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JAIPUR ENGINEERS COURSE CATALOGUE

Course Brochures

110 courses and programmes

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BROWSE BY SUBJECT

Programming & web	17	**Java development**	19
Data, AI & cloud	19	**Security, testing & networks**	17
Marketing, design & mobile	19	**Diplomas & training**	19

Featured guides



Core Java / Java Programming

₹6,500 ›



Advanced Java (Servlets & JSP)

₹8,000 ›



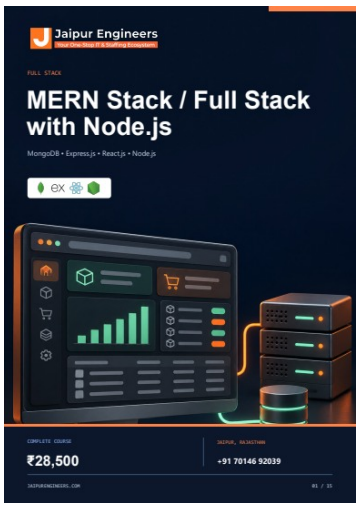
Spring Framework & Hibernate

₹8,000 ›



Java Full Stack Development

₹42,500 ›



MERN Stack / Full Stack with Node.js

₹28,500 ›



Python Programming

₹7,500 ›

Programming & web

Select a course, page number or fee to jump to that section.

COURSE	SYLLABUS	PROJECT	FEES
Programming			
Python Programming	16	13	₹7,500
C Programming	27	25	₹4,000
C++ Programming	38	36	₹4,000
C# Programming	48	45	₹7,500
JavaScript	56	54	Enquire
PHP	64	62	Enquire
Full Stack			
MERN Stack / Full Stack with Node.js	82	78	₹28,500
MEAN Stack	92	89	₹28,500
Java Full Stack Development	110	106	₹42,500
Python Full Stack with React & Django	120	117	₹35,000
.NET Full Stack with Angular	130	127	₹35,000
Web Development			
React.js	138	136	₹8,500
Angular Frontend Module	148	145	₹8,500
Node.js	156	154	₹8,500
Next.js	164	162	Enquire
Frontend Development with React.js	174	171	₹20,000
Frontend Development with Angular	184	181	₹20,000

Java development

Select a course, page number or fee to jump to that section.

COURSE	SYLLABUS	PROJECT	FEES
Java			
Core Java / Java Programming	194	191	₹6,500
Advanced Java (Servlets & JSP)	204	201	₹8,000
JDBC	212	210	Enquire
Servlets & JSP	220	218	Included
Spring Framework & Hibernate	230	227	₹8,000
Spring Boot	238	236	Included
Spring MVC	246	244	Enquire
Hibernate	254	252	Included
JPA	262	260	Enquire
Java Microservices	270	268	Enquire
Java REST API	278	276	Enquire
Java Design Patterns	286	284	Enquire
Java Multithreading	294	292	Enquire
Java Testing	302	300	Enquire
Helidon	310	308	Enquire
Big Data with Java	318	316	Enquire
Kafka with Java	326	324	Enquire
Java Interview Preparation	334	332	Enquire
Java Backend Development	342	340	₹22,500

Data, AI & cloud

Select a course, page number or fee to jump to that section.

COURSE	SYLLABUS	PROJECT	FEES
Data & AI			
Hadoop	350	348	Enquire
Data Science	358	356	Enquire
Data Analytics	376	372	₹31,500
Business Analytics	384	382	Enquire
Machine Learning	392	390	Enquire
Artificial Intelligence	400	398	Enquire
Generative AI	408	406	Enquire
Power BI	416	414	₹10,000
SQL	424	422	₹7,000
Advanced Excel	432	430	₹7,000
AI Tools	440	438	Enquire
AI, Machine Learning & Applied AI Development	448	446	₹35,000
Cloud & DevOps			
Cloud Computing	456	454	Enquire
AWS	464	462	Enquire
Azure	472	470	Enquire
Google Cloud	480	478	Enquire
DevOps	488	486	Enquire
Docker	496	494	Enquire
Kubernetes	504	502	Enquire

Security, testing & networks

Select a course, page number or fee to jump to that section.

COURSE	SYLLABUS	PROJECT	FEES
Cyber Security			
Cyber Security	512	510	Enquire
Ethical Hacking	520	518	Enquire
Certified Ethical Hacker (CEH) Preparation	528	526	Enquire
SOC Analyst	536	534	Enquire
Penetration Testing	544	542	Enquire
Network Security	552	550	Enquire
Software Testing			
Software Testing	560	558	Enquire
Manual Testing	568	566	Enquire
Automation Testing	576	574	Enquire
Selenium	584	582	Enquire
API Testing	592	590	Enquire
Playwright	600	598	Enquire
Networking			
Networking	608	606	Enquire
CCNA	616	614	Enquire
CCNP	624	622	Enquire
Linux	632	630	Enquire
Windows Server	640	638	Enquire

Marketing, design & mobile

Select a course, page number or fee to jump to that section.

COURSE	SYLLABUS	PROJECT	FEES
Digital Marketing			
Digital Marketing	650	647	₹30,000*
SEO, Google Ads & Google Platforms	660	657	₹10,000
Google Ads	670	667	Enquire
SMO & Meta Ads	680	677	₹10,000
Content Marketing	688	686	Enquire
Email Marketing	696	694	Enquire
Digital Marketing with AI Automation	706	703	₹50,000
Digital Marketing Workflow Automation	716	713	₹20,000
Design			
UI/UX Design	726	723	₹10,000
Figma	734	732	Enquire
Graphic Design	744	741	₹10,000
Graphic & Video Editing	754	751	₹10,000
Video Editing with Adobe Premiere Pro	764	761	₹25,000
Mobile Development			
Mobile App Development	772	770	Enquire
Android App Development with Kotlin & Java	782	779	₹25,000
Kotlin	790	788	Enquire
Flutter	798	796	Enquire
React Native	811	809	₹8,500
iOS App Development with Swift	821	818	₹30,000

* Digital Marketing shows the sum of the listed module fees.

Diplomas & training

Select a course, page number or fee to jump to that section.

COURSE	SYLLABUS	PROJECT	FEES
Diploma Programs			
Diploma Programs	829	827	Enquire
Diploma in Full Stack Development	837	835	Enquire
Diploma in Data Science & AI	845	843	Enquire
Diploma in Python Programming	853	851	Enquire
Diploma in Java Programming	861	859	Enquire
Diploma in Digital Marketing	869	867	Enquire
Diploma in Cyber Security	877	875	Enquire
Diploma in Cloud Computing	885	883	Enquire
Diploma in Data Analytics	893	891	Enquire
Software Engineering Diploma	901	899	Enquire
Training & Internship			
Internship Programs	909	907	Enquire
Summer Internship	917	915	Enquire
Winter Internship	925	923	Enquire
Industrial Training	933	931	Enquire
Live Project Training	941	939	Enquire
Final Year Projects	949	947	Enquire
Corporate Training	957	955	Enquire
Career Skills			
Personality Development	965	963	Enquire
IT Courses			
Other IT Courses	973	971	Enquire

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PROGRAMMING

Python Programming

Python • NumPy • pandas • Matplotlib • Plotly



COURSE FEE

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Python Programming

Syllabus at a glance

01

Core Python

02

Files, exceptions & OOP

03

NumPy

04

pandas

05

Matplotlib

06

Plotly

PORTFOLIO PROJECT

Retail Sales Explorer

Clean a sample sales file, calculate revenue by category and create both static and interactive charts.

Python Programming

Core concepts

01

Core Python

Set up Python and run a script. Work with types, strings, conditions, loops, lists, dictionaries and reusable functions.

02

Files, exceptions & OOP

Read CSV or JSON, structure a small program with classes or modules, and handle invalid input.

03

NumPy

Work with arrays, shapes, indexing, masks and aggregations. Compare row and column calculations.

TOOLS & TOPICS

Python • NumPy • pandas • Matplotlib • Plotly

Python Programming

Applied skills

04

pandas

Load tabular data, handle missing and duplicate records, group rows and join lookup tables.

05

Matplotlib

Choose a suitable chart, label axes and export a readable static figure.

06

Plotly

Build a chart with hover details and filters, then check results against the cleaned data.

TOOLS & TOPICS

Python • NumPy • pandas • Matplotlib • Plotly

Python Programming

Portfolio project

Retail Sales Explorer

Clean a sample sales file, calculate revenue by category and create both static and interactive charts.



Define inputs

Write a normal case, an empty case and an invalid case before coding.

Verify output

Run each case and record the expected and actual results.

Source code, sample inputs, expected outputs and a short run guide.

Python Programming

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Prepare the dataset

Save the original file and document the rules used to clean dates, missing values and duplicates.

02

Reconcile the totals

Check that category totals add up to total revenue and explain any records you excluded.

03

Compare chart formats

Present a static Matplotlib chart and an interactive Plotly view that answer the same business question.

Python Programming

Course fees

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View course details online

Python Programming

Course content

MODULES 01–02

01 Core Python

Lessons & practice

- Python setup and virtual environments
- Types and operators
- Control flow, functions and collections

HANDS-ON Parse an expense list and print the total and category counts.

02 Files, exceptions & OOP

Lessons & practice

- CSV and JSON input
- Modules and imports
- Exceptions, validation and classes

HANDS-ON Load transactions and flag rows with missing or invalid values.

Python Programming

Course content

MODULES 03–04

03 NumPy

Lessons & practice

- Arrays, shapes and dtypes
- Slicing, masking and broadcasting
- Aggregation by axis

HANDS-ON Compute row and column totals for a sales array and check one result by hand.

04 pandas

Lessons & practice

- DataFrames and CSV imports
- Missing values, duplicates and types
- Filtering, groupby and merge

HANDS-ON Clean sales rows, join a product lookup and report revenue by category.

Python Programming

Course content

MODULES 05–06

05 Matplotlib

Lessons & practice

- Matplotlib figures and axes
- Bar, line and scatter plots
- Labels, legends and image export

HANDS-ON Compare monthly figures in a readable chart and export the image.

06 Plotly

Lessons & practice

- Plotly Express
- Hover details and colour
- Filtering and HTML export

HANDS-ON Build an interactive chart and reconcile its totals with the static report.

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PROGRAMMING FOUNDATIONS

C Programming

Build logic with C, work with memory and write a console program that saves records.



WRITE

Syntax and control flow

BUILD

Functions and data

RUN

Files, tests and a mini-project

COURSE FEE

Mansarovar, Jaipur

₹4,000

Eight-module syllabus

Build on each topic through short exercises before combining them in a complete C program.

01 C setup and syntax

Toolchain, program structure, main(), compilation and console output.

02 Variables and operators

Types, constants, expressions, conversions and input/output.

03 Conditions and loops

if/else, switch, for, while, do-while, break and continue.

04 Functions and recursion

Declarations, parameters, return values, scope and base cases.

05 Arrays and strings

One- and two-dimensional arrays, null terminators and bounded input.

06 Pointers and memory

Addresses, dereferencing, arrays and dynamic allocation basics.

07 Structures and unions

Group fields with struct and compare storage with union.

08 Files and mini-project

Read and write records, test edge cases and explain a project.

Write, compile and run C

Start with program structure, then use data, conditions and loops to produce useful output.

Source

hello.c

Compiler

Check and build

Executable

Run the program

count.c

```c
#include <stdio.h>
int main(void) {
    for (int n = 1; n <= 3; ++n) {
        printf("%d\n", n);
    }
    return 0;
}
```

Core topics

Variables and data types, operators and expressions, console input/output, if/else, switch and loops.

TRY IT

Write a menu-driven calculator and check invalid input before performing a calculation.

Organise code and data

Split a program into functions and use arrays and strings to process a series of inputs.

01

Functions and recursion

Use prototypes, arguments, return values and local scope. Trace recursion with a clear base case.

02

Arrays and searching

Traverse one- and two-dimensional arrays and practise totals, linear search and simple sorting.

03

Strings and safe input

Work with character arrays, null termination, bounded input and standard string functions.

TRY IT

Put marks in an array and call separate functions to find the maximum and calculate the average.

Read a pointer step by step

Variables hold values. A pointer can store the address of one of those variables.

```
int score = 12;

int *p = &score;

printf("%d\n", *p);
```

OUTPUT 12

Addresses and dereferencing

Use & to obtain an address and * to read or update the value at a valid address.

Arrays and memory ownership

Explore pointer–array relationships, bounds, malloc and free. Check for allocation failure.

TRY IT

Pass a pointer to a function that updates a value. Describe which variable changed and why.

Store records and test them

Group related fields, save data and make sure a program can handle missing or invalid input.

MODEL

Structures and unions

Create records with struct, access members and compare how a union shares storage.

SAVE

File input and output

Open, read, write and close text files. Check errors before using the result.

CHECK

Debugging and tests

Use compiler warnings, breakpoints and repeatable tests for normal and boundary cases.

TRY IT

Save an array of inventory records to a text file and verify a fresh run can load the same data.

Build an Inventory Tracker

Create a menu-driven console app that stores item records and reports low stock.

inventory.c / console menu

```
01    Add an item
02    Find an item by ID
03    Update stock quantity
04    Show low-stock items
05    Save and exit
```

Build and verify

Use structures for records, functions for menu actions and a text file for storage. Test duplicate IDs, invalid quantities and reload after saving.

MORE PRACTICE

Other practice ideas include a student marks report and a menu-driven calculator.

Ask about the next C batch

Contact Jaipur Engineers for class timings, learning options and admission details.

C PROGRAMMING COURSE FEE

₹4,000

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C Programming

Course content

MODULES 01–02

01

Lessons & practice

- Compiler setup
- Main
- Types
- Console I/O

HANDS-ON

Compile a C console program and print parsed values with the correct format specifiers.

02

Lessons & practice

- Operators
- Conditions
- Loops

HANDS-ON

Build a menu-driven calculator that validates input before each operation.

C Programming

Course content

MODULES 03–04

03

Lessons & practice

- Functions
- Prototypes
- Scope
- Recursion

HANDS-ON

Split total and average calculations into functions and trace a recursive base case.

04

Lessons & practice

- Arrays
- Strings
- Bounds checks

HANDS-ON

Find a maximum in a two-dimensional marks table and test bounded string input.

C Programming

Course content

MODULES 05–06

05

Lessons & practice

- Pointers
- Allocation
- Structures
- Unions

HANDS-ON

Allocate a record array, update one record through a pointer and release memory.

06

Lessons & practice

- Text file I/O
- Compiler warnings
- Tests

HANDS-ON

Save an inventory file and test duplicate IDs, missing files and compiler warnings.

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PROGRAMMING COURSE



C++ Programming

Write console programs with classes, the Standard Template Library and file handling.

COURSE FEE

₹4,000

10 syllabus modules

Coding practice and a sample project

MANSAROVAR, JAIPUR

jaipurengineers.com

The C++ syllabus

Ten modules cover the language, object-oriented programming, standard library tools and project work.

01 C++ setup and syntax

Install an editor and compiler, build a program and use console input and output.

02 Variables and data types

Types, constants, operators, conversions, scope and storage duration.

03 Control statements

Branch with if/else and switch. Repeat with for, while and do-while.

04 Functions

Declarations, parameters, overloads, default arguments and recursion.

05 Arrays and strings

Indexed data, multidimensional arrays, character arrays and std::string.

06 Object-oriented programming

Classes, constructors, encapsulation, inheritance and polymorphism.

07 Pointers and dynamic memory

Addresses, references, object lifetime, new/delete and smart pointers.

08 File handling

Read, write and append records. Check stream errors and explore binary I/O.

09 Standard Template Library

Containers, adapters, iterators, standard sorting and searching algorithms.

10 Projects and interview prep

Build and test a console app, solve coding tasks and explain your choices.

Write your first programs

Set up your tools, read input and use conditions and loops to control what runs.

Write

```
hello.cpp
```

Compile

```
g++ hello.cpp -o hello
```

Run

```
.\hello.exe
```

01 C++ setup and syntax

Set up GCC with VS Code or Code::Blocks. Explore headers, main(), tokens, keywords, comments, std::cin and std::cout. Build and run a .cpp file.

02 Variables and data types

Work with built-in types, constants and operators. Trace expressions and type conversions, and learn how scope and storage duration affect variables.

03 Control statements

Write if/else, nested conditions and switch cases. Use for, while, do-while, break and continue. Read a short example of goto.

PRACTICE

Build a menu-based calculator. Repeat the menu until Exit is selected and test invalid choices.

Organise code and data

Write reusable functions and use arrays and strings to process multiple inputs.

04 Functions

Practise function declarations, definitions and calls, overloads, default arguments, inline functions, recursion and the scope resolution operator.

05 Arrays and strings

Use one- and multi-dimensional arrays, traverse rows and columns, and practise character arrays, std::string and string operations.

message.cpp

```cpp
#include <iostream>
#include <string>
void greet(const std::string& name) {
    std::cout << "Hello, " << name << "\n";
}
int main() { greet("Jaipur"); }
```

PRACTICE

Write a function that counts vowels in a string. Test it with a blank line and mixed-case input.

Classes, objects and memory

Model a record with a class and trace what happens when functions access the same object.

06 Object-oriented programming

Create classes and objects with access specifiers, constructors and destructors. Use encapsulation, abstraction, inheritance and polymorphism. Explore overrides, operator overloading, friend functions and static members.

```
CLASS       Book
STATE       id, title, onLoan
BEHAVIOUR   borrow(), returnBook()
```

07 Pointers and dynamic memory

Work with addresses, references, dereferencing, pointer arithmetic, arrays and object pointers. Learn new/delete, object lifetime and introductory smart pointers.

PRACTICE

Write a Book class with private fields. Call a method that marks a copy as on loan and check its state.

Save, sort and search

Read and write records with file streams. Use containers and algorithms to organise them in memory.

08 File handling

Open text files with file streams. Read, write and append records, check open and read errors, and practise basic binary input and output.

09 Standard Template Library

Choose from vector, list, map and set, and use stack and queue adapters. Traverse data with iterators and practise sorting and searching with standard algorithms.

`std::vector`

Keep a sequence of books.

`std::map`

Look up books by ID.

`std::sort`

Order a list by title.

`std::find_if`

Find an available copy.

PRACTICE

Load a catalogue from a file, sort the titles and search for a book by ID.

Library Management System

In this sample project, build a console app that tracks books, loans and returns.

```
LIBRARY CONSOLE
-----------------------------------

[1]     Add or list books

[2]     Find a book by ID

[3]     Borrow or return a book

[4]     Save the catalogue and exit
```

Build and test

Use a Book class to model each record, a container to hold the catalogue, and file streams to save and reload it. Test duplicate IDs, a missing file and borrowing a book that is already on loan.

Interview preparation

Walk through your class design, explain why you chose each container and describe a bug you fixed. Practise short exercises on strings, loops and searching.

> **PROJECT OPTIONS**
>
> Other project options include a student management system, a quiz and a console billing app.

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C++ Programming

Course content

MODULES 01–02

01

Lessons & practice

- Toolchain
- Types
- Expressions
- Control statements

HANDS-ON

Build a C++ console program and trace a switch and loop on sample input.

02

Lessons & practice

- Functions
- Overloading
- Arrays
- Strings

HANDS-ON

Write overloaded functions for string and numeric searches and test an empty input.

C++ Programming

Course content

MODULES 03–04

03

Lessons & practice

- Classes
- Constructors
- Inheritance
- Polymorphism

HANDS-ON — Model book loans with constructors and an interface for different loan rules.

04

Lessons & practice

- References
- Pointers
- Dynamic memory
- Smart pointers

HANDS-ON — Compare pass-by-reference and pointer use and inspect ownership of a dynamic object.

C++ Programming

Course content

MODULES 05–06

05

Lessons & practice

- STL containers
- Iterators
- Sorting
- Searching

HANDS-ON — Sort catalogue records with std::sort and locate a match with an iterator.

06

Lessons & practice

- File streams
- Troubleshooting
- Interview practice

HANDS-ON — Save and reload catalogue records and explain which checks handle a failed file open.

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PROGRAMMING

C# Programming

C# • .NET • LINQ • Unit testing



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C# Programming

Syllabus at a glance

01

C# & .NET

02

Collections

03

Object-oriented C#

04

LINQ

05

Data and errors

06

Testing and debugging

PORTFOLIO PROJECT

Book Lending Console

Create a .NET console app that records loans, applies rules and reloads saved records.

C# Programming

Core concepts

01

C# & .NET

Set up the .NET SDK. Use values, operators, conditions, loops and methods.

02

Collections

Work with strings, arrays, lists, dictionaries and generic types.

03

Object-oriented C#

Model a domain using classes, properties, constructors, interfaces and inheritance.

TOOLS & TOPICS

C# • .NET • LINQ • Unit testing

C# Programming

Applied skills

04

LINQ

Filter, group, order and project records, then inspect results on sample data.

05

Data and errors

Handle exceptions, read and write JSON, and explore tasks and async/await.

06

Testing and debugging

Use breakpoints, isolate failures, structure a project and test key business rules.

TOOLS & TOPICS

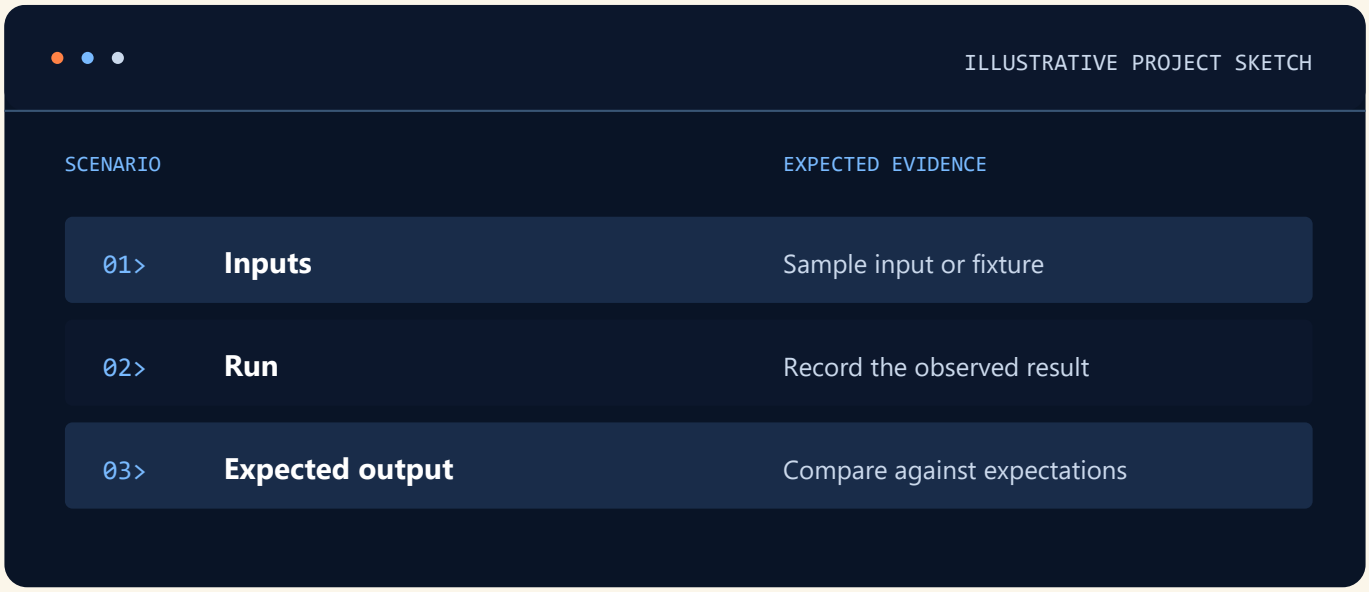
C# • .NET • LINQ • Unit testing

C# Programming

Portfolio project

Book Lending Console

Create a .NET console app that records loans, applies rules and reloads saved records.



Define inputs

Write a normal case, an empty case and an invalid case before coding.

Verify output

Run each case and record the expected and actual results.

Source code, sample inputs, expected outputs and a short run guide.

C# Programming

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Model a loan

Assign each book an ID and document how the application tracks availability.

02

Test rejected actions

Cover duplicate IDs, invalid returns and missing input.

03

Verify persistence

Restart the console app and confirm that saved records reload correctly.

C# Programming

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C# Programming

Course content

MODULES 01–02

01 C# & .NET

Lessons & practice

- .NET SDK and console projects
- Types and nullable values
- Conditions, loops and methods

HANDS-ON Build a console menu that rejects an invalid option and returns to the prompt.

02 Collections

Lessons & practice

- Strings and arrays
- Lists and dictionaries
- Generics and lookup

HANDS-ON Index a book catalogue by ID and handle a missing record.

C# Programming

Course content

MODULES 03–04

03 Object-oriented C#

Lessons & practice

- Classes and constructors
- Properties and access modifiers
- Interfaces and polymorphism

HANDS-ON Create lending rules you can test separately from console input.

04 LINQ

Lessons & practice

- LINQ filtering and projection
- Ordering and grouping
- Aggregation and enumeration

HANDS-ON Report loans by book category and verify counts against sample records.

C# Programming

Course content

MODULES 05–06

05 Data and errors

Lessons & practice

- Exceptions
- JSON serialisation and file I/O
- Task and async/await

HANDS-ON Save and reload lending data and show a useful error for corrupted input.

06 Testing and debugging

Lessons & practice

- Breakpoints and stepping
- Unit-test cases and assertions
- Project layout

HANDS-ON Test a duplicate checkout, an invalid return and a successful loan.

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PROGRAMMING

JavaScript

SAMPLE PROJECT

Weather Search App

JS



COURSE FEE

Fee on enquiry

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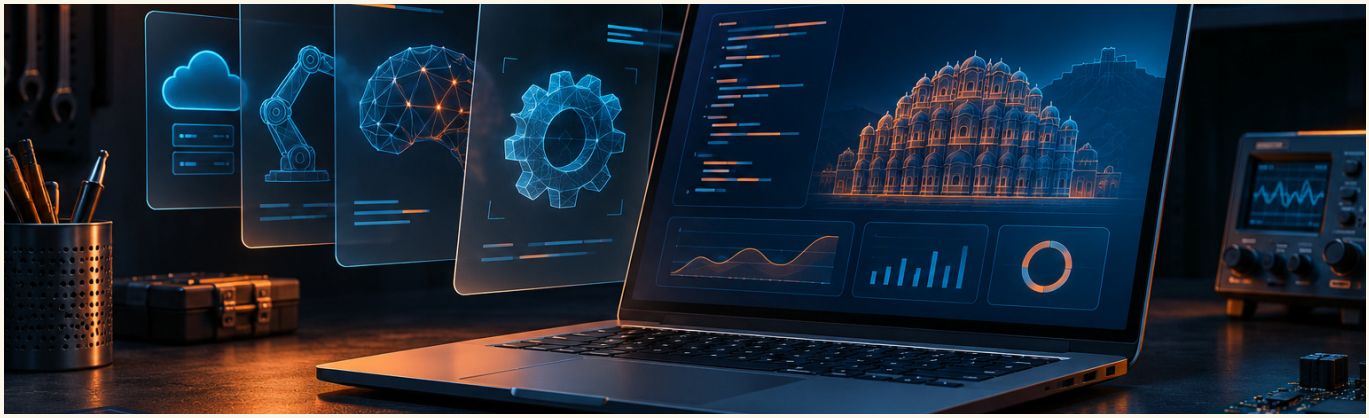
JavaScript

Core concepts



01	Values, operators, control flow and functions
02	Arrays, objects, scope and closures
03	DOM events, forms and validation

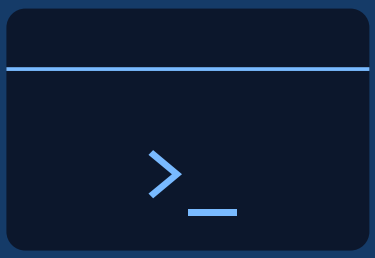
Define inputs

Write a normal case, an empty case and an invalid case before coding.

JavaScript

Applied skills

- **Inputs**
- **Run**
- **Expected output**



04 ES6 to ES10 syntax and modules

05 Promises, Fetch, async/await and error handling

06 Debugging, storage and a browser project

PROJECT DELIVERABLES

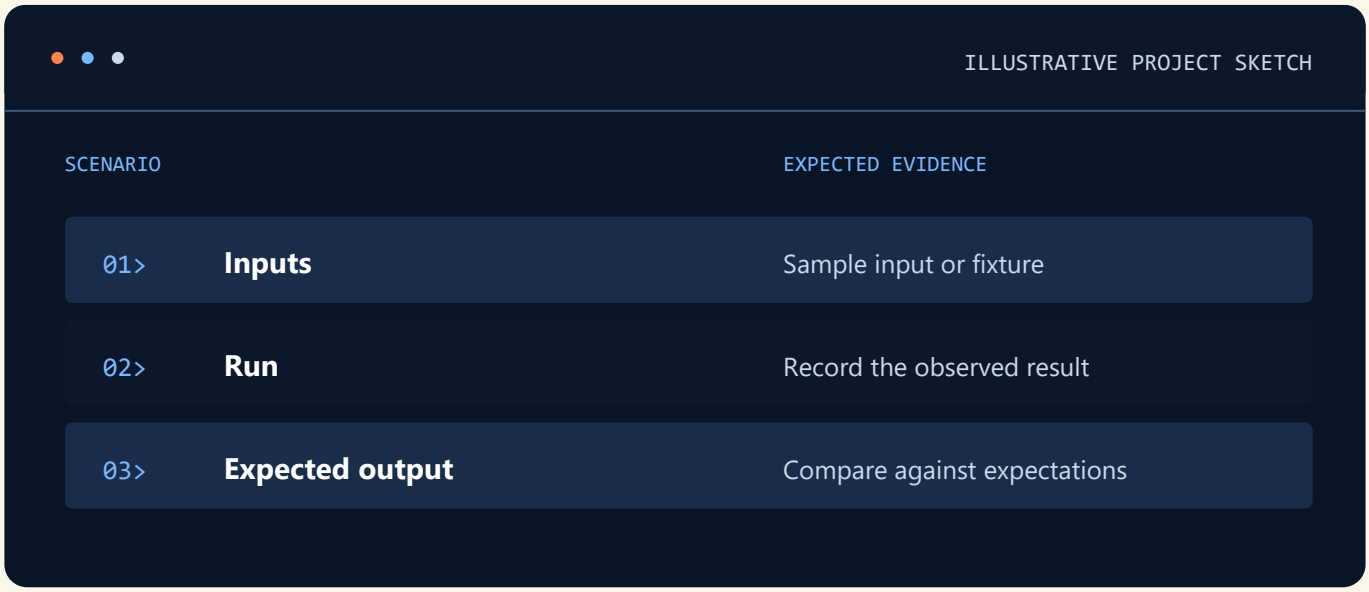
Source code, sample inputs, expected outputs and a short run guide.

JavaScript

Portfolio project

Weather Search App

Build a browser interface that fetches weather by city and handles loading, errors and empty results.



Define inputs

Write a normal case, an empty case and an invalid case before coding.

Verify output

Run each case and record the expected and actual results.

Source code, sample inputs, expected outputs and a short run guide.

JavaScript

Course fees

COURSE FEE

Fee on enquiry

RELATED MODULE	INR
Advanced JavaScript	₹4,000

Ask admissions for the course fee, available batches and enrolment details.

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SCAN FOR MAP

Check course details

JavaScript

Course content

MODULES 01–02

01

Lessons & practice

- Values
- Operators
- Control flow
- Functions

HANDS-ON — Calculate subtotals from inputs and validate values with a reusable function.

02

Lessons & practice

- Arrays
- Objects
- Scope
- Closures

HANDS-ON — Transform an array of products and use a closure to preserve filter criteria.

JavaScript

Course content

MODULES 03–04

03

Lessons & practice

- DOM events
- Forms
- Validation

HANDS-ON

Add keyboard-accessible form validation and update results after a DOM event.

04

Lessons & practice

- ES6 to ES10 syntax
- Modules

HANDS-ON

Split a feature into modules and compare transformed objects without mutating the inputs.

JavaScript

Course content

MODULES 05–06

05

Lessons & practice

- Promises
- Fetch
- Async/await
- Error handling

HANDS-ON Load JSON data and show loading, empty and error states using async/await.

06

Lessons & practice

- Debugging
- Storage
- A browser project

HANDS-ON Debug a failed search and persist the last valid choice in browser storage.

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PROGRAMMING

PHP

SAMPLE PROJECT

Workshop Registration



COURSE FEE

Fee on enquiry

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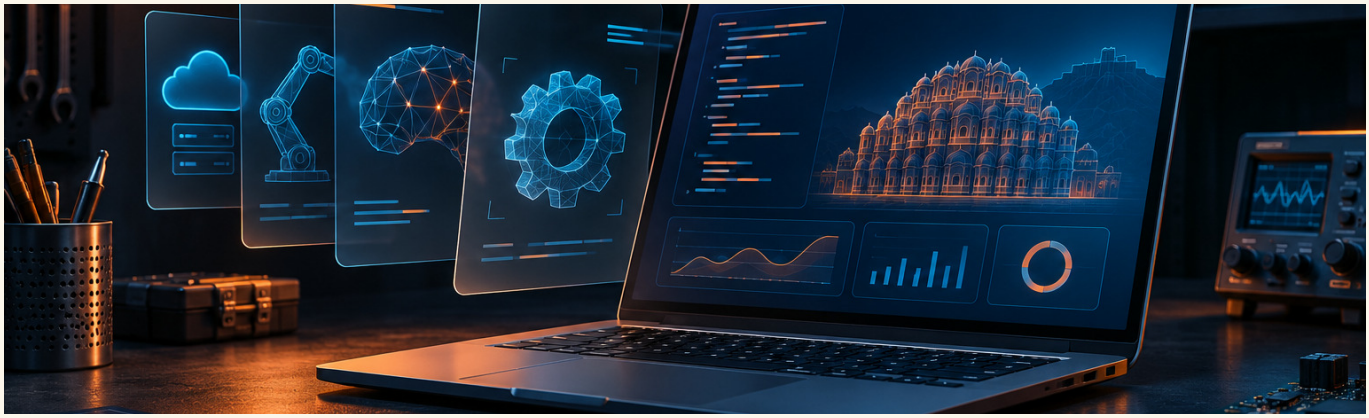
PHP

Core concepts



01	PHP setup, request lifecycle and syntax
02	Arrays, strings, functions and includes
03	Form input, validation and output escaping

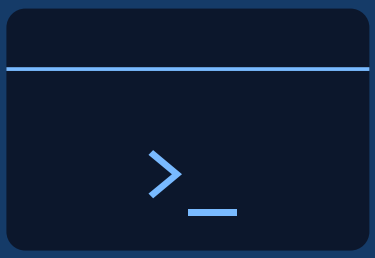
Define inputs

Write a normal case, an empty case and an invalid case before coding.

PHP

Applied skills

- **Inputs**
- **Run**
- **Expected output**



04 Sessions, cookies and login fundamentals

05 MySQL queries with PDO and prepared statements

06 MVC concepts, logging and deployment checks

PROJECT DELIVERABLES

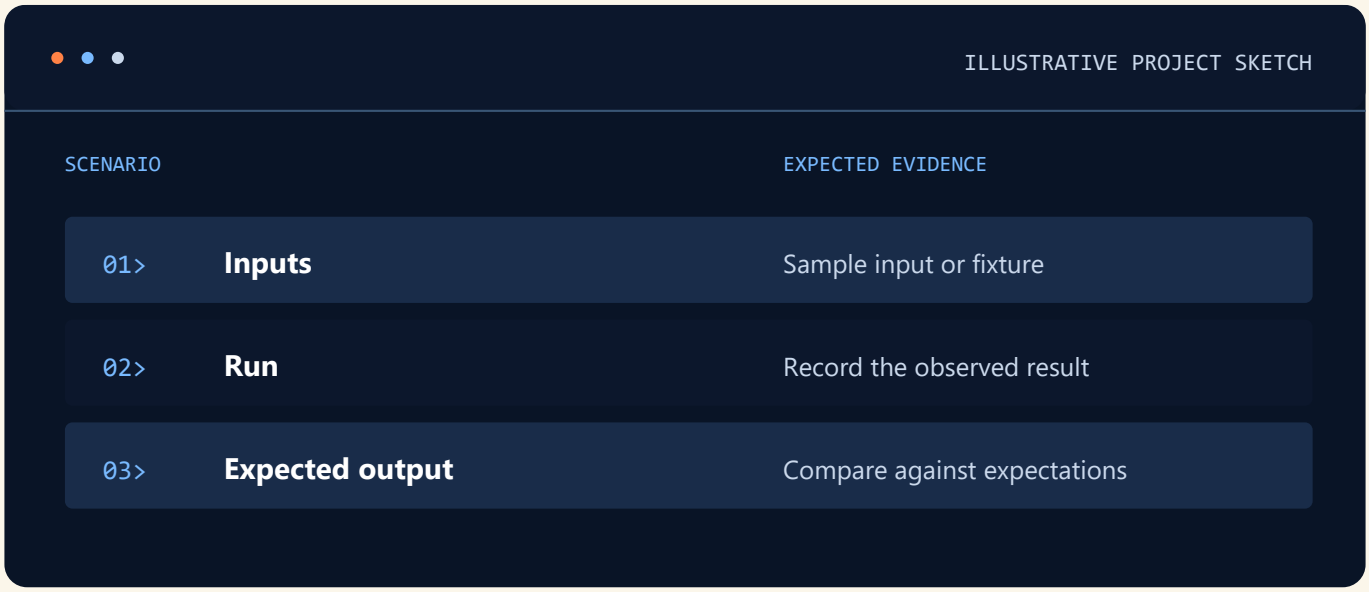
Source code, sample inputs, expected outputs and a short run guide.

PHP

Portfolio project

Workshop Registration

Process registration forms, validate submissions and show stored attendees in an admin view.



Define inputs

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Source code, sample inputs, expected outputs and a short run guide.

PHP

Course fees

COURSE FEE

Fee on enquiry

Ask admissions for the course fee, available batches and enrolment details.

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SCAN FOR MAP

Check course details

PHP

Course content

MODULES 01–02

01

Lessons & practice

- PHP setup
- Request lifecycle
- Syntax

HANDS-ON Run a PHP page that displays safe values from a sample query string.

02

Lessons & practice

- Arrays
- Strings
- Functions
- Includes

HANDS-ON Extract reusable rendering and validation functions into a separate include.

PHP

Course content

MODULES 03–04

03

Lessons & practice

- Form input
- Validation
- Output escaping

HANDS-ON

Validate an enquiry form and escape values when rendering an error or confirmation.

04

Lessons & practice

- Sessions
- Cookies
- Login fundamentals

HANDS-ON

Use a session to show a signed-in view and verify logout clears its state.

PHP

Course content

MODULES 05–06

05

Lessons & practice

- MySQL queries with PDO
- Prepared statements

HANDS-ON — Insert a course enquiry through a prepared PDO statement and retrieve it by ID.

06

Lessons & practice

- MVC concepts
- Logging
- Deployment checks

HANDS-ON — Separate controller, data and template code and check logs for a failed request.

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FULL STACK

MERN Stack / Full Stack with Node.js

MongoDB • Express.js • React.js • Node.js



COMPLETE COURSE

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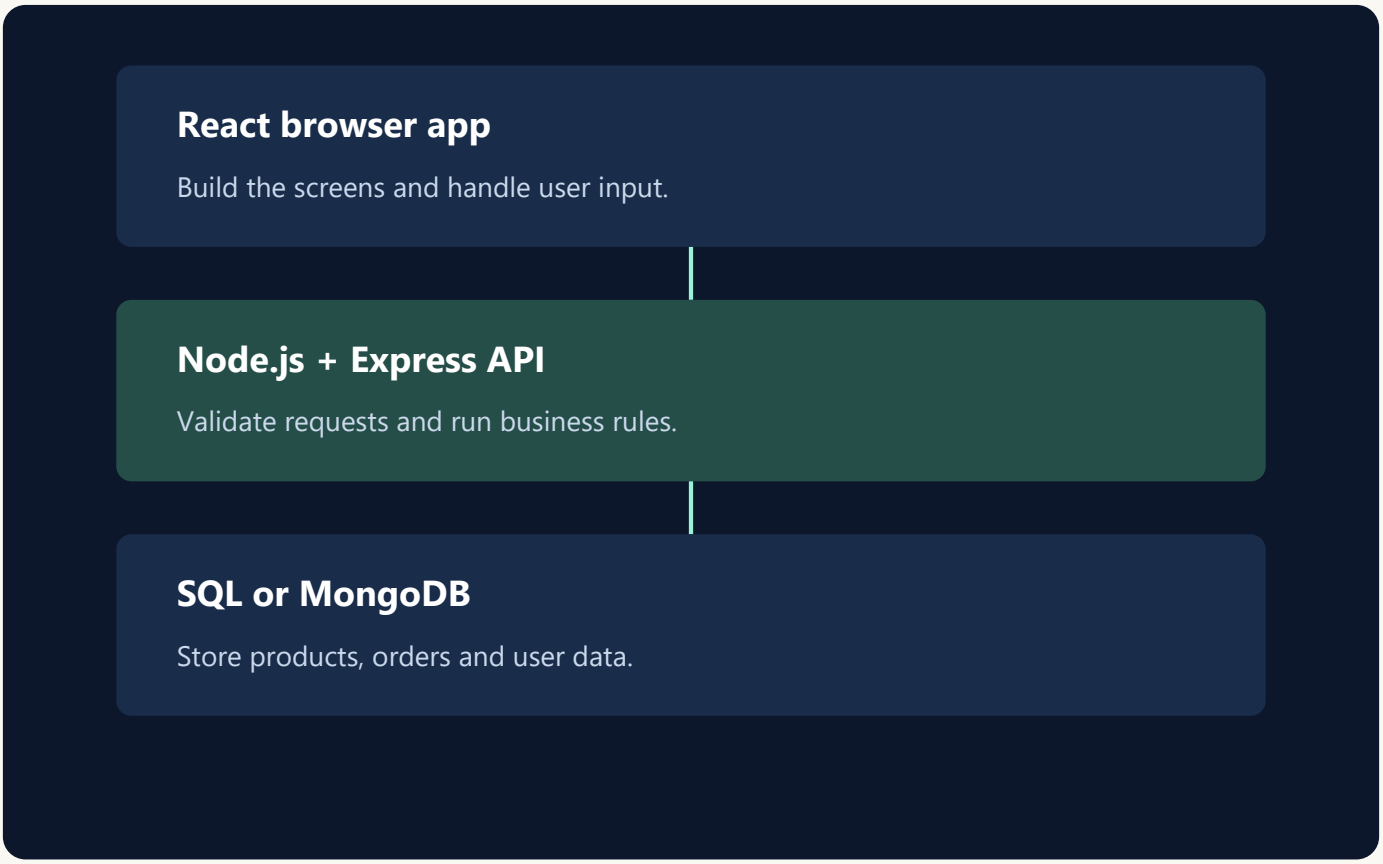
How the stack fits together

Follow a product search request from the browser to the database and back.



Frontend

Build responsive pages and interactive screens.

Backend

Create API routes and protect application data.

Delivery

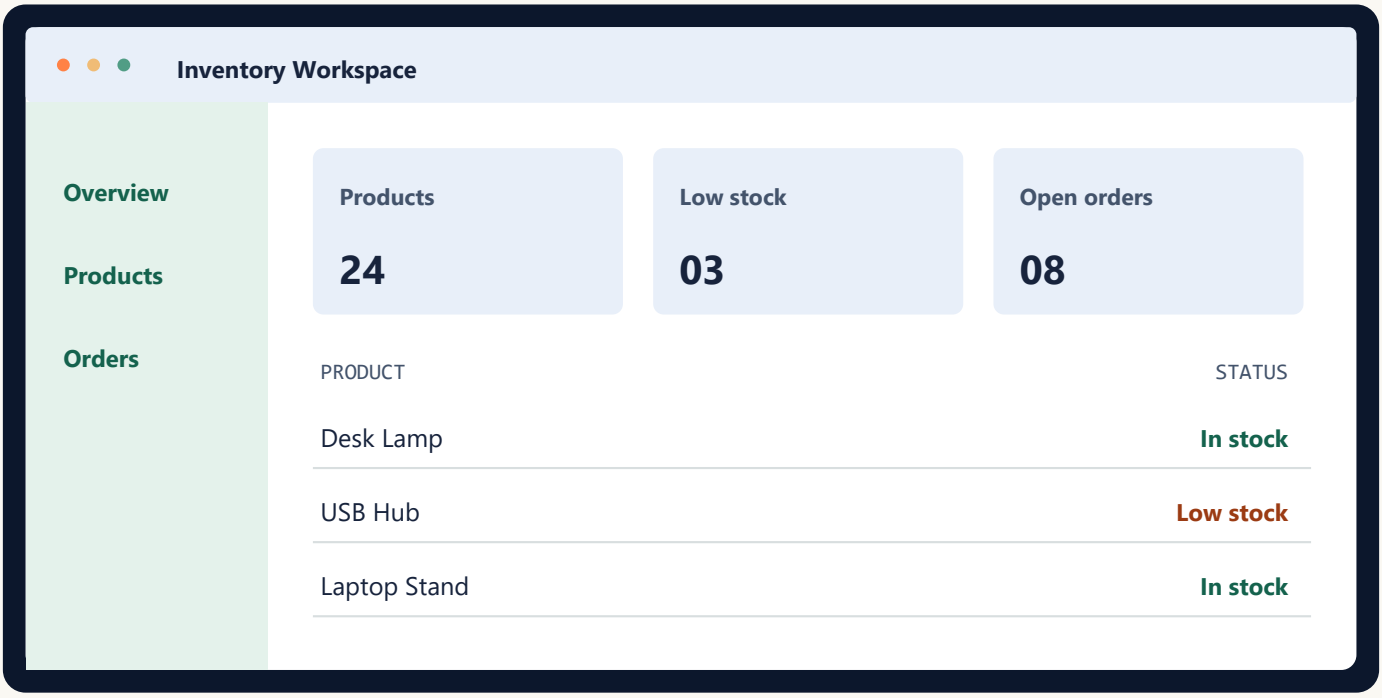
Connect the layers, test the workflow and prepare a deployment.

WHO IT'S FOR

Suitable for students and developers moving into full-stack web development. Familiarity with basic coding helps.

Build responsive web pages

Start with semantic HTML, flexible CSS and forms users can navigate with a keyboard.



ILLUSTRATIVE INVENTORY DASHBOARD

HTML5

Structure pages with landmarks, tables, links, inputs and form labels.

CSS3

Use the box model, Flexbox, Grid and breakpoints for responsive layouts.

CSS frameworks

Compare Bootstrap components with Tailwind CSS utility classes.

PRACTICE

Build a product list that works on desktop and narrow screens. Inspect layout and focus states in browser DevTools.

Make pages interactive

Use JavaScript to validate forms, transform records and bring API data into the interface.

products.js

```
async function loadProducts() {
  const response = await fetch('/api/products');
  if (!response.ok) throw new Error('Could not load products');
  return response.json();
}
```

Core JavaScript

Variables, arrays, objects, functions, DOM events and form handling.

Modern syntax

ES6 to ES10 features, modules, destructuring and array methods.

Async workflow

Promises, async/await, JSON and handling unsuccessful requests.

PRACTICE

Fetch product records and show separate loading, empty and error states.

Build a React application

Turn the dashboard into reusable components, routes and predictable state.

01

Components, props and hooks

Build reusable tables and forms with JSX. Manage component data with useState and coordinate side effects with useEffect.

02

Routes and screen states

Use React Router for product, order and detail screens. Handle form feedback and missing records.

03

Redux and Redux Toolkit

Organise shared state with slices, selectors and async request status. Keep small UI concerns local to the screen.

PRACTICE

Filter inventory by stock status and show the selected product on a detail route.

Build the server

Turn incoming requests into validated actions and return consistent JSON responses.

products-route.js

```
app.get('/api/products', async (req, res, next) => {
  try {
    res.json(await products.list());
  } catch (error) { next(error); }
});
```

Node.js runtime

Explore npm, modules, the event loop and asynchronous I/O.

Express routing

Organise routes, middleware and request handlers by feature.

Configuration

Manage environment settings and keep secrets outside the repository.

PRACTICE

Add a products route and return a clear response when a request cannot be completed.

Define the API contract

Design resource URLs and response formats that the React app can depend on.

METHOD	RESOURCE	PURPOSE
GET	/api/products	List and filter products
POST	/api/products	Create a product
POST	/api/orders	Place an order
PATCH	/api/orders/:id/status	Update an order status
DELETE	/api/products/:id	Remove a product

Validate at the boundary

Validate request data, choose HTTP status codes, and use Postman to check both successful and invalid requests.

PRACTICE

Send a valid order, then submit one without products and confirm the API returns a useful validation error.

Model relational data

Connect products and orders through order items. Use constraints to keep records consistent.

Products

id · primary key

name

price

stock_qty

Order items

order_id · reference

product_id · reference

quantity

unit_price

Orders

id · primary key

customer_id

status

created_at

Each order item links one order to one product.

Querying

Write SELECT, JOIN, GROUP BY and filters for common reports.

Integrity

Work with keys, constraints, transactions and indexes.

Engines

Compare MySQL, PostgreSQL and Oracle Database at a conceptual level.

PRACTICE

Use a JOIN to show each order with its products and calculate the order total.

Compare data stores

Practise document-based CRUD with MongoDB and see where other database models fit.

MongoDB

Work with collections and documents. Model products, filter records and review indexes.

Cassandra

Compare a wide-column model. See how partition keys affect query design.

DynamoDB

Explore a managed key-value and document database and how it uses access patterns.

Apache Druid

Explore a store designed for fast analytics over event and time-series data.

PRACTICE

Store and filter product documents in MongoDB. Compare the structure with the relational model.

Protect the workflow

Use the API to decide who can see an order or change inventory levels.

01

Sign-in and sessions

Understand password hashing and session or token-based authentication. Handle sign-out and expired sessions.

02

Permissions and validation

Check permissions in server-side handlers. Use parameterised queries and validate data before storage.

03

Connect React, API and database

Load data through the API, send form changes and handle validation or permission errors in the browser.

PRACTICE

Verify that staff can update inventory while a signed-out visitor cannot submit changes.

Prepare the app for release

Check the full workflow before deploying the frontend, server and data connection.

01

Track changes with Git

Use branches, clear commits and a GitHub repository. Document local setup and environment variables.

02

Test across layers

Check responsive views, API response codes and database changes. Add tests around important application rules.

03

Deploy and diagnose

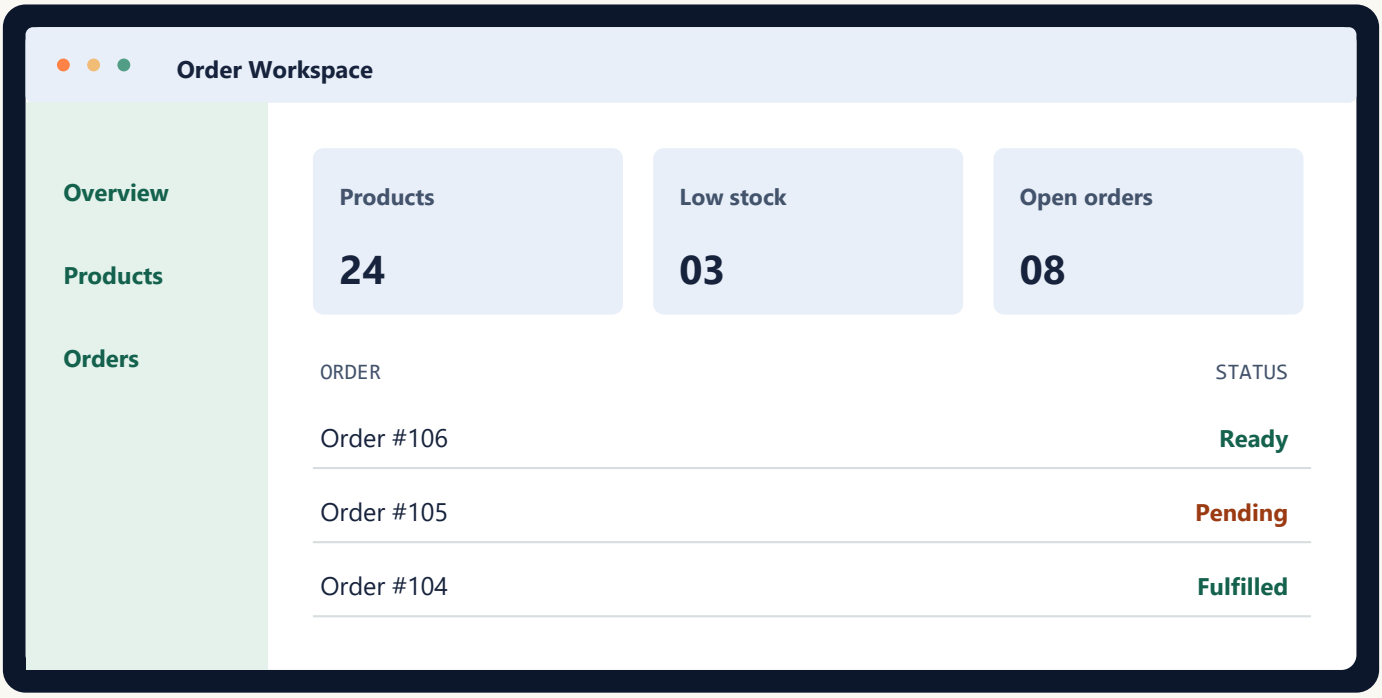
Configure HTTPS, application environment and database connectivity. Check logs and run a short smoke test after deployment.

PRACTICE

Deploy a preview, create a test order and confirm the dashboard and database reflect it.

Inventory and order portal

Build an internal web app that tracks products, accepts orders and shows what needs restocking.



ILLUSTRATIVE ORDER DASHBOARD

Product catalogue

Search products, display available stock and edit records from the dashboard.

Order workflow

Create an order, validate stock and update status through the API.

Reporting

Show low-stock products and open orders using database queries.

PROJECT DEMO

Create an order, show the stock change and trace how the update reaches the dashboard.

Present your project

Use the application to explain what you built, how it works and where you made design choices.

01

Make it reproducible

Publish the code with a README, setup steps, sample data and the environment variable names the app expects.

02

Record a short walkthrough

Show a working product list, an order submission and how the UI responds when a required field is missing.

03

Explain the decisions

Trace a browser request through Node.js to the database and explain why you chose a relational or document model.

INTERVIEW PRACTICE

Use examples from your project when preparing for entry-level frontend, backend or full-stack interviews.

Module and package fees

Published module and programme fees in Indian rupees.

COMPLETE COURSE FEE **₹28,500**

COURSE MODULES & PATHWAYS	INR
Web Design	₹7,500
Advanced JavaScript & ECMAScript (ES6–ES10)	₹4,000
React, Redux & Redux Toolkit	₹8,500
Node.js & Express.js backend	₹8,500

DATABASE TRAINING

SQL and NoSQL database training is included with complete Full Stack enrolment.

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SCAN FOR MAP

Full Stack course details

Node.js course details

MERN Stack / Full Stack with Node.js

Course content

MODULES 01–02

01 Web Design

Lessons & practice

- HTML semantics and forms
- CSS Grid and Flexbox
- Bootstrap, Tailwind CSS and Core JavaScript

HANDS-ON Build a responsive product form and check keyboard and input feedback.

02 Advanced JavaScript & ECMAScript

Lessons & practice

- ES6–ES10 syntax and modules
- Array and object transforms
- Fetch, promises and async/await

HANDS-ON Load products and show loading, empty and failed responses.

MERN Stack / Full Stack with Node.js

Course content

MODULES 03–04

03 React, Redux & Redux Toolkit

Lessons & practice

- React components, routes and hooks
- Controlled forms
- Redux Toolkit slices, selectors and async actions

HANDS-ON Use a Redux slice to manage catalogue filters and inventory state.

04 Node.js & Express.js

Lessons & practice

- Node.js modules and runtime
- Express routes and middleware
- Validation and structured errors

HANDS-ON Build an order endpoint and check its result when a required field is missing.

MERN Stack / Full Stack with Node.js

Course content

MODULES 05–06

05 MongoDB & database practice

Lessons & practice

- MongoDB documents and indexes
- SQL relationships and queries
- CRUD and consistency

HANDS-ON Store an order and verify a query that retrieves a customer's order history.

06 Integration and delivery

Lessons & practice

- End-to-end tests
- Permissions and runtime configuration
- Deployment and documentation

HANDS-ON Trace an order through React, Express and MongoDB and document how to run the project.

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FULL STACK

MEAN Stack

MongoDB • Express.js • Angular • Node.js



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MEAN Stack

Syllabus at a glance

01

Web and TypeScript

02

Angular frontend

03

Node.js and Express

04

MongoDB and data modelling

05

Identity and integration

06

Testing and deployment

PORTFOLIO PROJECT

Appointment Scheduler

Build an Angular scheduler and use Express and MongoDB to save appointments and detect conflicts.

MEAN Stack

Core concepts

01

Web and TypeScript

Build responsive pages and use TypeScript to model inputs and request data.

02

Angular frontend

Use components, routing, reactive forms, services, RxJS and HttpClient.

03

Node.js and Express

Build REST routes, controllers and middleware. Validate inputs and return structured errors.

TOOLS & TOPICS

MongoDB • Express.js • Angular • Node.js

MEAN Stack

Applied skills

04

MongoDB and data modelling

Store appointments in documents, design indexes and compare SQL and NoSQL data models.

05

Identity and integration

Apply permissions, connect forms to APIs and show loading, error and empty states.

06

Testing and deployment

Test booking conflicts, check data consistency and document environment settings.

TOOLS & TOPICS

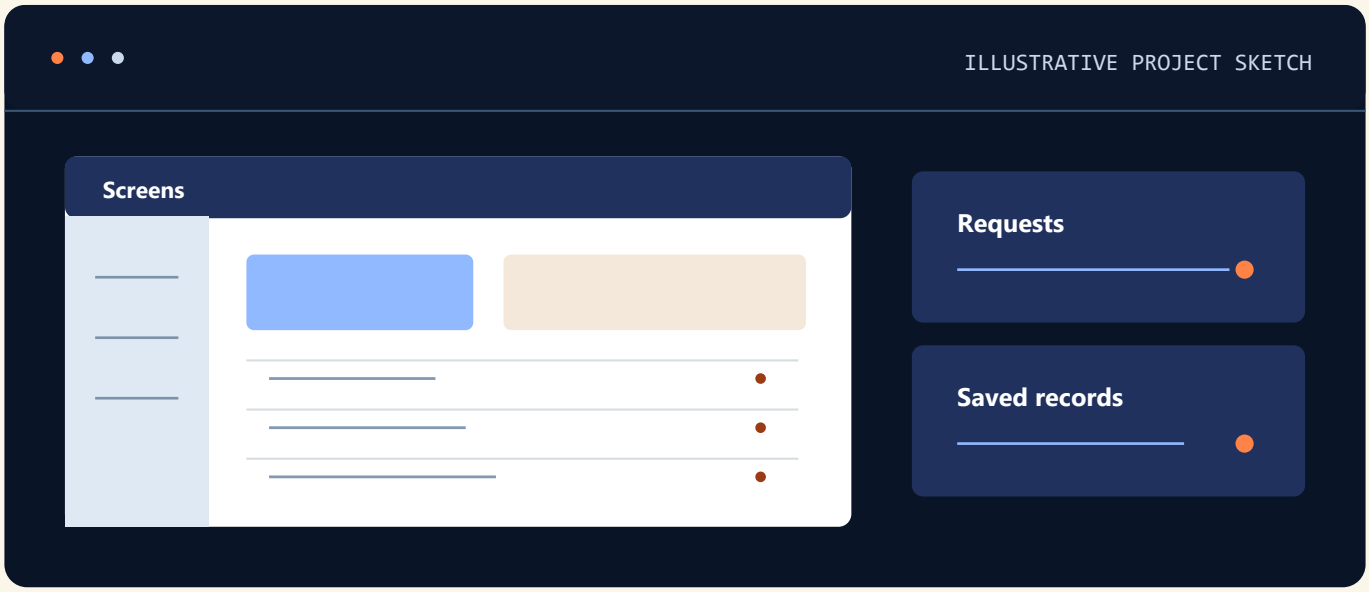
MongoDB • Express.js • Angular • Node.js

MEAN Stack

Portfolio project

Appointment Scheduler

Build an Angular scheduler and use Express and MongoDB to save appointments and detect conflicts.



Map the request

Trace one user action through the interface, API and data store.

Check the flow

Test a successful request, a validation error and a permission error.

Working screens, an API checklist, a database sketch and setup instructions.

MEAN Stack

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Book an appointment

Show the Angular request, the API response and the stored appointment.

02

Handle a time conflict

Confirm an overlapping appointment is rejected and the error appears in the form.

03

Prepare the project

Provide sample data, a setup guide and test cases for the main workflow.

MEAN Stack

Course fees

COMPLETE COURSE

₹28,500

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SCAN FOR MAP

View course details online

MEAN Stack

Course content

MODULES 01–02

01 Web and TypeScript

Lessons & practice

- Responsive HTML and CSS
- TypeScript types and interfaces
- Browser forms

HANDS-ON Create a validated appointment form backed by typed request data.

02 Angular frontend

Lessons & practice

- Angular components and routing
- Reactive forms and services
- RxJS and HttpClient

HANDS-ON Show loading, empty and error states in a scheduler view.

MEAN Stack

Course content

MODULES 03–04

03 Node.js and Express

Lessons & practice

- Node.js modules
- Express controllers and middleware
- API validation and errors

HANDS-ON Return a clear result for both valid and invalid booking requests.

04 MongoDB and data modelling

Lessons & practice

- MongoDB documents and indexes
- Date and overlap queries
- Relational and document models

HANDS-ON Save an appointment and demonstrate how the system detects a conflicting time.

MEAN Stack

Course content

MODULES 05–06

05 Identity and integration

Lessons & practice

- Authentication and permissions
- UI-to-API contact points
- Feedback for rejected actions

HANDS-ON Test a normal booking, an unauthorized request and a conflict.

06 Testing and deployment

Lessons & practice

- Regression tests
- Runtime configuration
- Deployment and handoff

HANDS-ON Present setup steps, sample data and a repeatable booking test.

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FULL STACK WEB DEVELOPMENT COURSE

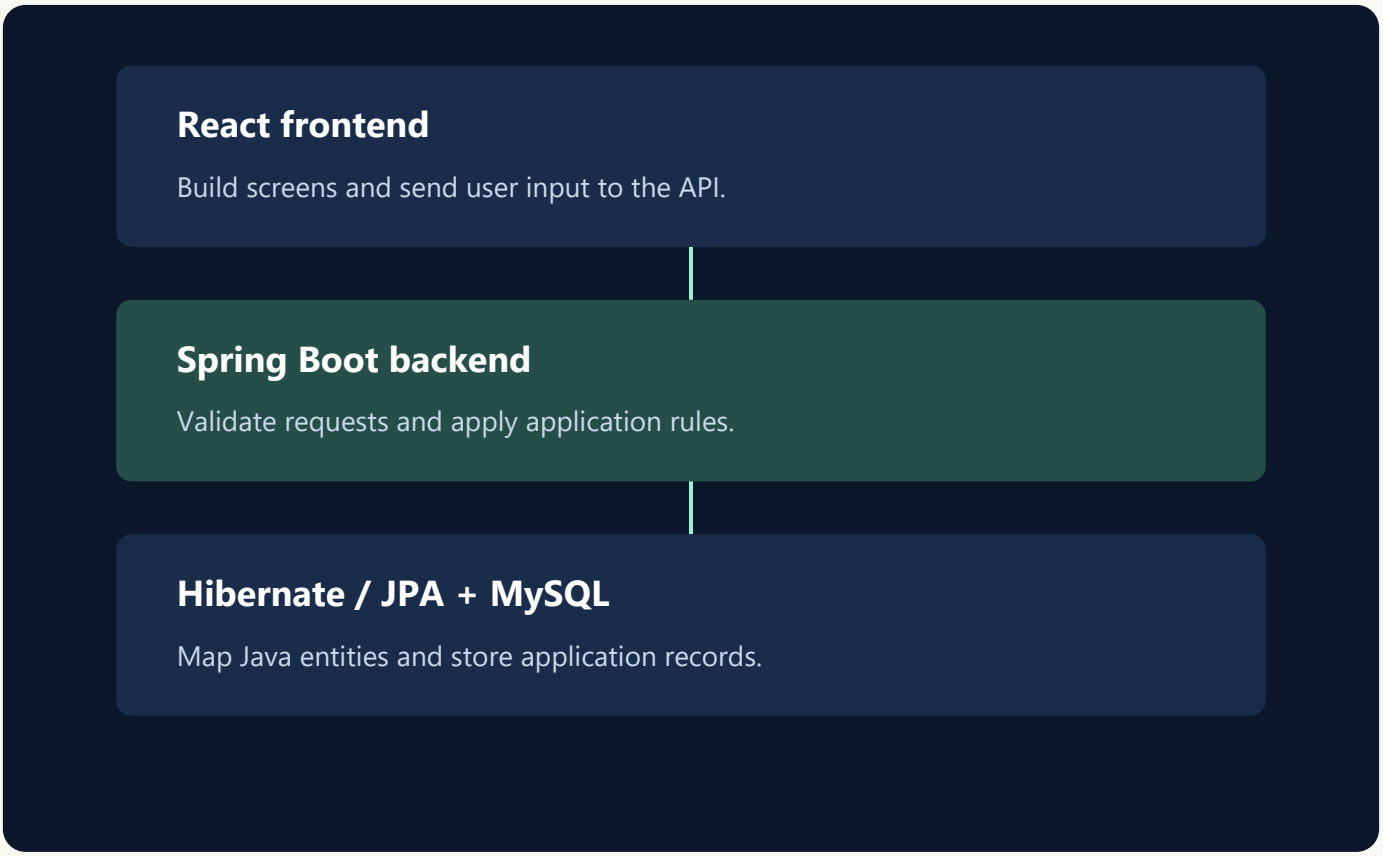
Java Full Stack Web Development

Build a React frontend, Spring Boot APIs and a MySQL-backed web application.



How the Java stack fits together

Follow a course application from a browser form through the Java API to MySQL.



Frontend

Learn responsive HTML/CSS, JavaScript and React with Redux.

Backend

Progress from Core Java and JDBC to Spring Boot and Hibernate.

Project

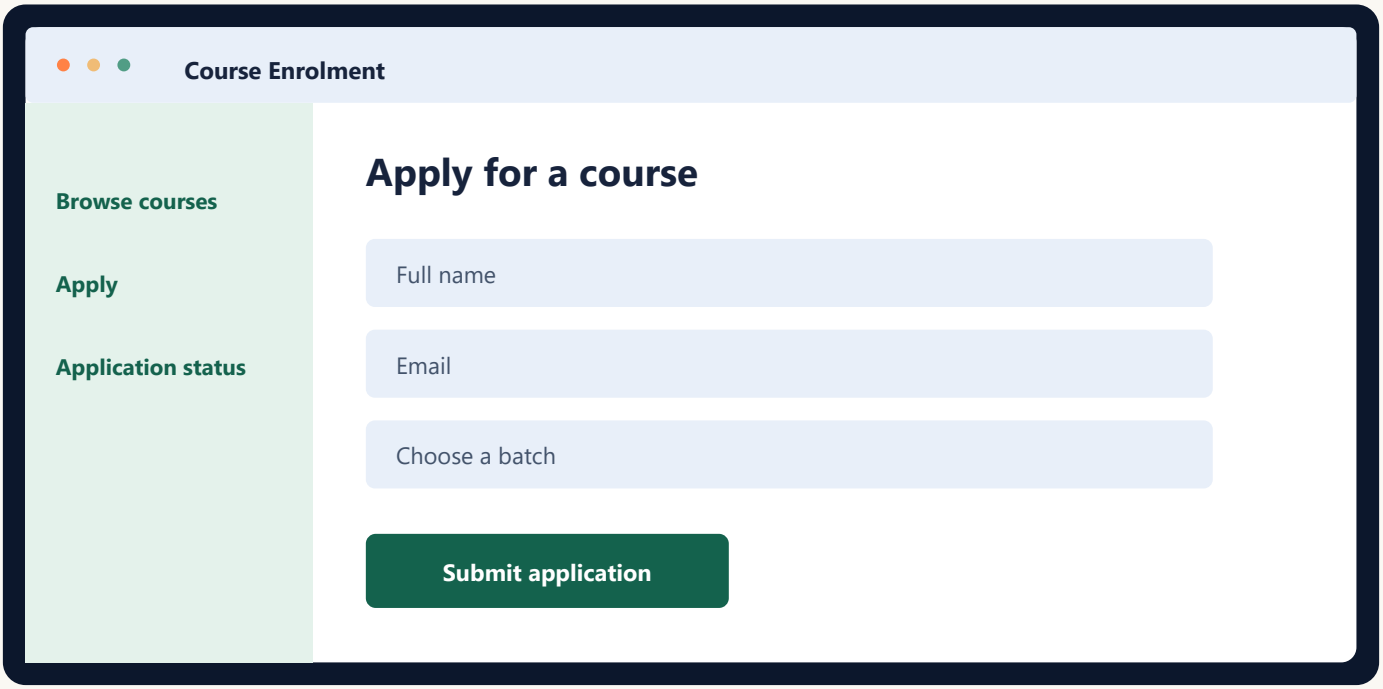
Connect both layers and demonstrate an end-to-end workflow.

WHO IT'S FOR

For students and developers learning to build complete web applications with Java.

Build responsive web pages

Create a course application form with clear labels, flexible layouts and visible focus states.



ILLUSTRATIVE STUDENT APPLICATION FORM

HTML and CSS

Use semantic HTML, form inputs, Flexbox, Grid and breakpoints.

CSS frameworks

Build interface elements with Bootstrap and Tailwind CSS.

Core JavaScript

Handle events and update an interface in response to user input.

PRACTICE

Build the application form and test it in a narrow browser window and with a keyboard.

Make pages work with data

Use modern ECMAScript features to read, transform and display data returned by a Java API.

batches.js

```
async function loadOpenBatches() {
    const response = await fetch('/api/batches');
    if (!response.ok) throw new Error('Could not load batches');
    const batches = await response.json();
    return batches.filter(({ open }) => open);
}
```

Language

Review ES6 to ES10, modules, destructuring and array methods.

Asynchronous code

Use promises and async/await to handle API requests and errors.

Browser workflow

Validate inputs, handle JSON and show loading and empty states.

PRACTICE

Fetch available batches and give the student a helpful message when the request fails.

Build a React application

Connect the enrolment screens with reusable components, routing and shared state.

01 **Components, props and hooks**

Create course cards, form fields and status panels. Use props and hooks such as useState and useEffect.

02 **Routing and forms**

Use React Router for the course list, application form and status screen. Validate data before submitting.

03 **Redux and Redux Toolkit**

Use slices and selectors for shared data such as the selected batch and application status.

PRACTICE

Select a course, move to its application screen and show a confirmation after submitting.

Learn Java fundamentals

Represent courses, batches and applications as Java objects before adding the web layer.

Application.java

```java
public class Application {
    private final String studentName;
    public Application(String studentName) {
        this.studentName = studentName;
    }
}
```

Java basics

Work with the JDK, classes, data types, methods, loops and conditions.

Object-oriented design

Use encapsulation, interfaces, inheritance and polymorphism.

Collections and errors

Work with List, Map and generics. Handle exceptions and invalid input.

PRACTICE

Create an application model, store records in a collection and filter them by status.

Connect Java to the web

Understand how HTTP requests, Java server code and a relational database work together.

01 **JDBC and SQL**

Connect to MySQL, execute parameterised queries, read results and manage database resources.

02 **Servlets and JSP**

Study servlet lifecycle, HTTP request/response handling, sessions and the role of JSP views.

03 **MVC and build workflow**

Separate presentation, request handling and data access. Review project builds with Maven and deployment with Tomcat.

PRACTICE

Read course records with JDBC and render the list in a simple Java web application.

Build Spring Boot APIs

Structure REST endpoints around controllers, services and repositories.

CourseController.java

```java
@RestController
@RequestMapping("/api/courses")
class CourseController {
    private final CourseService service;
    CourseController(CourseService service) { this.service = service; }
    @GetMapping
    List<CourseDto> courses() { return service.list(); }
}
```

Spring basics

Use dependency injection, configuration and Spring Boot project setup.

REST endpoints

Map routes to handlers and return JSON with appropriate HTTP status codes.

API quality

Validate request data, handle exceptions and test endpoints with Postman.

PRACTICE

Build a course-list endpoint and check both successful and invalid responses.

Persist application records

Map Java entities to MySQL tables and manage changes through repository methods and transactions.

Batches

id (primary key)

course_id (reference)

capacity

start_date

Applications

id (primary key)

batch_id (reference)

student_id (reference)

status

Students

id (primary key)

name

email

created_at

Each application connects one student to one course batch.

Entity mapping

Use JPA annotations for entities, IDs and table relationships.

Repositories

Use Spring Data JPA for CRUD, filters and pagination.

Transactions

Group related updates and review how to prevent inconsistent records.

PRACTICE

Retrieve applications for a batch and update an application’s status in a transaction.

Connect React and Java

Send browser requests to Spring Boot and keep the frontend in sync with database changes.

01

Integrate screens with REST APIs

Load courses, submit applications and fetch their latest status. Handle validation errors and unavailable services.

02

Protect staff actions

Understand authentication and role-based access. Enforce staff permissions on the server when an application is reviewed.

03

Configure environments

Use environment settings for API URLs and database connections. Review cross-origin requests for separate web and API hosts.

PRACTICE

Submit an application in React and confirm it can be retrieved from MySQL through the Java API.

Prepare the app for release

Verify the browser, API and database workflow before sharing a deployment.

01

Use Git and Maven

Track work in Git and GitHub, build the Java application with Maven and document how to run the frontend.

02

Test the workflow

Use JUnit for Java logic and Postman for API checks. Test the form, permission rules and database updates end to end.

03

Package and deploy

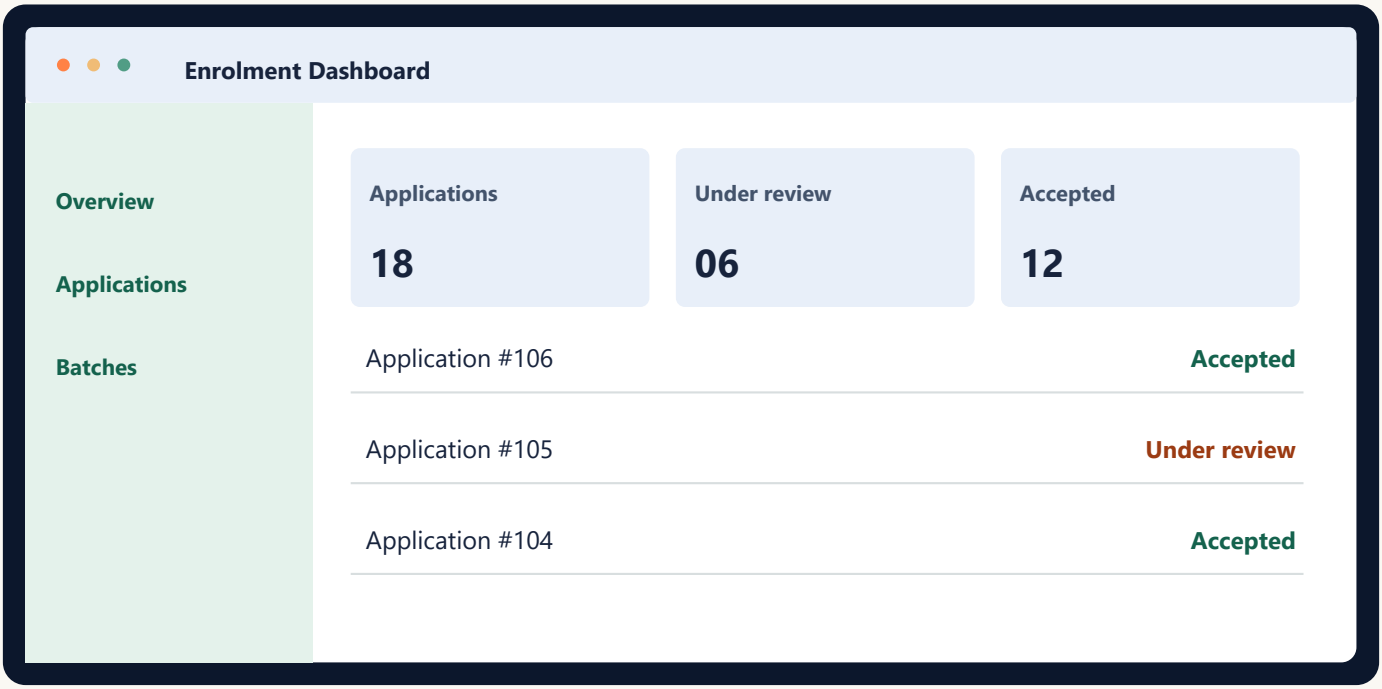
Review environment configuration, use application logs to diagnose issues and run a smoke test after deployment.

PRACTICE

Run a test application and document the steps to verify the deployed frontend and backend.

Student enrolment portal

Build a web app where students apply for courses and staff review those applications.



ILLUSTRATIVE STAFF DASHBOARD

Student workflow

Browse courses, submit an application and check its status.

Staff workflow

Review applications, filter by batch and update statuses.

Backend

Save records in MySQL and expose clear REST endpoints for both views.

PROJECT DEMO

Submit a sample application, approve it as staff and show the updated status in the student view.

Present what you built

Use the project to explain your code, the data model and how you handled failures.

01

Write a setup guide

Include steps to start the React app and Spring Boot service, configure MySQL and load sample data.

02

Record a workflow demo

Show a completed application and an example where the API rejects invalid input.

03

Explain your technical choices

Trace a request through the controller, service and repository. Explain the entity relationships and permission checks.

INTERVIEW PRACTICE

Use your project examples to prepare for entry-level Java backend and full-stack interviews.

Module and package fees

Published module and programme fees in Indian rupees.

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Java backend pathway	₹22,500
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SCAN FOR MAP

Java Full Stack course details

Java Backend course details

Java Full Stack Development

Course content

MODULES 01–02

01

Lessons & practice

- HTML
- CSS
- JavaScript
- React
- Redux Toolkit

HANDS-ON — Build an enrolment form and manage its pending and submitted state with React and Redux Toolkit.

02

Lessons & practice

- Core Java
- OOP
- Collections
- Exceptions

HANDS-ON — Model applications as Java objects and reject invalid input with a clear exception.

Java Full Stack Development

Course content

MODULES 03–04

03

Lessons & practice

- JDBC
- SQL
- Servlet/JSP web fundamentals

HANDS-ON

Load enrolment records with a JDBC repository and render a result via Servlet/JSP.

04

Lessons & practice

- Spring Boot controllers
- Services
- REST APIs

HANDS-ON

Build a Spring Boot application endpoint with DTO validation and structured errors.

Java Full Stack Development

Course content

MODULES 05–06

05

Lessons & practice

- Hibernate
- JPA relationships
- Transactions

HANDS-ON

Map students, courses and applications with JPA and verify transaction rollback.

06

Lessons & practice

- Frontend integration
- Test cases
- Deployment

HANDS-ON

Connect the browser flow to the Java API and document setup and a repeatable test.

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FULL STACK

Python Full Stack with React & Django

React.js • JavaScript • Python • Django • REST APIs



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Python Full Stack with React & Django

Syllabus at a glance

01

Frontend foundations

02

React.js frontend

03

Python programming

04

Django backend

05

Databases & REST APIs

06

Integration & deployment

PORTFOLIO PROJECT

Workshop Booking Portal

Build a React booking experience that consumes Django REST endpoints and saves registrations in a database.

Python Full Stack with React & Django

Core concepts

01

Frontend foundations

Work through responsive HTML and CSS forms, JavaScript modules and asynchronous requests.

02

React.js frontend

Build screens with components, hooks, forms, routing and loading and error states.

03

Python programming

Write reusable Python functions and classes. Use environments, modules and exceptions.

TOOLS & TOPICS

React.js • JavaScript • Python • Django • REST APIs

Python Full Stack with React & Django

Applied skills

04

Django backend

Organise routes, applications, models, validation and role-based access.

05

Databases & REST APIs

Use the Django ORM and migrations. Expose booking resources with Django REST Framework (DRF).

06

Integration & deployment

Connect React to Django, check permissions and error responses, and prepare deployment settings.

TOOLS & TOPICS

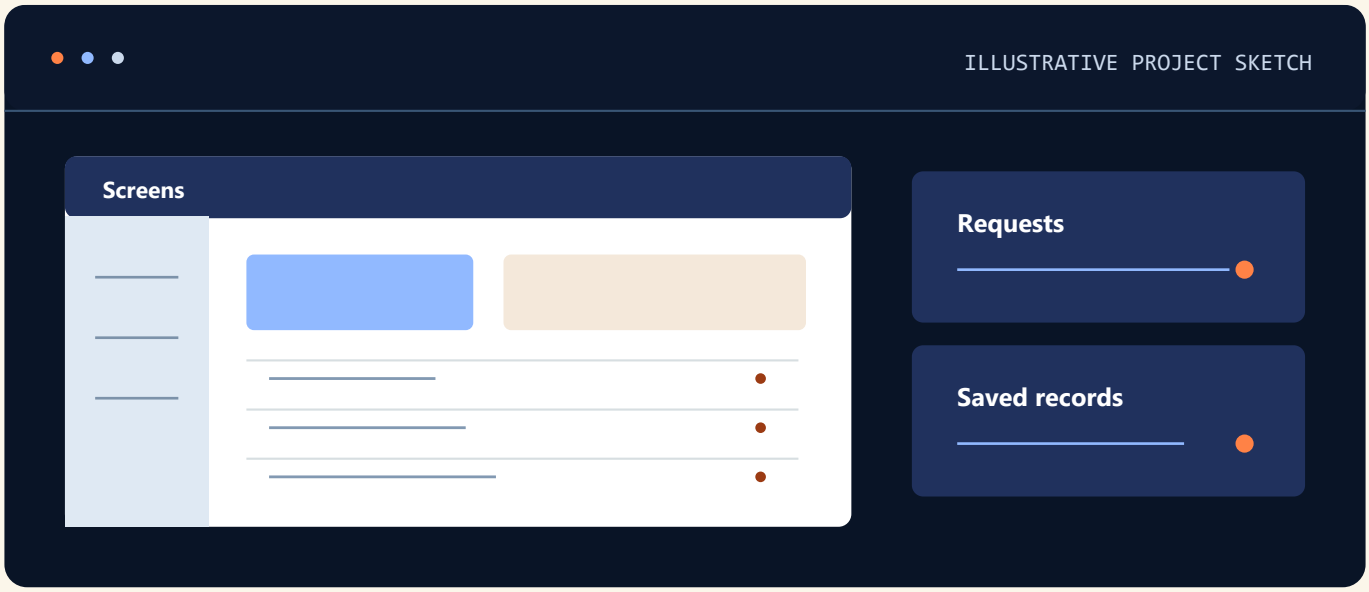
React.js • JavaScript • Python • Django • REST APIs

Python Full Stack with React & Django

Portfolio project

Workshop Booking Portal

Build a React booking experience that consumes Django REST endpoints and saves registrations in a database.



Map the request

Trace one user action through the interface, API and data store.

Check the flow

Test a successful request, a validation error and a permission error.

Working screens, an API checklist, a database sketch and setup instructions.

Python Full Stack with React & Django

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Trace a booking

Follow React form data through a Django REST endpoint to the saved record.

02

Verify access rules

Check a normal booking, invalid data and a restricted staff action.

03

Prepare a walkthrough

Include API examples, sample data and launch instructions for both applications.

Python Full Stack with React & Django

Course fees

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SCAN FOR MAP

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Python Full Stack with React & Django

Course content

MODULES 01–02

01 Frontend foundations

Lessons & practice

- Semantic HTML and responsive CSS
- JavaScript modules and Fetch
- Forms and validation

HANDS-ON Build a labelled form and verify keyboard and mobile behaviour.

02 React.js frontend

Lessons & practice

- React components and JSX
- Hooks and routes
- Loading and error states

HANDS-ON Create workshop list and detail routes using sample API data.

Python Full Stack with React & Django

Course content

MODULES 03–04

03 Python programming

Lessons & practice

- Python functions and classes
- Modules and environments
- Validation and exceptions

HANDS-ON Write a testable capacity rule that rejects an invalid booking.

04 Django backend

Lessons & practice

- Django projects and apps
- URL routing and views
- Models, permissions and admin

HANDS-ON Create workshop and booking models and restrict a staff-only action.

Python Full Stack with React & Django

Course content

MODULES 05–06

05 Databases & REST APIs

Lessons & practice

- Django ORM and migrations
- Serialisers and validation
- Django REST Framework endpoints

HANDS-ON Create and list bookings through an API and verify filtered database results.

06 Integration & deployment

Lessons & practice

- React-to-Django integration
- Authentication and useful errors
- Tests and deployment configuration

HANDS-ON Demonstrate a valid booking and a rejected request with setup instructions.

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FULL STACK

.NET Full Stack with Angular

Angular • TypeScript • C# • ASP.NET Core • Entity Framework Core



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.NET Full Stack with Angular

Syllabus at a glance

01

Web and TypeScript foundations

02

Angular frontend

03

C# and .NET

04

ASP.NET Core Web API

05

Entity Framework Core & SQL

06

Integration & delivery

PORTFOLIO PROJECT

Order Management Portal

Build an Angular order dashboard backed by ASP.NET Core APIs and a relational database.

.NET Full Stack with Angular

Core concepts

01

Web and TypeScript foundations

Build responsive layouts and practise TypeScript types, functions and form input.

02

Angular frontend

Use components, routing, services, reactive forms, RxJS and HttpClient.

03

C# and .NET

Apply object-oriented design, collections, LINQ and asynchronous methods on the server.

TOOLS & TOPICS

Angular • TypeScript • C# • ASP.NET Core • Entity Framework Core

.NET Full Stack with Angular

Applied skills

04

ASP.NET Core Web API

Build validated REST endpoints with controllers, dependency injection and middleware.

05

Entity Framework Core & SQL

Model orders and line items, apply migrations and test database queries and transactions.

06

Integration & delivery

Connect Angular to the API, handle errors and permissions, and test and publish the application.

TOOLS & TOPICS

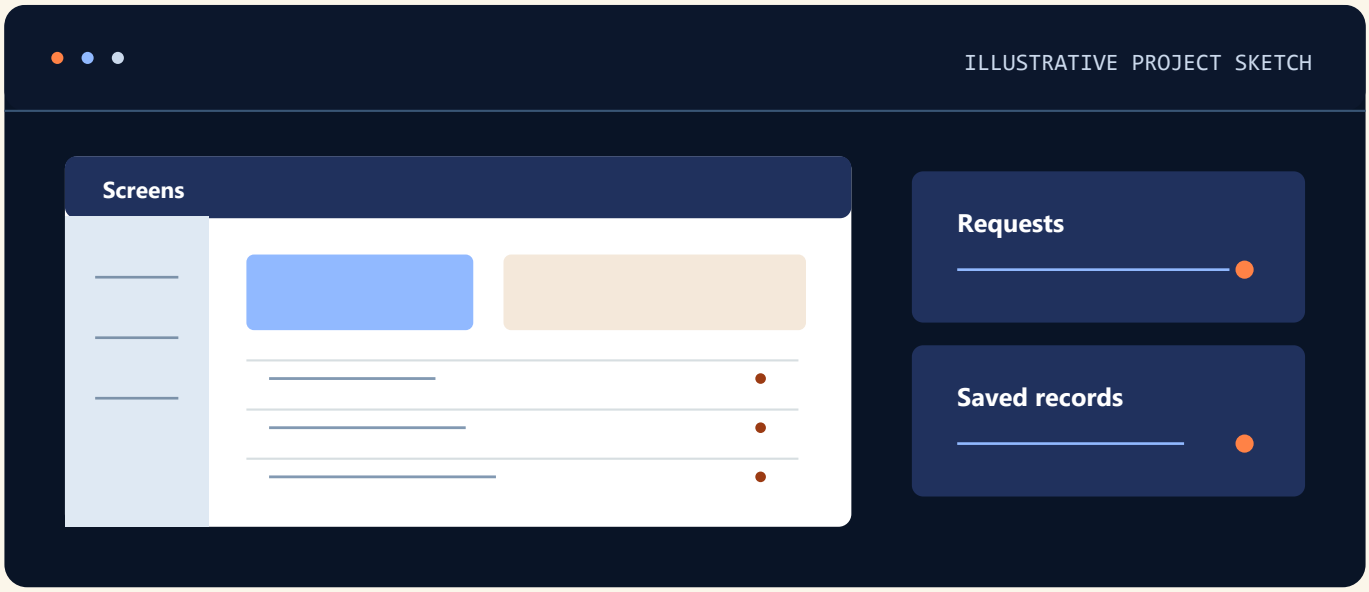
Angular • TypeScript • C# • ASP.NET Core • Entity Framework Core

.NET Full Stack with Angular

Portfolio project

Order Management Portal

Build an Angular order dashboard backed by ASP.NET Core APIs and a relational database.



Map the request

Trace one user action through the interface, API and data store.

Check the flow

Test a successful request, a validation error and a permission error.

Working screens, an API checklist, a database sketch and setup instructions.

.NET Full Stack with Angular

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Create a valid order

Show the Angular form, the API request, and the saved order and line items.

02

Reject invalid requests

Test missing fields and permissions and confirm the API returns useful errors.

03

Package the demo

Document frontend and backend startup, database migration and sample data.

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SCAN FOR MAP

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.NET Full Stack with Angular

Course content

MODULES 01–02

01 Web and TypeScript foundations

Lessons & practice

- Responsive HTML and CSS
- TypeScript types and interfaces
- Accessible form controls

HANDS-ON Build an order form that works at narrow widths and with a keyboard.

02 Angular frontend

Lessons & practice

- Angular components and templates
- Routing and services
- Reactive forms, RxJS and HttpClient

HANDS-ON Make an order screen show loading, validation and API error feedback.

.NET Full Stack with Angular

Course content

MODULES 03–04

03 C# and .NET

Lessons & practice

- C# classes and interfaces
- LINQ and typed collections
- Async methods and tasks

HANDS-ON Implement an order-total service and test a discount and an empty cart.

04 ASP.NET Core Web API

Lessons & practice

- ASP.NET Core controllers and routes
- Dependency injection and middleware
- DTO validation and HTTP errors

HANDS-ON Build a create-order endpoint that rejects missing fields.

.NET Full Stack with Angular

Course content

MODULES 05–06

05 Entity Framework Core & SQL

Lessons & practice

- Entity Framework Core relationships
- Migrations and queries
- Transactions

HANDS-ON Save an order and its items together and reconcile totals from stored data.

06 Integration & delivery

Lessons & practice

- API integration and access rules
- Angular and API testing
- Configuration and publishing

HANDS-ON Trace an order end to end and document how to run both applications.

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WEB DEVELOPMENT

React.js

SAMPLE PROJECT

Product Comparison Dashboard



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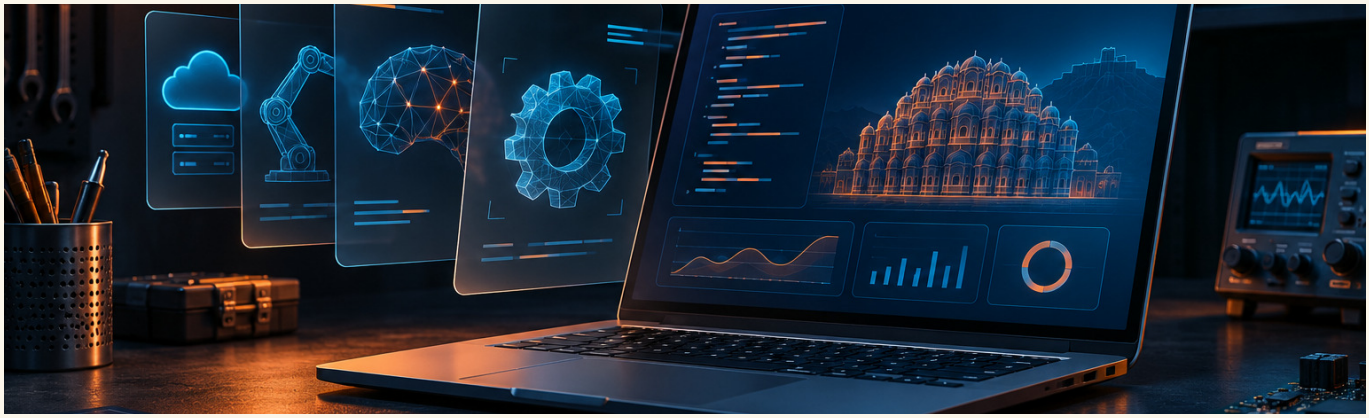
React.js

Core concepts



01 JSX, components, props and lists

02 State, effects, forms and reusable hooks

03 Routing, layouts and navigation

Sketch the states

Plan normal, loading, empty and error states for the demo.

React.js

Applied skills

- **Interface**
- **Interactions**
- **Response states**



04 Fetching, loading, empty and error states

05 Redux, Redux Toolkit slices and async actions

06 Accessibility, component testing and deployment

PROJECT DELIVERABLES

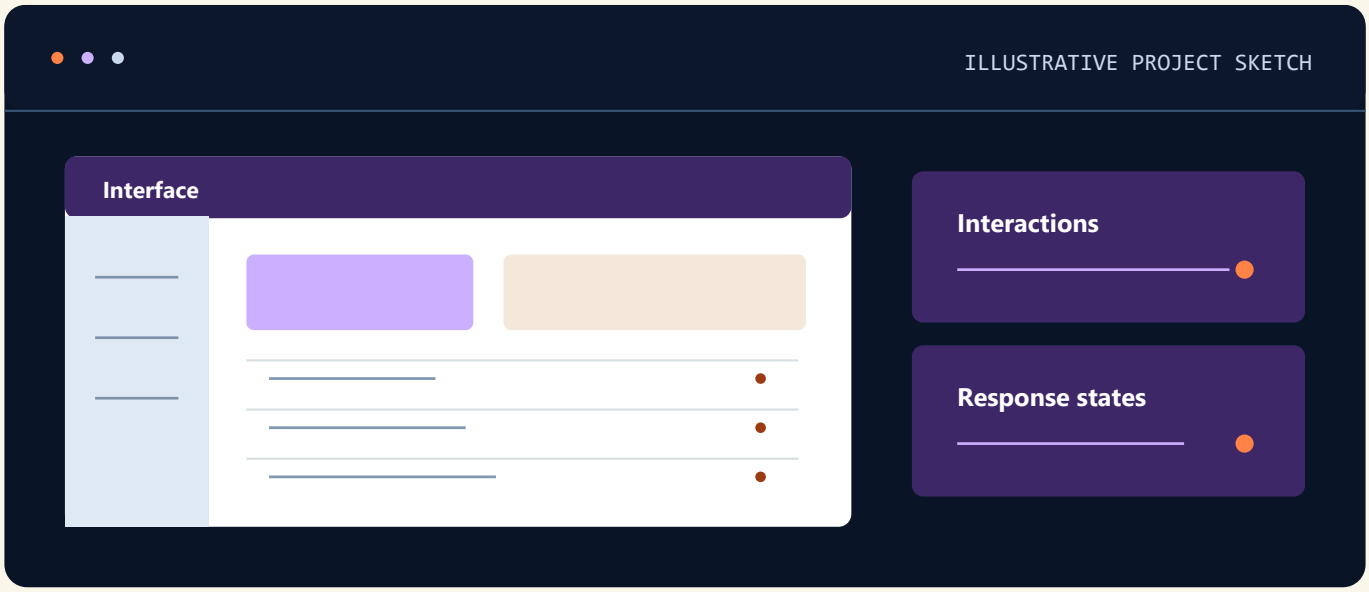
A working demo, test cases and notes on how the interface or service is organised.

React.js

Portfolio project

Product Comparison Dashboard

Build sortable product cards with route-based views, Redux Toolkit state and API error handling.



Sketch the states

Plan normal, loading, empty and error states for the demo.

Test the interface

Check the main workflow and record how it handles an invalid input.

A working demo, test cases and notes on how the interface or service is organised.

React.js

Course fees

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SCAN FOR MAP

Check course details

React.js

Course content

MODULES 01–02

01

Lessons & practice

- JSX
- Components
- Props
- Lists

HANDS-ON Render product records as reusable JSX cards with stable keys.

02

Lessons & practice

- State
- Effects
- Forms
- Reusable hooks

HANDS-ON Make a controlled form and move repeated state logic into a custom hook.

React.js

Course content

MODULES 03–04

03

Lessons & practice

- Routing
- Layouts
- Navigation

HANDS-ON Add list and detail routes and a shared navigation layout.

04

Lessons & practice

- Fetching
- Loading
- Empty
- Error states

HANDS-ON Load product records and test the loading, empty and failed responses.

React.js

Course content

MODULES 05–06

05

Lessons & practice

- Redux
- Redux Toolkit slices
- Async actions

HANDS-ON Use a Redux Toolkit slice and selector to maintain saved items across routes.

06

Lessons & practice

- Accessibility
- Component testing
- Deployment

HANDS-ON Test a keyboard interaction and create a production build.

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WEB DEVELOPMENT

Angular Frontend Module

Angular • TypeScript • RxJS • HttpClient



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Angular Frontend Module

Syllabus at a glance

01

TypeScript and Angular setup

02

Components and templates

03

Navigation and services

04

Reactive forms

05

RxJS and HttpClient

06

Testing and builds

PORTFOLIO PROJECT

Support Ticket Portal

Build an Angular ticket form and dashboard with client validation and API-backed filters.

Angular Frontend Module

Core concepts

01

TypeScript and Angular setup

Practise types and interfaces. Set up Angular CLI and inspect the project structure.

02

Components and templates

Use standalone components, inputs, outputs, directives and pipes to build screens.

03

Navigation and services

Connect routes and use dependency injection for shared services.

TOOLS & TOPICS

Angular • TypeScript • RxJS • HttpClient

Angular Frontend Module

Applied skills

04

Reactive forms

Validate ticket data, show accessible messages and handle submission states.

05

RxJS and HttpClient

Read and update ticket data, filter results and handle empty, loading and error states.

06

Testing and builds

Test a core component and prepare a production frontend build.

TOOLS & TOPICS

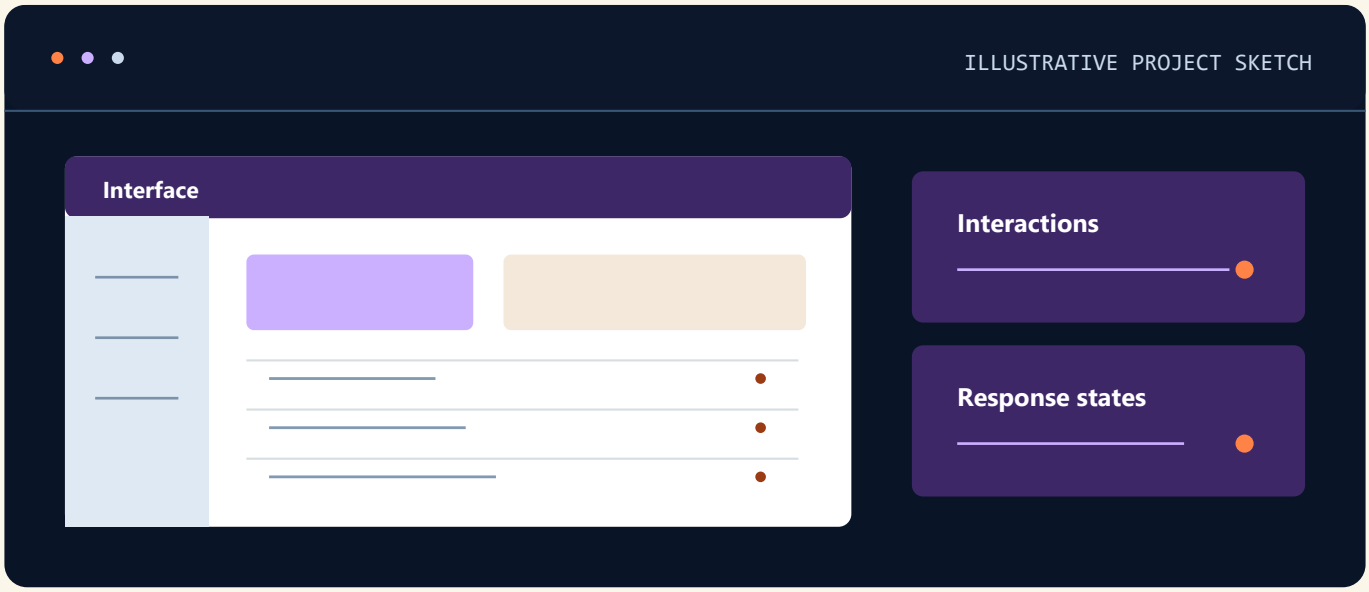
Angular • TypeScript • RxJS • HttpClient

Angular Frontend Module

Portfolio project

Support Ticket Portal

Build an Angular ticket form and dashboard with client validation and API-backed filters.



Sketch the states

Plan normal, loading, empty and error states for the demo.

Test the interface

Check the main workflow and record how it handles an invalid input.

A working demo, test cases and notes on how the interface or service is organised.

Angular Frontend Module

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Connect two screens

Navigate from the list to a ticket detail and open a new ticket form.

02

Validate the request

Cover missing required fields and a backend error response.

03

Show updates

Demonstrate that a newly saved ticket appears in the appropriate filtered list.

Angular Frontend Module

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SCAN FOR MAP

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Angular Frontend Module

Course content

MODULES 01–02

01 TypeScript and Angular setup

Lessons & practice

- TypeScript types and interfaces
- Angular CLI setup
- Workspace structure

HANDS-ON Run a project and display a typed list of support tickets.

02 Components and templates

Lessons & practice

- Standalone components and imports
- Inputs and outputs
- Binding, directives and pipes

HANDS-ON Create a reusable card with formatted status and dates.

Angular Frontend Module

Course content

MODULES 03–04

03 Navigation and services

Lessons & practice

- Navigation and route parameters
- Dependency injection
- Shared services

HANDS-ON Open a ticket by ID and handle an unknown result.

04 Reactive forms

Lessons & practice

- Reactive form controls
- Built-in and custom validators
- Accessible messages

HANDS-ON Prevent a submission when required fields are empty.

Angular Frontend Module

Course content

MODULES 05–06

05 RxJS and HttpClient

Lessons & practice

- RxJS streams and HttpClient
- Filtering and updates
- Loading, empty and error handling

HANDS-ON Fetch and filter tickets and display a useful request failure.

06 Testing and builds

Lessons & practice

- Component tests
- Production build
- Frontend configuration

HANDS-ON Test form validation and build the app with the expected configuration.

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WEB DEVELOPMENT

Node.js

SAMPLE PROJECT

Book Catalogue API

ex



NODE.JS BACKEND TRACK

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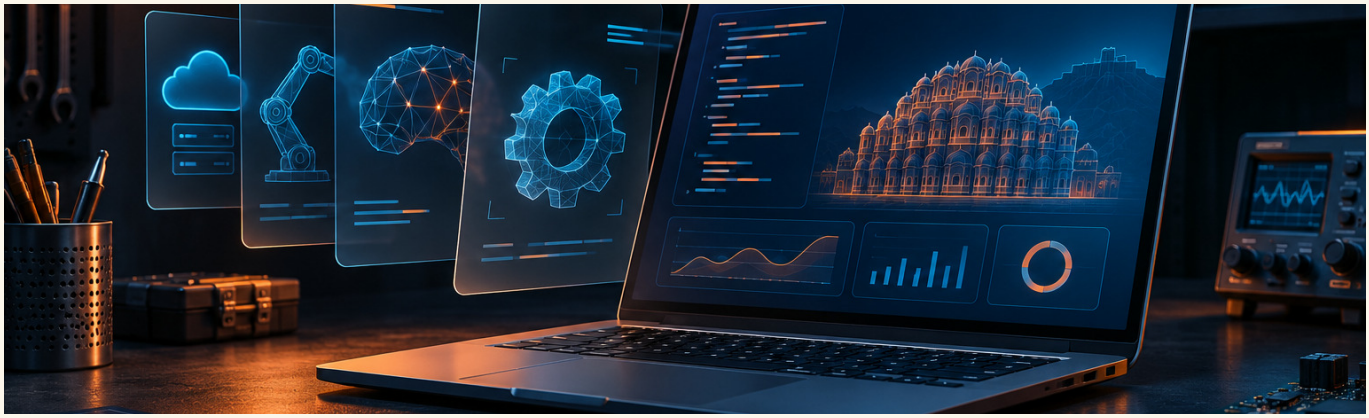
Node.js

Core concepts



01	Node.js runtime, npm, modules and event loop
02	Promises, async/await and filesystem basics
03	Express routes, controllers and middleware

Sketch the states

Plan normal, loading, empty and error states for the demo.

Node.js

Applied skills

- **Interface**
- **Interactions**
- **Response states**



04 REST resources, validation and error handling

05 Database integration, authentication and configuration

06 API tests, logging and deployment

PROJECT DELIVERABLES

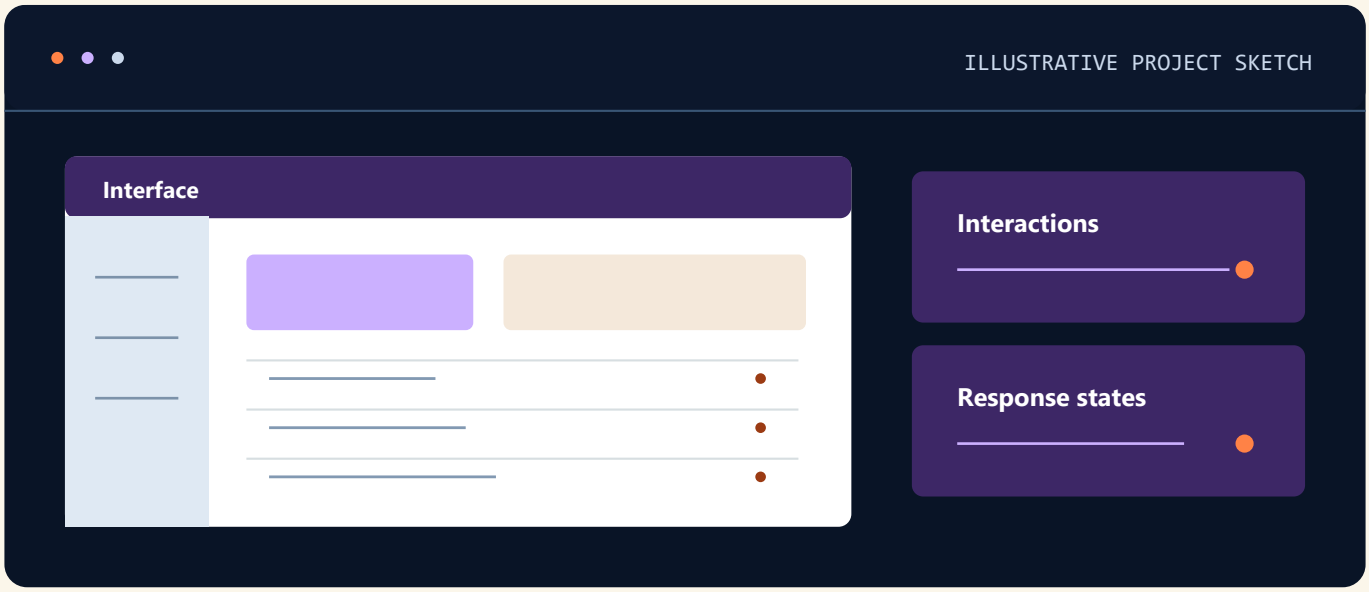
A working demo, test cases and notes on how the interface or service is organised.

Node.js

Portfolio project

Book Catalogue API

Build an Express API that validates records, persists catalogue changes and returns consistent errors.



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Test the interface

Check the main workflow and record how it handles an invalid input.

A working demo, test cases and notes on how the interface or service is organised.

Node.js

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NODE.JS BACKEND TRACK

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SCAN FOR MAP

Check course details

Node.js

Course content

MODULES 01–02

01

Lessons & practice

- Node.js runtime
- Npm
- Modules
- Event loop

HANDS-ON

Create a Node.js project and compare synchronous output with an asynchronous callback.

02

Lessons & practice

- Promises
- Async/await
- Filesystem basics

HANDS-ON

Read a JSON file asynchronously and return useful feedback if it is missing.

Node.js

Course content

MODULES 03–04

03

Lessons & practice

- Express routes
- Controllers
- Middleware

HANDS-ON

Separate a catalogue feature into an Express router, controller and middleware.

04

Lessons & practice

- REST resources
- Validation
- Error handling

HANDS-ON

Test a resource creation endpoint with valid and invalid payloads.

Node.js

Course content

MODULES 05–06

05

Lessons & practice

- Database integration
- Authentication
- Configuration

HANDS-ON Connect the API to persistent storage and check a restricted action.

06

Lessons & practice

- API tests
- Logging
- Deployment

HANDS-ON Run API tests, inspect a request log and document environment settings.

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WEB DEVELOPMENT

Next.js

SAMPLE PROJECT

Content Directory



COURSE FEE

Fee on enquiry

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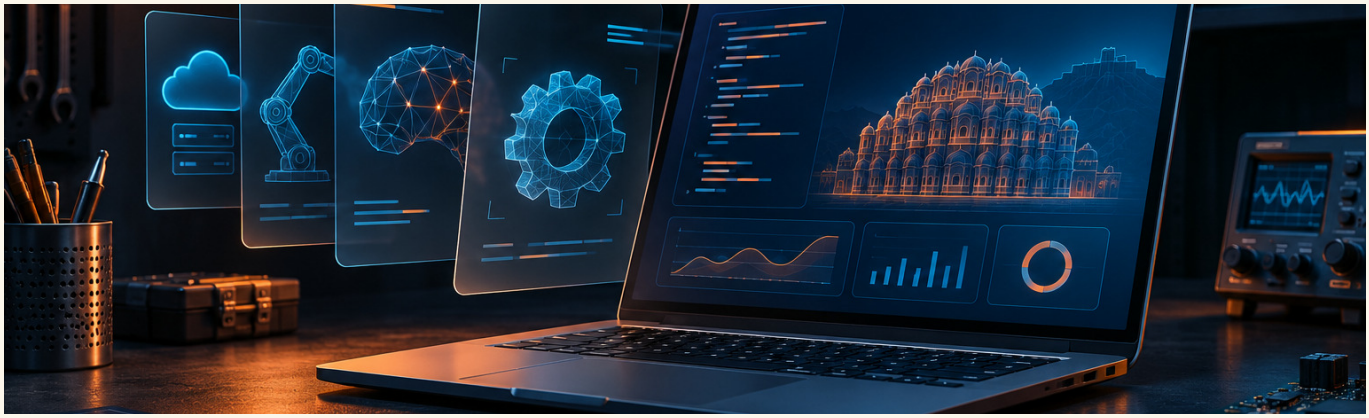
Next.js

Core concepts



01 App Router, layouts and rendering models

02 Server and Client Components

03 Dynamic routes, metadata and navigation

Sketch the states

Plan normal, loading, empty and error states for the demo.

Next.js

Applied skills

- **Interface**
- **Interactions**
- **Response states**



04 Data fetching, loading states and caching

05 Forms, route handlers and input validation

06 Builds, accessibility checks and deployment

PROJECT DELIVERABLES

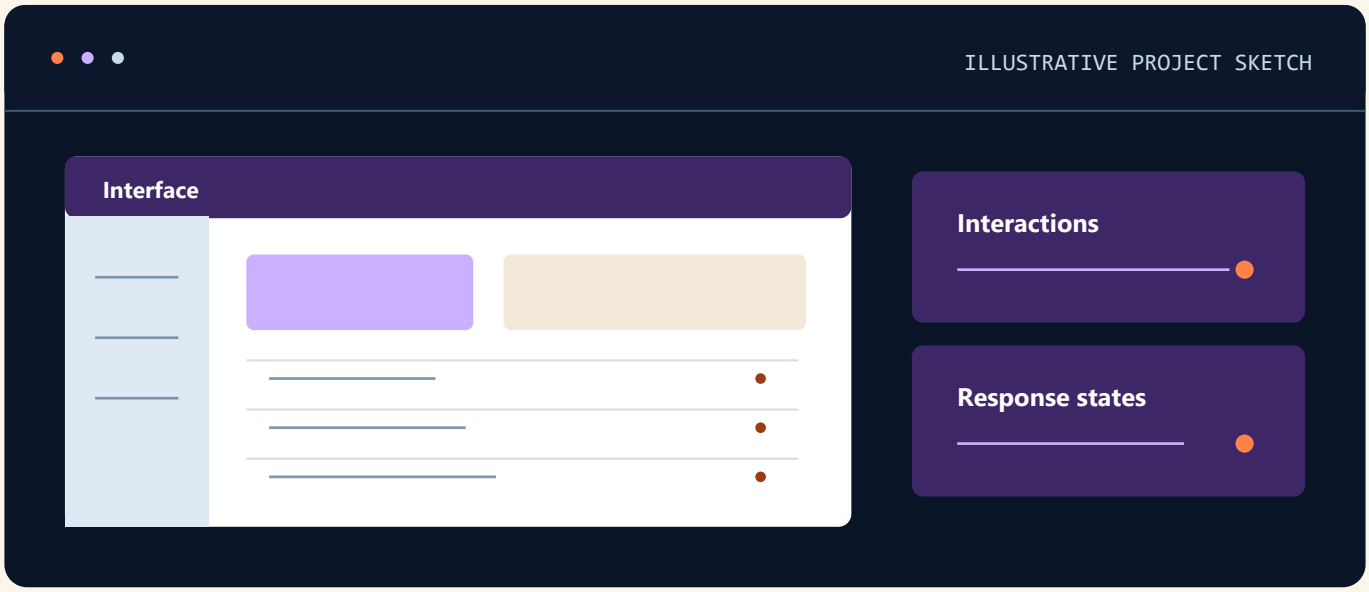
A working demo, test cases and notes on how the interface or service is organised.

Next.js

Portfolio project

Content Directory

Build a searchable directory with server-rendered pages, dynamic detail routes and a submission form.



Sketch the states

Plan normal, loading, empty and error states for the demo.

Test the interface

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A working demo, test cases and notes on how the interface or service is organised.

Next.js

Course fees

COURSE FEE

Fee on enquiry

Ask admissions for the course fee, available batches and enrolment details.

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SCAN FOR MAP

Check course details

Next.js

Course content

MODULES 01–02

01

Lessons & practice

- App Router
- Layouts
- Rendering models

HANDS-ON

Create App Router layouts and compare static and dynamic pages for a content directory.

02

Lessons & practice

- Server
- Client Components

HANDS-ON

Separate server-side data loading from an interactive client filter.

Next.js

Course content

MODULES 03–04

03

Lessons & practice

- Dynamic routes
- Metadata
- Navigation

HANDS-ON — Add a dynamic detail route and generate page metadata from the record.

04

Lessons & practice

- Data fetching
- Loading states
- Caching

HANDS-ON — Handle loading and missing content and explain the chosen caching behaviour.

Next.js

Course content

MODULES 05–06

05

Lessons & practice

- Forms
- Route handlers
- Input validation

HANDS-ON Validate a sample form through a route handler and show an accessible error.

06

Lessons & practice

- Builds
- Accessibility checks
- Deployment

HANDS-ON Run a production build and test navigation and metadata on the deployed site.

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WEB DEVELOPMENT

Frontend Development with React.js

HTML • CSS • Bootstrap • Tailwind CSS • JavaScript • React • Redux Toolkit



COMPLETE FRONTEND COURSE

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Frontend Development with React.js

Syllabus at a glance

01

Web Design

02

Core JavaScript in the browser

03

Advanced JavaScript & ECMAScript

04

React.js application development

05

Redux & Redux Toolkit

06

Frontend delivery

PORTFOLIO PROJECT

Product Directory Frontend

Create a responsive product directory, load API data and use Redux Toolkit for shared state.

Frontend Development with React.js

Core concepts

01

Web Design

Build semantic HTML pages. Use CSS, Flexbox and Grid for responsive layouts. Practise Bootstrap, Tailwind CSS and Core JavaScript in browser exercises.

02

Core JavaScript in the browser

Read and update the DOM, respond to events, validate a form and check keyboard and mobile behaviour.

03

Advanced JavaScript & ECMAScript

Follow the ES6–ES10 track with modules, let and const, destructuring, spread, promises and async/await. Practise Fetch, errors and JSON.

TOOLS & TOPICS

HTML • CSS • Bootstrap • Tailwind CSS • JavaScript • React • Redux Toolkit

Frontend Development with React.js

Applied skills

04

React.js application development

Build JSX components, pass props, manage hooks and compose reusable layouts and routes.

05

Redux & Redux Toolkit

Build slices and selectors, connect shared state to UI components and handle asynchronous requests.

06

Frontend delivery

Check accessibility, responsive layouts and browser behaviour. Test and deploy a working frontend.

TOOLS & TOPICS

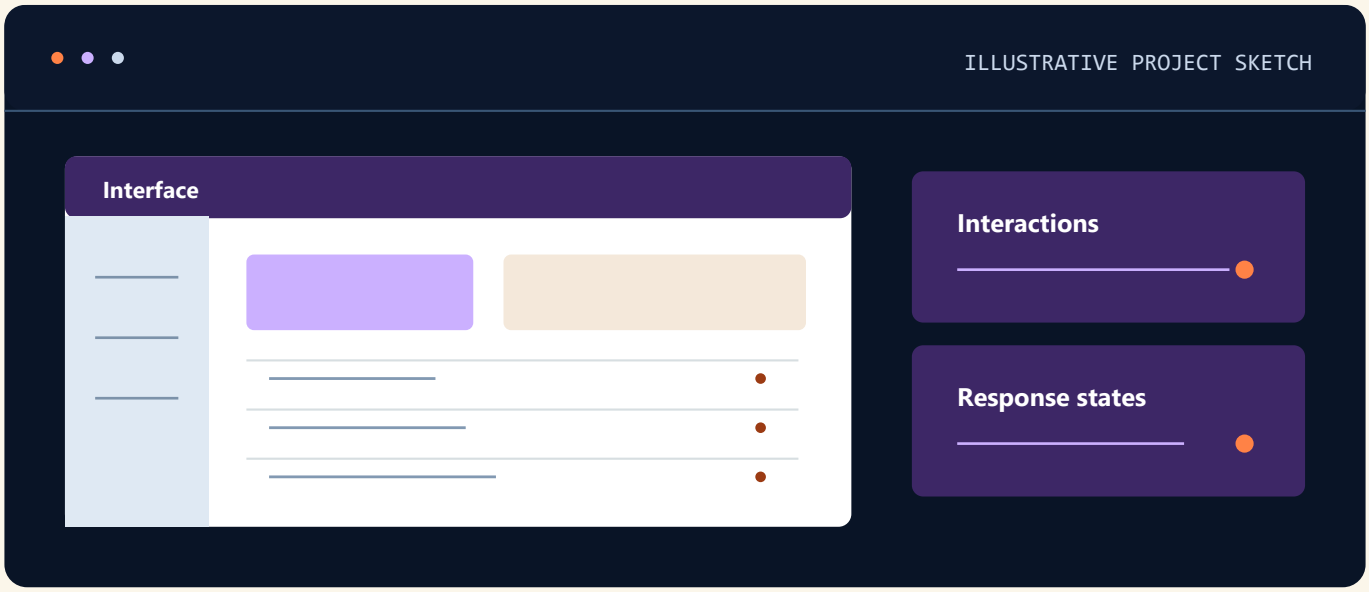
HTML • CSS • Bootstrap • Tailwind CSS • JavaScript • React • Redux Toolkit

Frontend Development with React.js

Portfolio project

Product Directory Frontend

Create a responsive product directory, load API data and use Redux Toolkit for shared state.



Sketch the states

Plan normal, loading, empty and error states for the demo.

Test the interface

Check the main workflow and record how it handles an invalid input.

A working demo, test cases and notes on how the interface or service is organised.

Frontend Development with React.js

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Make the directory responsive

Confirm the product grid, navigation and forms work with touch and keyboard inputs.

02

Connect the API

Load products and cover empty, loading and error states.

03

Explain shared state

Show how Redux Toolkit manages filters or saved products across screens.

Frontend Development with React.js

Course fees

COMPLETE FRONTEND COURSE

₹20,000

MODULE	INR
Web Design	₹7,500
Advanced JavaScript & ECMAScript (ES6–ES10)	₹4,000
React, Redux & Redux Toolkit	₹8,500

Contact admissions for current batches, class timings and enrolment details.

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SCAN FOR MAP

View course details online

Frontend Development with React.js

Course content

MODULES 01–02

01 Web Design

Lessons & practice

- Semantic HTML and forms
- CSS Grid and Flexbox
- Bootstrap components, Tailwind utilities and Core JavaScript

HANDS-ON Build a product card and form that work at mobile and desktop widths.

02 Core JavaScript in the browser

Lessons & practice

- DOM selection and events
- Client-side validation
- Keyboard and responsive checks

HANDS-ON Add catalogue filtering and form feedback without reloading the page.

Frontend Development with React.js

Course content

MODULES 03–04

03 Advanced JavaScript & ECMAScript

Lessons & practice

- ES6–ES10 syntax and modules
- Immutable data transforms
- Promises, Fetch and async/await

HANDS-ON

Load a product feed and show empty data, malformed data and request errors.

04 React.js application development

Lessons & practice

- JSX and props
- Hooks and controlled forms
- Page layout and React routing

HANDS-ON

Build list and detail routes that share a filter interface.

Frontend Development with React.js

Course content

MODULES 05–06

05 Redux & Redux Toolkit

Lessons & practice

- Redux principles and Redux Toolkit
- Slices and selectors
- Async actions and state debugging

HANDS-ON Keep filter settings in a store and explain what changes when you dispatch an action.

06 Frontend delivery

Lessons & practice

- Accessible interactions
- Component and browser tests
- Production builds and deployment

HANDS-ON Test keyboard and mobile flows and publish the directory demo.

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WEB DEVELOPMENT

Frontend Development with Angular

HTML • CSS • Bootstrap • Tailwind CSS • JavaScript • TypeScript • Angular



COMPLETE FRONTEND COURSE

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Frontend Development with Angular

Syllabus at a glance

01

Web Design

02

Core JavaScript in the browser

03

Advanced JavaScript & ECMAScript

04

TypeScript & Angular

05

Services, RxJS & forms

06

Frontend delivery

PORTFOLIO PROJECT

Product Directory Frontend

Build a responsive Angular product directory with API data, routing and validated forms.

Frontend Development with Angular

Core concepts

01

Web Design

Build semantic HTML pages. Use CSS, Flexbox and Grid for responsive layouts. Practise Bootstrap, Tailwind CSS and Core JavaScript in browser exercises.

02

Core JavaScript in the browser

Read and update the DOM, respond to events, validate a form and check keyboard and mobile behaviour.

03

Advanced JavaScript & ECMAScript

Follow the ES6–ES10 track with modules, let and const, destructuring, spread, promises and async/await. Practise Fetch, errors and JSON.

TOOLS & TOPICS

HTML • CSS • Bootstrap • Tailwind CSS • JavaScript • TypeScript • Angular

Frontend Development with Angular

Applied skills

04

TypeScript & Angular

Use TypeScript types, standalone components, templates, data binding and navigation.

05

Services, RxJS & forms

Manage application data with services and observable streams. Use reactive forms and HttpClient.

06

Frontend delivery

Check accessibility, responsive layouts and browser behaviour. Test and deploy a working frontend.

TOOLS & TOPICS

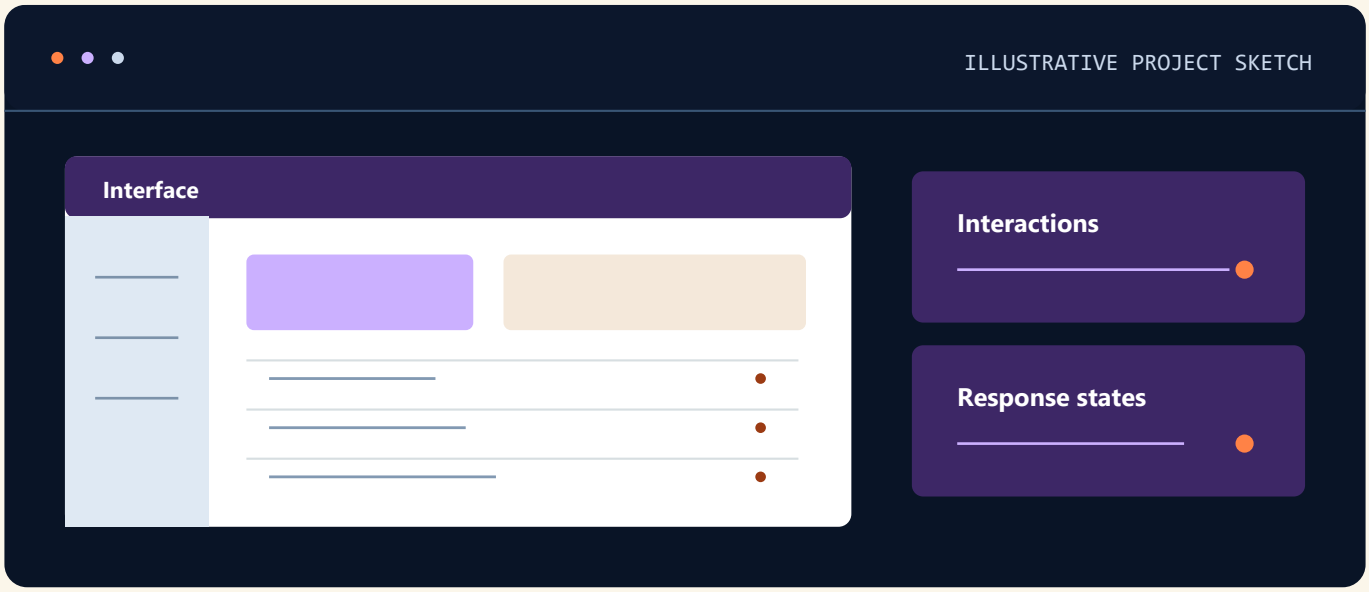
HTML • CSS • Bootstrap • Tailwind CSS • JavaScript • TypeScript • Angular

Frontend Development with Angular

Portfolio project

Product Directory Frontend

Build a responsive Angular product directory with API data, routing and validated forms.



Sketch the states

Plan normal, loading, empty and error states for the demo.

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Check the main workflow and record how it handles an invalid input.

A working demo, test cases and notes on how the interface or service is organised.

Frontend Development with Angular

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Make the directory responsive

Confirm the product grid, navigation and forms work with touch and keyboard inputs.

02

Connect the API

Load products through an Angular service and cover empty, loading and error states.

03

Test the form

Demonstrate reactive validation and a successful request to update a product.

Frontend Development with Angular

Course fees

COMPLETE FRONTEND COURSE

₹20,000

MODULE	INR
Web Design	₹7,500
Advanced JavaScript & ECMAScript (ES6–ES10)	₹4,000
Angular	₹8,500

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SCAN FOR MAP

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Frontend Development with Angular

Course content

MODULES 01–02

01 Web Design

Lessons & practice

- Semantic HTML and forms
- CSS Grid and Flexbox
- Bootstrap components, Tailwind utilities and Core JavaScript

HANDS-ON Build a product card and form that work at mobile and desktop widths.

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Lessons & practice

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- Client-side validation
- Keyboard and responsive checks

HANDS-ON Add catalogue filtering and form feedback without reloading the page.

Frontend Development with Angular

Course content

MODULES 03–04

03 Advanced JavaScript & ECMAScript

Lessons & practice

- ES6–ES10 syntax and modules
- Immutable data transforms
- Promises, Fetch and async/await

HANDS-ON Load a product feed and show empty data, malformed data and request errors.

04 TypeScript & Angular

Lessons & practice

- TypeScript interfaces
- Angular standalone components
- Templates, binding and routes

HANDS-ON Build a list and detail route with a shared responsive layout.

Frontend Development with Angular

Course content

MODULES 05–06

05 Services, RxJS & forms

Lessons & practice

- Dependency injection and services
- RxJS and HttpClient
- Reactive forms and validation

HANDS-ON Fetch product data through a service and validate an edit form.

06 Frontend delivery

Lessons & practice

- Accessible interactions
- Component and browser tests
- Production builds and deployment

HANDS-ON Test keyboard and mobile flows and publish the directory demo.

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JAVA

Core Java / Java Programming

Java • OOP • Collections • Streams



COURSE FEE

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Core Java / Java Programming

Syllabus at a glance

01

Java foundations

02

Arrays, strings & packages

03

Object-oriented Java

04

Exceptions & collections

05

Files, lambdas & streams

06

Testing & debugging

PORTFOLIO PROJECT

Bank Account Simulator

Build a Java console application that records transactions and tests invalid operations.

Core Java / Java Programming

Core concepts

01

Java foundations

Use the JDK and JVM. Practise types, operators, conditions, loops and methods.

02

Arrays, strings & packages

Process collections of values and organise source files into packages.

03

Object-oriented Java

Use classes, constructors, access modifiers, interfaces, inheritance and polymorphism.

TOOLS & TOPICS

Java • OOP • Collections • Streams

Core Java / Java Programming

Applied skills

04

Exceptions & collections

Handle predictable failures and choose lists, sets or maps for different data needs.

05

Files, lambdas & streams

Persist records, then filter and summarise transactions.

06

Testing & debugging

Trace program behaviour, reproduce errors and test the core rules.

TOOLS & TOPICS

Java • OOP • Collections • Streams

Core Java / Java Programming

Portfolio project

Bank Account Simulator

Build a Java console application that records transactions and tests invalid operations.



Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

Core Java / Java Programming

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Model accounts

Create reusable account and transaction types and define how balances are calculated.

02

Test business rules

Reject invalid amounts and check the balance remains accurate after each operation.

03

Explain the implementation

Walk through the data model, a test case and how to run the application.

Core Java / Java Programming

Course fees

COURSE FEE

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SCAN FOR MAP

View course details online

Core Java / Java Programming

Course content

MODULES 01–02

01 Java foundations

Lessons & practice

- JDK, JVM and compilation
- Primitive types and expressions
- Conditions, loops and methods

HANDS-ON Compile and run a menu with valid, invalid and exit inputs.

02 Arrays, strings & packages

Lessons & practice

- Arrays and strings
- StringBuilder
- Packages and access control

HANDS-ON Format a sample array of transaction descriptions.

Core Java / Java Programming

Course content

MODULES 03–04

03 Object-oriented Java

Lessons & practice

- Classes and constructors
- Encapsulation and interfaces
- Inheritance and polymorphism

HANDS-ON Make an account change its balance only through defined methods.

04 Exceptions & collections

Lessons & practice

- Exceptions and control flow
- Lists, sets and maps
- Basic generics

HANDS-ON Reject a duplicate transaction reference without changing the balance.

Core Java / Java Programming

Course content

MODULES 05–06

05 Files, lambdas & streams

Lessons & practice

- File input and output
- Lambda expressions
- Filtering and reducing with streams

HANDS-ON Read a transaction file and calculate deposit and withdrawal totals.

06 Testing & debugging

Lessons & practice

- Breakpoints and debugging
- Unit-test assertions
- Project structure

HANDS-ON Test a rejected withdrawal and check the balance and transaction count.

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JAVA

Advanced Java (Servlets & JSP)

Java • Servlets • JSP • JSTL • JDBC



ADVANCED JAVA MODULE

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Advanced Java (Servlets & JSP)

Syllabus at a glance

01

Java web foundations

02

Java Servlets

03

JSP, EL & JSTL

04

JDBC and SQL

05

Session management and validation

06

Testing and deployment

PORTFOLIO PROJECT

Help Desk Web App

Submit and review support tickets using Java Servlets, JSP views and a JDBC repository.

Advanced Java (Servlets & JSP)

Core concepts

01

Java web foundations

Understand HTTP methods and status codes and configure a Java web application in a practice server.

02

Java Servlets

Work with servlet lifecycle, route mapping, request parameters, responses, forwarding and redirects.

03

JSP, EL & JSTL

Render lists, forms and messages using JavaServer Pages, Expression Language and JSTL.

TOOLS & TOPICS

Java • Servlets • JSP • JSTL • JDBC

Advanced Java (Servlets & JSP)

Applied skills

04

JDBC and SQL

Use a DAO and prepared statements to create and update tickets and map database results.

05

Session management and validation

Use sessions, filters and access checks. Handle invalid inputs and failed updates.

06

Testing and deployment

Test the browser-to-database flow, build an application package and document how to run it.

TOOLS & TOPICS

Java • Servlets • JSP • JSTL • JDBC

Advanced Java (Servlets & JSP)

Portfolio project

Help Desk Web App

Submit and review support tickets using Java Servlets, JSP views and a JDBC repository.



Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

Advanced Java (Servlets & JSP)

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Trace a submission

Show how the servlet accepts valid form data and how JSP displays the confirmation.

02

Validate access and errors

Test a missing field, a rejected action and a failed data update.

03

Demonstrate deployment

Share sample database records and instructions for running the web application.

Advanced Java (Servlets & JSP)

Course fees

ADVANCED JAVA MODULE

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SCAN FOR MAP

View course details online

Advanced Java (Servlets & JSP)

Course content

MODULES 01–02

01 Java web foundations

Lessons & practice

- HTTP request and response
- Java web application structure
- Server deployment and configuration

HANDS-ON

Run a sample Java web application and inspect the response for a missing route.

02 Java Servlets

Lessons & practice

- Servlet mapping and lifecycle
- GET and POST handling
- Forwarding and redirects

HANDS-ON

Accept a ticket form in a servlet, forward with errors and redirect after success.

Advanced Java (Servlets & JSP)

Course content

MODULES 03–04

03 JSP, EL & JSTL

Lessons & practice

- JSP views and Expression Language
- JSTL lists and conditions
- Form feedback and MVC separation

HANDS-ON Render a ticket list and show a validation error without losing the submitted data.

04 JDBC and SQL

Lessons & practice

- JDBC connections and DAO design
- Prepared statements
- ResultSet mapping and transaction basics

HANDS-ON Save a ticket from the servlet and reload it through a DAO query.

Advanced Java (Servlets & JSP)

Course content

MODULES 05–06

05 Session management and validation

Lessons & practice

- Sessions and access checks
- Servlet filters
- Validation, exceptions and rollback

HANDS-ON

Check a restricted action and confirm a failed ticket update leaves the data intact.

06 Testing and deployment

Lessons & practice

- Package and deploy the app
- Browser and repository testing
- Logs and handoff

HANDS-ON

Run the complete support-ticket workflow on a practice server and document the setup.

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JAVA

JDBC

SAMPLE PROJECT

Course Registration DAO



COURSE FEE

Fee on enquiry

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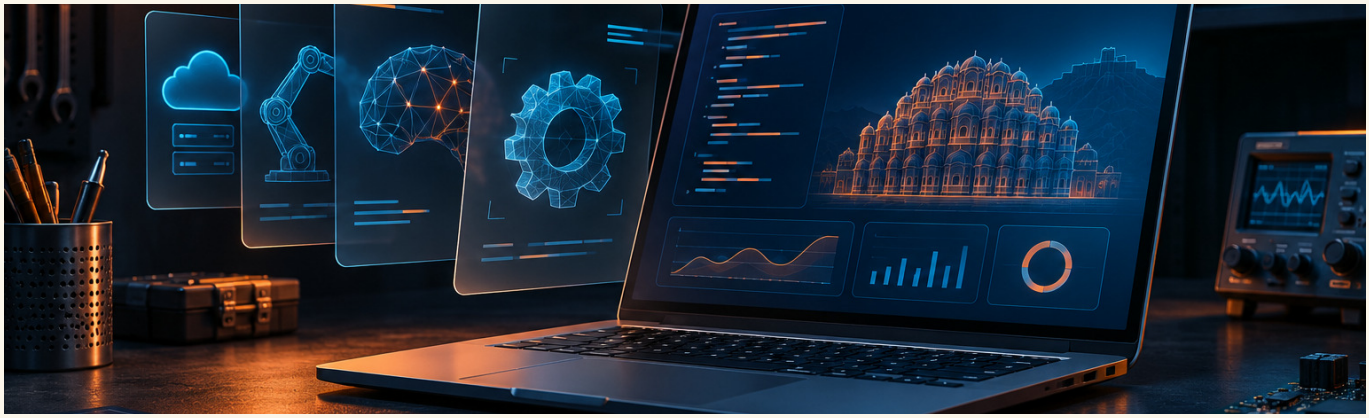
JDBC

Core concepts



01 Drivers, connections and database setup

02 PreparedStatement and typed parameter binding

03 ResultSet mapping and CRUD methods

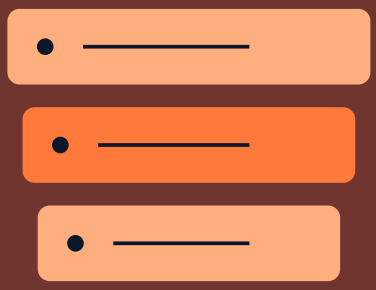
Model the domain

Identify data, actions and boundaries before writing the first class.

JDBC

Applied skills

- **Model**
- **Execute**
- **Verify result**



04 Transactions, rollback and batching

05 Data sources, pooling and resource management

06 DAO design, integration tests and SQL errors

PROJECT DELIVERABLES

A runnable Java project, test results and notes on design and error handling.

JDBC

Portfolio project

Course Registration DAO

Build repository methods for adding and finding enrolments with a transactional seat update.



Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

JDBC

Course fees

COURSE FEE

Fee on enquiry

Ask admissions for the course fee, available batches and enrolment details.

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SCAN FOR MAP

Check course details

JDBC

Course content

MODULES 01–02

01

Lessons & practice

- Drivers
- Connections
- Database setup

HANDS-ON

Configure a JDBC connection and report connection failures without exposing credentials.

02

Lessons & practice

- PreparedStatement
- Typed parameter binding

HANDS-ON

Bind values with PreparedStatement and test one insert and one filtered query.

JDBC

Course content

MODULES 03–04

03

Lessons & practice

- ResultSet mapping
- CRUD methods

HANDS-ON Map ResultSet rows to Java objects and build a record update method.

04

Lessons & practice

- Transactions
- Rollback
- Batching

HANDS-ON Perform a batch transaction and demonstrate rollback when one change fails.

JDBC

Course content

MODULES 05–06

05

Lessons & practice

- Data sources
- Pooling
- Resource management

HANDS-ON

Acquire connections from a data source and close resources after each operation.

06

Lessons & practice

- DAO design
- Integration tests
- SQL errors

HANDS-ON

Test a DAO against a practice database and distinguish validation errors from SQL failures.

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JAVA MODULE GUIDE

Servlets & JSP

Feedback Review App

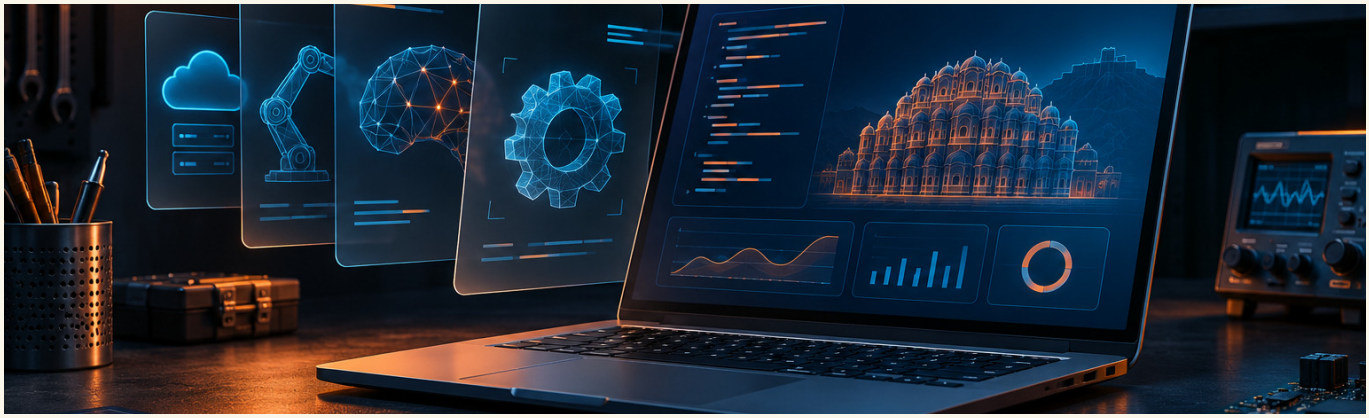


INCLUDED IN

Advanced Java (Servlets & JSP) **₹8,000**

Servlets & JSP

Core concepts



01 HTTP methods, servlet mapping and lifecycle

02 Form data, redirects and request forwarding

03 JSP, Expression Language and JSTL views

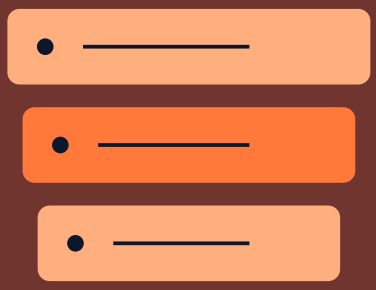
Model the domain

Identify data, actions and boundaries before writing the first class.

Servlets & JSP

Applied skills

- **Model**
- **Execute**
- **Verify result**



04 Sessions, cookies, filters and access checks

05 MVC flow, validation and JDBC integration

06 WAR packaging, tests and deployment

PROJECT DELIVERABLES

A runnable Java project, test results and notes on design and error handling.

Servlets & JSP

Portfolio project

Feedback Review App

Collect feedback through a servlet, render it with JSP and track sign-in state.



Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

Servlets & JSP

Included training

INCLUDED IN

Advanced Java (Servlets & JSP)

₹8,000 module fee

This topic is covered in the Advanced Java (Servlets & JSP) module.

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SCAN FOR MAP

View course details online

Servlets & JSP

Course content

MODULES 01–02

01

Lessons & practice

- HTTP methods
- Servlet mapping
- Lifecycle

HANDS-ON

Map a servlet and inspect which lifecycle methods handle valid requests.

02

Lessons & practice

- Form data
- Redirects
- Request forwarding

HANDS-ON

Forward invalid form data with an error and redirect on success.

Servlets & JSP

Course content

MODULES 03–04

03

Lessons & practice

- JSP
- Expression Language
- JSTL views

HANDS-ON Render a safe record list in JSP using Expression Language and JSTL.

04

Lessons & practice

- Sessions
- Cookies
- Filters
- Access checks

HANDS-ON Check that a filter protects restricted pages and that logout clears the session.

Servlets & JSP

Course content

MODULES 05–06

05

Lessons & practice

- MVC flow
- Validation
- JDBC integration

HANDS-ON — Wire a form through a controller, service and JDBC repository.

06

Lessons & practice

- WAR packaging
- Tests
- Deployment

HANDS-ON — Package the practice app, deploy it and verify a complete browser flow.

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JAVA

Spring Framework & Hibernate

Spring Core • Spring MVC • Spring Boot • Hibernate ORM • JPA



COMBINED FRAMEWORK MODULE

₹8,000

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Spring Framework & Hibernate

Syllabus at a glance

01

Spring Core and dependency injection

02

Spring Boot and Spring MVC

03

Hibernate and JPA entity mapping

04

Queries and transactions

05

REST and persistence integration

06

Testing and application delivery

PORTFOLIO PROJECT

Course Enrolment API

Build a Spring Boot enrolment service, persist records with Hibernate and verify transaction behaviour.

Spring Framework & Hibernate

Core concepts

01

Spring Core and dependency injection

Configure Spring beans, use constructor injection and organise dependencies through interfaces.

02

Spring Boot and Spring MVC

Set up starters and profiles. Trace controller mapping, request handling and response validation.

03

Hibernate and JPA entity mapping

Map entities, identifiers and relationships and inspect the resulting schema.

TOOLS & TOPICS

Spring Core • Spring MVC • Spring Boot • Hibernate ORM • JPA

Spring Framework & Hibernate

Applied skills

04

Queries and transactions

Use repositories, JPQL and transaction boundaries. Review lazy loading and rollback.

05

REST and persistence integration

Connect controllers, services and the persistence layer. Validate data and map errors to appropriate responses.

06

Testing and application delivery

Test endpoints and persistence, apply configuration by environment and package the service.

TOOLS & TOPICS

Spring Core • Spring MVC • Spring Boot • Hibernate ORM • JPA

Spring Framework & Hibernate

Portfolio project

Course Enrolment API

Build a Spring Boot enrolment service, persist records with Hibernate and verify transaction behaviour.

ILLUSTRATIVE PROJECT SKETCH

SCENARIO		EXPECTED EVIDENCE
01>	**Model**	Sample input or fixture
02>	**Execute**	Record the observed result
03>	**Verify result**	Compare against expectations

Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

Spring Framework & Hibernate

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Map an enrolment

Show how enrolment, course and student records are related in the model.

02

Exercise a failed update

Verify the records remain consistent after a failed or rejected enrolment.

03

Hand over the service

Provide launch instructions, API request examples and matching database checks.

Spring Framework & Hibernate

Course fees

COMBINED FRAMEWORK MODULE

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SCAN FOR MAP

View course details online

Spring Framework & Hibernate

Course content

MODULES 01–02

01 Spring Core and dependency injection

Lessons & practice

- IoC container and beans
- Constructor injection
- Configuration, scopes and lifecycle

HANDS-ON

Inject a course repository and swap in an in-memory implementation for a test.

02 Spring Boot and Spring MVC

Lessons & practice

- Spring Boot starters and profiles
- Spring MVC request mapping
- Controllers, DTOs and validation

HANDS-ON

Create an enrolment endpoint and check the structured response when a field is missing.

Spring Framework & Hibernate

Course content

MODULES 03–04

03 Hibernate and JPA entity mapping

Lessons & practice

- JPA entities and identifiers
- Hibernate relationships and mappings
- Schema and migration basics

HANDS-ON

Map courses, students and enrolments and verify the relationships in the database.

04 Queries and transactions

Lessons & practice

- JPQL and repository queries
- Transactional service methods
- Fetch strategies and rollback

HANDS-ON

Query course enrolments and verify rollback when a planned update fails.

Spring Framework & Hibernate

Course content

MODULES 05–06

05 REST and persistence integration

Lessons & practice

- Controller, service and persistence layers
- REST errors and validation
- Database integration

HANDS-ON

Trace a valid HTTP request through Spring and show the resulting Hibernate record.

06 Testing and application delivery

Lessons & practice

- Controller and persistence testing
- Environment-specific settings
- Application packaging and logs

HANDS-ON

Run tests for success and validation failure, then package the service with launch instructions.

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JAVA MODULE GUIDE

Spring Boot

Course Catalogue Service

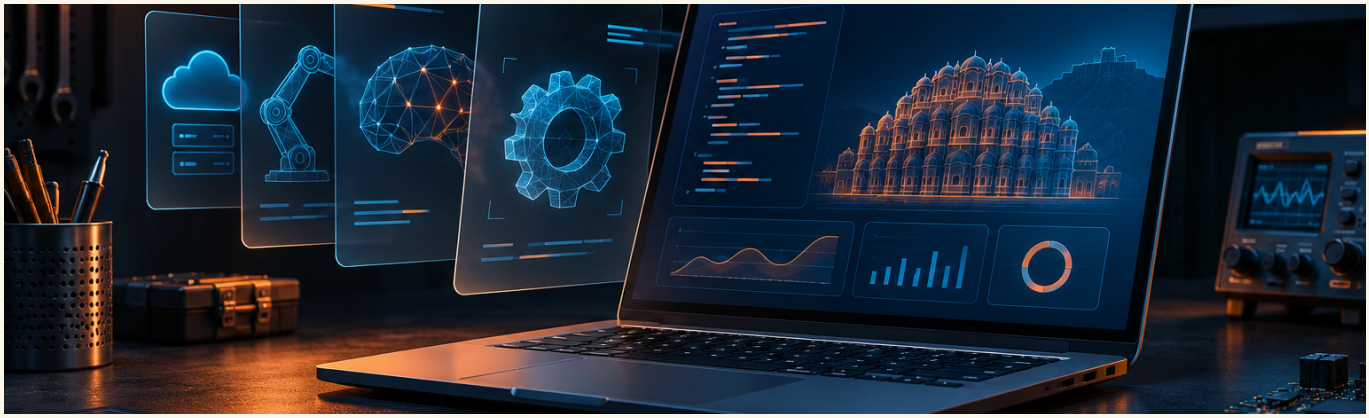


INCLUDED IN

Spring Framework & Hibernate **₹8,000**

Spring Boot

Core concepts



01 Project setup, starters and auto-configuration

02 Controllers, services and request validation

03 Spring Data JPA and database migrations

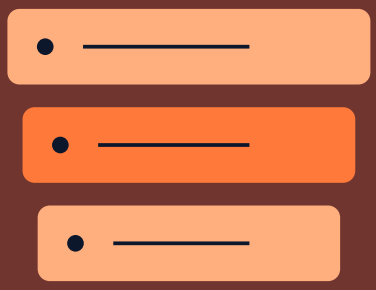
Model the domain

Identify data, actions and boundaries before writing the first class.

Spring Boot

Applied skills

- **Model**
- **Execute**
- **Verify result**



04 Exceptions, configuration and profiles

05 Access rules, Actuator and logging basics

06 Controller tests, packaging and deployment

PROJECT DELIVERABLES

A runnable Java project, test results and notes on design and error handling.

Spring Boot

Portfolio project

Course Catalogue Service

Publish Spring Boot endpoints for course records with validation and a persistent repository.



Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

Spring Boot

Included training

INCLUDED IN

Spring Framework & Hibernate

₹8,000 module fee

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SCAN FOR MAP

View course details online

Spring Boot

Course content

MODULES 01–02

01

Lessons & practice

- Project setup
- Starters
- Auto-configuration

HANDS-ON

Start a Spring Boot app from a minimal starter configuration and inspect its dependencies.

02

Lessons & practice

- Controllers
- Services
- Request validation

HANDS-ON

Build a REST controller with DTO validation and a service-level rule.

Spring Boot

Course content

MODULES 03–04

03

Lessons & practice

- Spring Data JPA
- Database migrations

HANDS-ON

Add a JPA repository and verify a migration and sorted query.

04

Lessons & practice

- Exceptions
- Configuration
- Profiles

HANDS-ON

Use a profile to separate settings and map validation failures to structured errors.

Spring Boot

Course content

MODULES 05–06

05

Lessons & practice

- Access rules
- Actuator
- Logging basics

HANDS-ON Expose a health check and verify access rules for a restricted endpoint.

06

Lessons & practice

- Controller tests
- Packaging
- Deployment

HANDS-ON Run controller tests and package the service with runnable instructions.

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JAVA

Spring MVC

SAMPLE PROJECT

Library Booking Site



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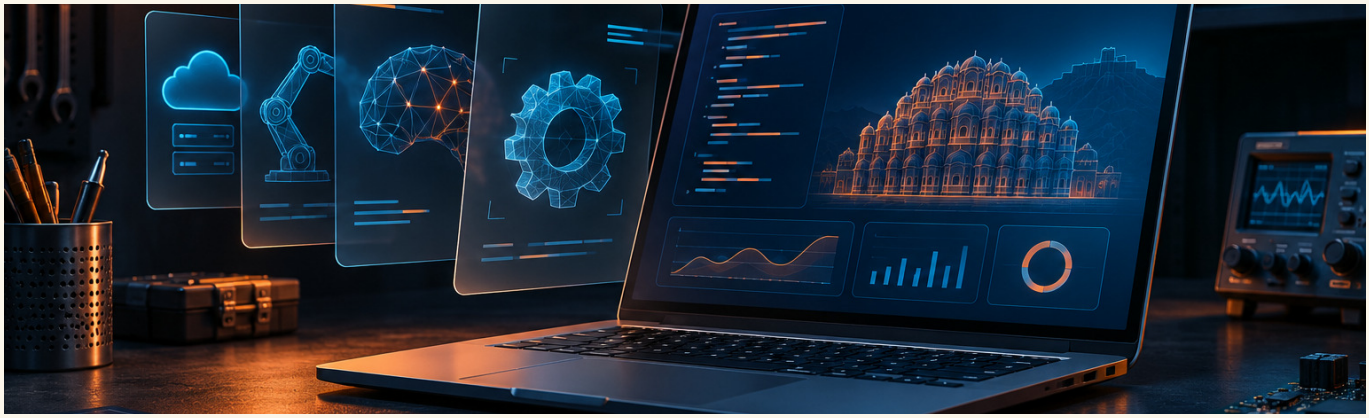
Spring MVC

Core concepts



01 DispatcherServlet and request mapping

02 Controllers, model attributes and views

03 Form binding, validation and feedback

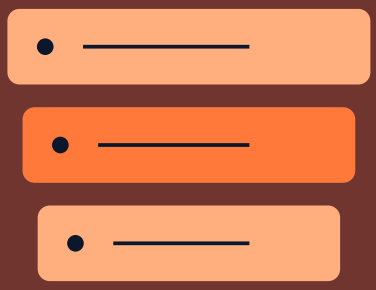
Model the domain

Identify data, actions and boundaries before writing the first class.

Spring MVC

Applied skills

- **Model**
- **Execute**
- **Verify result**



04 View templates, redirects and exception handling

05 Interceptors and service-layer integration

06 MockMvc tests and deployment basics

PROJECT DELIVERABLES

A runnable Java project, test results and notes on design and error handling.

Spring MVC

Portfolio project

Library Booking Site

Create a server-rendered reservation form with validation, confirmation and a bookings page.

ILLUSTRATIVE PROJECT SKETCH

SCENARIO		EXPECTED EVIDENCE
01>	**Model**	Sample input or fixture
02>	**Execute**	Record the observed result
03>	**Verify result**	Compare against expectations

Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

Spring MVC

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SCAN FOR MAP

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Spring MVC

Course content

MODULES 01–02

01

Lessons & practice

- DispatcherServlet
- Request mapping

HANDS-ON

Trace a request from DispatcherServlet to a mapped handler and returned view.

02

Lessons & practice

- Controllers
- Model attributes
- Views

HANDS-ON

Populate a form with model attributes and render a result table.

Spring MVC

Course content

MODULES 03–04

03

Lessons & practice

- Form binding
- Validation
- Feedback

HANDS-ON Bind and validate form inputs, then show feedback on the same page.

04

Lessons & practice

- View templates
- Redirects
- Exception handling

HANDS-ON Redirect after a successful submission and render an error page for failures.

Spring MVC

Course content

MODULES 05–06

05

Lessons & practice

- Interceptors
- Service-layer integration

HANDS-ON

Pass a request through an interceptor and into a service method.

06

Lessons & practice

- MockMvc tests
- Deployment basics

HANDS-ON

Test form submission with MockMvc and package the example.

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JAVA MODULE GUIDE

Hibernate

Purchase Order Model

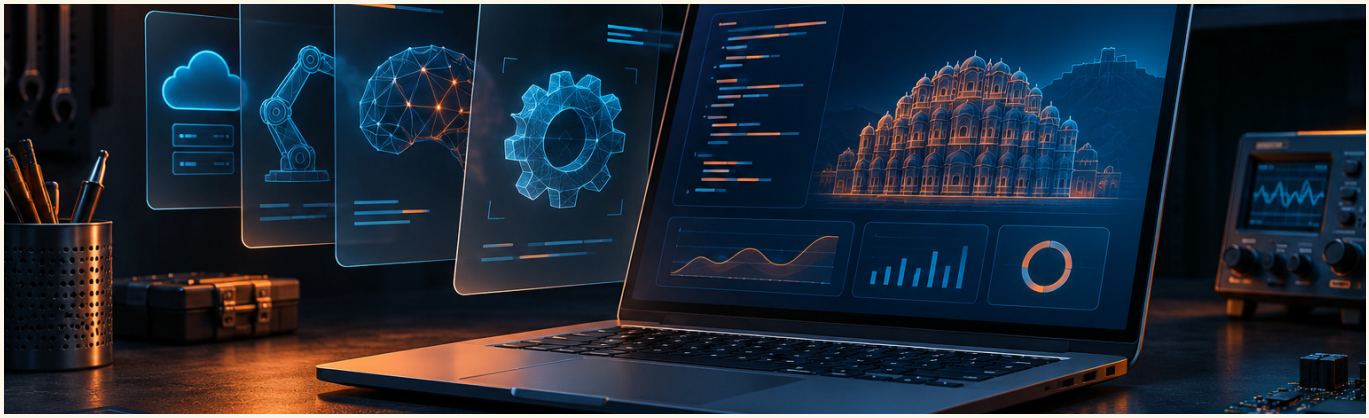


INCLUDED IN

Spring Framework & Hibernate **₹8,000**

Hibernate

Core concepts



01

ORM fundamentals, configuration and entity mapping

02

Identity, associations, cascades and lifecycles

03

Sessions, transactions and persistence context

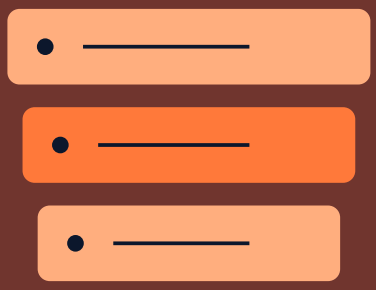
Model the domain

Identify data, actions and boundaries before writing the first class.

Hibernate

Applied skills

- **Model**
- **Execute**
- **Verify result**



04 JPQL/HQL queries and fetch strategies

05 Lazy loading, N+1 queries and caching basics

06 Migration-friendly schemas and integration tests

PROJECT DELIVERABLES

A runnable Java project, test results and notes on design and error handling.

Hibernate

Portfolio project

Purchase Order Model

Map orders and line items, persist transactions and verify query efficiency on a sample dataset.



Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

Hibernate

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SCAN FOR MAP

View course details online

Hibernate

Course content

MODULES 01–02

01

Lessons & practice

- ORM fundamentals
- Configuration
- Entity mapping

HANDS-ON

Annotate a simple entity and inspect the schema mapping in a sample database.

02

Lessons & practice

- Identity
- Associations
- Cascades
- Lifecycles

HANDS-ON

Model a relationship and compare cascade and entity lifecycle behaviour.

Hibernate

Course content

MODULES 03–04

03

Lessons & practice

- Sessions
- Transactions
- Persistence context

HANDS-ON Trace a transaction and verify rollback after a failed update.

04

Lessons & practice

- JPQL/HQL queries
- Fetch strategies

HANDS-ON Write a JPQL query and compare lazy and explicit fetching for a relationship.

Hibernate

Course content

MODULES 05–06

05

Lessons & practice

- Lazy loading
- N+1 queries
- Caching basics

HANDS-ON — Measure the queries emitted by a list page and reduce an N+1 pattern.

06

Lessons & practice

- Migration-friendly schemas
- Integration tests

HANDS-ON — Run persistence tests through a migration and verify an existing record remains readable.

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JAVA

JPA

SAMPLE PROJECT

Training Enrolment Repository



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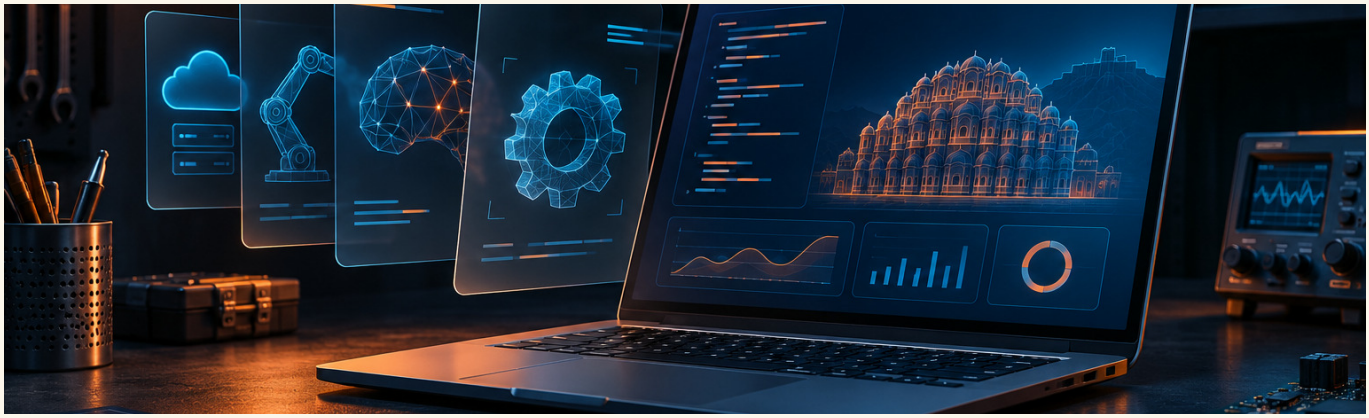


01 Entity mapping, identifiers and relationships

02 Persistence context and entity state changes

03 EntityManager and transaction boundaries

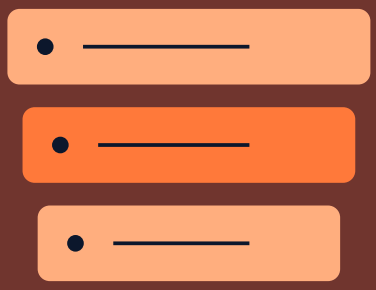
Model the domain

Identify data, actions and boundaries before writing the first class.

JPA

Applied skills

- **Model**
- **Execute**
- **Verify result**



04 JPQL, projections and pagination

05 Fetching, cascades and optimistic locking

06 Repository tests and query diagnostics

PROJECT DELIVERABLES

A runnable Java project, test results and notes on design and error handling.

JPA

Portfolio project

Training Enrolment Repository

Model students, courses and enrolments with JPA and query results by schedule.



Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

JPA

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SCAN FOR MAP

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JPA

Course content

MODULES 01–02

01

Lessons & practice

- Entity mapping
- Identifiers
- Relationships

HANDS-ON

Map entities with identifiers and one-to-many relationships and inspect the resulting schema.

02

Lessons & practice

- Persistence context
- Entity state changes

HANDS-ON

Compare new, managed and detached objects during one update.

JPA

Course content

MODULES 03–04

03

Lessons & practice

- EntityManager
- Transaction boundaries

HANDS-ON Use EntityManager in a transaction and verify the effect of rollback.

04

Lessons & practice

- JPQL
- Projections
- Pagination

HANDS-ON Create a projection and test stable pagination with a defined sort order.

JPA

Course content

MODULES 05–06

05

Lessons & practice

- Fetching
- Cascades
- Optimistic locking

HANDS-ON Demonstrate optimistic locking with two edits to the same sample record.

06

Lessons & practice

- Repository tests
- Query diagnostics

HANDS-ON Test repository methods and record the queries needed for one request.

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JAVA

Java Microservices

SAMPLE PROJECT

Order and Stock Services



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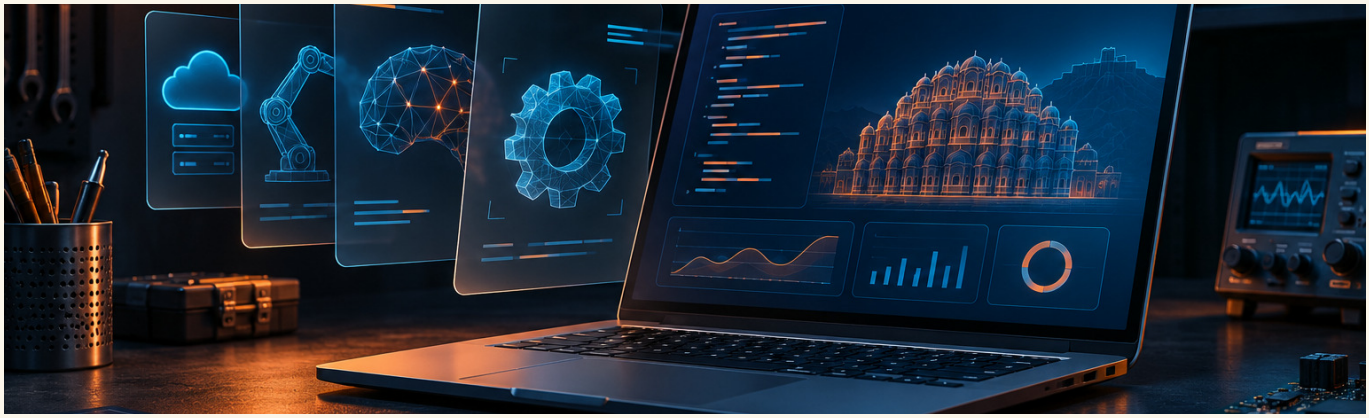
Java Microservices

Core concepts



01 Service boundaries and contract design

02 REST communication and service configuration

03 Gateways, discovery and resilience concepts

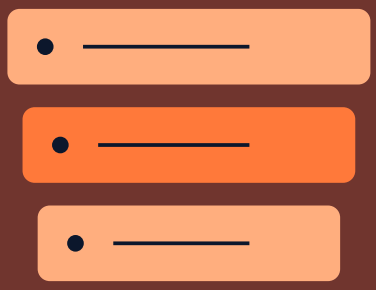
Model the domain

Identify data, actions and boundaries before writing the first class.

Java Microservices

Applied skills

- **Model**
- **Execute**
- **Verify result**



04 Data ownership, events and consistency basics

05 Logs, metrics and trace correlation

06 Contract testing and container deployment

PROJECT DELIVERABLES

A runnable Java project, test results and notes on design and error handling.

Java Microservices

Portfolio project

Order and Stock Services

Create two Spring Boot services and verify how the order flow handles a stock-service timeout.



Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

Java Microservices

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SCAN FOR MAP

Check course details

Java Microservices

Course content

MODULES 01–02

01

Lessons & practice

- Service boundaries
- Contract design

HANDS-ON

Define service boundaries and write a contract for an order lookup.

02

Lessons & practice

- REST communication
- Service configuration

HANDS-ON

Connect two practice services with configuration and structured REST errors.

Java Microservices

Course content

MODULES 03–04

03

Lessons & practice

- Gateways
- Discovery
- Resilience concepts

HANDS-ON

Test timeout handling and document how a gateway or discovery component would fit.

04

Lessons & practice

- Data ownership
- Events
- Consistency basics

HANDS-ON

Publish an order status event and explain which service owns each field.

Java Microservices

Course content

MODULES 05–06

05

Lessons & practice

- Logs
- Metrics
- Trace correlation

HANDS-ON Correlate logs across two services using a shared request identifier.

06

Lessons & practice

- Contract testing
- Container deployment

HANDS-ON Run a contract test and package both services for local container deployment.

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JAVA

Java REST API

SAMPLE PROJECT

Training Events API



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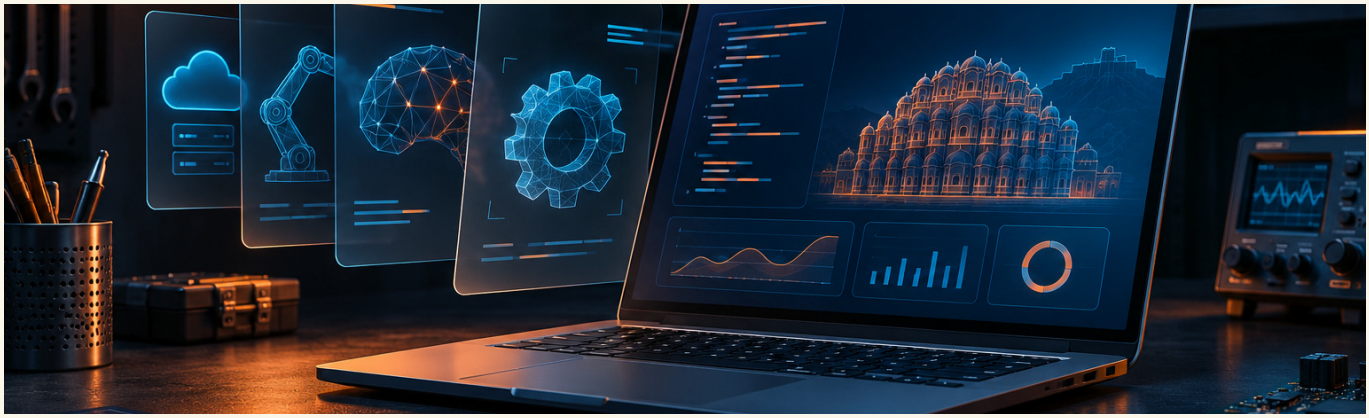
Java REST API

Core concepts



01

HTTP methods, status codes and resource design

02

Spring controllers, DTOs and serialization

03

Validation, pagination and error responses

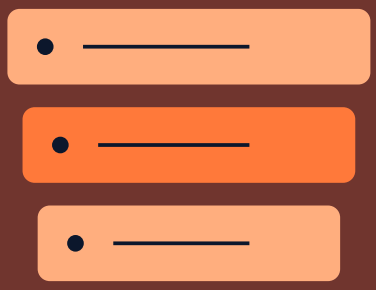
Model the domain

Identify data, actions and boundaries before writing the first class.

Java REST API

Applied skills

- **Model**
- **Execute**
- **Verify result**



04 Service and database layer integration

05 API access controls and OpenAPI documentation

06 Contract tests, versioning and build packaging

PROJECT DELIVERABLES

A runnable Java project, test results and notes on design and error handling.

Java REST API

Portfolio project

Training Events API

Design event and registration resources, validate requests and document the API for a client.

ILLUSTRATIVE PROJECT SKETCH

SCENARIO		EXPECTED EVIDENCE
01>	**Model**	Sample input or fixture
02>	**Execute**	Record the observed result
03>	**Verify result**	Compare against expectations

Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

Java REST API

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SCAN FOR MAP

Check course details

Java REST API

Course content

MODULES 01–02

01

Lessons & practice

- HTTP methods
- Status codes
- Resource design

HANDS-ON Design a resource collection with methods, status codes and consistent URLs.

02

Lessons & practice

- Spring controllers
- DTOs
- Serialization

HANDS-ON Create a typed request and response DTO and check the JSON output.

Java REST API

Course content

MODULES 03–04

03

Lessons & practice

- Validation
- Pagination
- Error responses

HANDS-ON Validate a request and verify pagination and structured error fields.

04

Lessons & practice

- Service
- Database layer integration

HANDS-ON Trace a request from controller through business logic to the database.

Java REST API

Course content

MODULES 05–06

05

Lessons & practice

- API access controls
- OpenAPI documentation

HANDS-ON

Document endpoint permissions and generate an OpenAPI description for a client.

06

Lessons & practice

- Contract tests
- Versioning
- Build packaging

HANDS-ON

Run contract tests and document a compatible versioning and packaging plan.

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JAVA

Java Design Patterns

SAMPLE PROJECT

Delivery Cost Calculator



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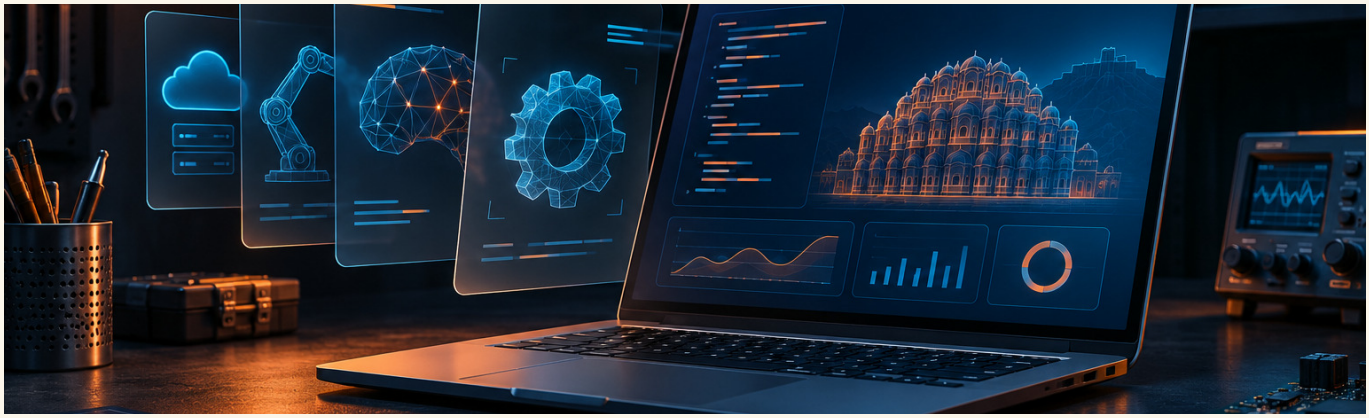
Java Design Patterns

Core concepts



01

Composition, interfaces and SOLID principles

02

Creational patterns including Factory and Builder

03

Structural patterns including Adapter and Facade

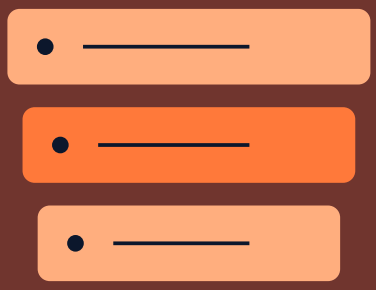
Model the domain

Identify data, actions and boundaries before writing the first class.

Java Design Patterns

Applied skills

- **Model**
- **Execute**
- **Verify result**



04 Behavioural patterns including Strategy and Observer

05 Dependency boundaries and testable refactoring

06 Pattern selection, trade-offs and code review

PROJECT DELIVERABLES

A runnable Java project, test results and notes on design and error handling.

Java Design Patterns

Portfolio project

Delivery Cost Calculator

Refactor a delivery calculator using strategy objects and demonstrate the trade-offs in tests.



Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

Java Design Patterns

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SCAN FOR MAP

Check course details

Java Design Patterns

Course content

MODULES 01–02

01

Lessons & practice

- Composition
- Interfaces
- SOLID principles

HANDS-ON

Refactor an order rule behind a small interface and explain its responsibilities.

02

Lessons & practice

- Creational patterns including Factory
- Builder

HANDS-ON

Construct a valid request object with a builder and test required inputs.

Java Design Patterns

Course content

MODULES 03–04

03

Lessons & practice

- Structural patterns including Adapter
- Facade

HANDS-ON

Adapt an existing data provider to a common interface or add a simpler facade.

04

Lessons & practice

- Behavioural patterns including Strategy
- Observer

HANDS-ON

Swap delivery-cost strategies and publish a status change to a test observer.

Java Design Patterns

Course content

MODULES 05–06

05

Lessons & practice

- Dependency boundaries
- Testable refactoring

HANDS-ON Use test doubles at a dependency boundary before refactoring a service.

06

Lessons & practice

- Pattern selection
- Trade-offs
- Code review

HANDS-ON Compare the original and refactored code and explain the maintenance trade-off.

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JAVA

Java Multithreading

SAMPLE PROJECT

Concurrent Job Queue



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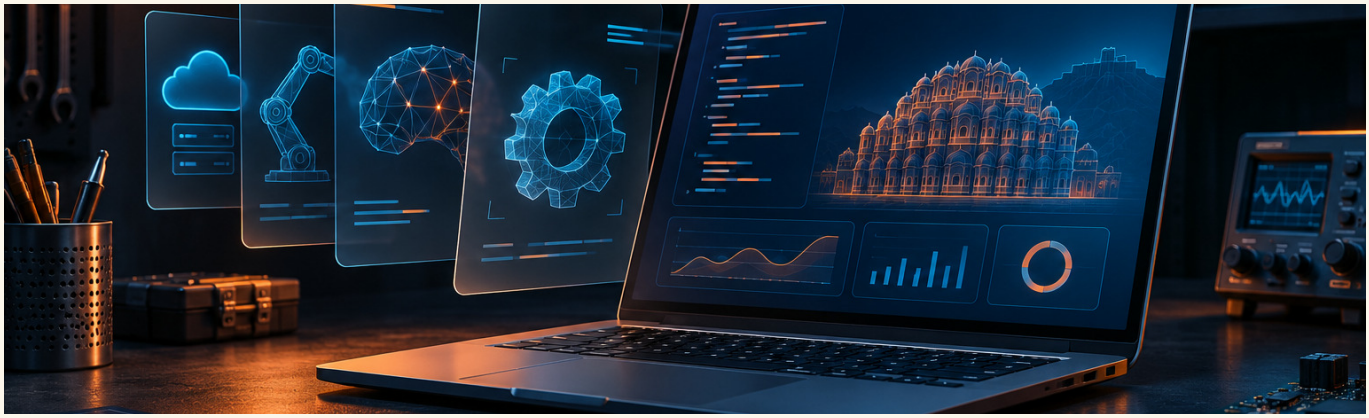
Java Multithreading

Core concepts



01 Threads, task lifecycles and interruption

02 Race conditions, synchronization and visibility

03 Locks, atomics and concurrent collections

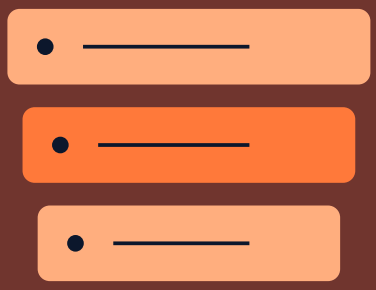
Model the domain

Identify data, actions and boundaries before writing the first class.

Java Multithreading

Applied skills

- **Model**
- **Execute**
- **Verify result**



04 Executors, Futures and CompletableFuture

05 Deadlock prevention, timeouts and cancellation

06 Reproducible tests and thread diagnostics

PROJECT DELIVERABLES

A runnable Java project, test results and notes on design and error handling.

Java Multithreading

Portfolio project

Concurrent Job Queue

Process jobs with an executor, record results and test stopping and timeout behaviour.



Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

Java Multithreading

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SCAN FOR MAP

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Java Multithreading

Course content

MODULES 01–02

01

Lessons & practice

- Threads
- Task lifecycles
- Interruption

HANDS-ON — Start and stop a worker safely and handle interruption during a test.

02

Lessons & practice

- Race conditions
- Synchronization
- Visibility

HANDS-ON — Reproduce an inconsistent counter and protect the shared update.

Java Multithreading

Course content

MODULES 03–04

03

Lessons & practice

- Locks
- Atomics
- Concurrent collections

HANDS-ON

Compare atomic counters and lock-protected collections for a shared task queue.

04

Lessons & practice

- Executors
- Futures
- CompletableFuture

HANDS-ON

Run independent jobs through an executor and combine their results.

Java Multithreading

Course content

MODULES 05–06

05

Lessons & practice

- Deadlock prevention
- Timeouts
- Cancellation

HANDS-ON

Add timeouts and cancellation and verify tasks stop without holding resources.

06

Lessons & practice

- Reproducible tests
- Thread diagnostics

HANDS-ON

Capture a thread dump from a practice run and explain how the tests reproduce the issue.

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JAVA

Java Testing

SAMPLE PROJECT

Regression Suite for a Booking Service



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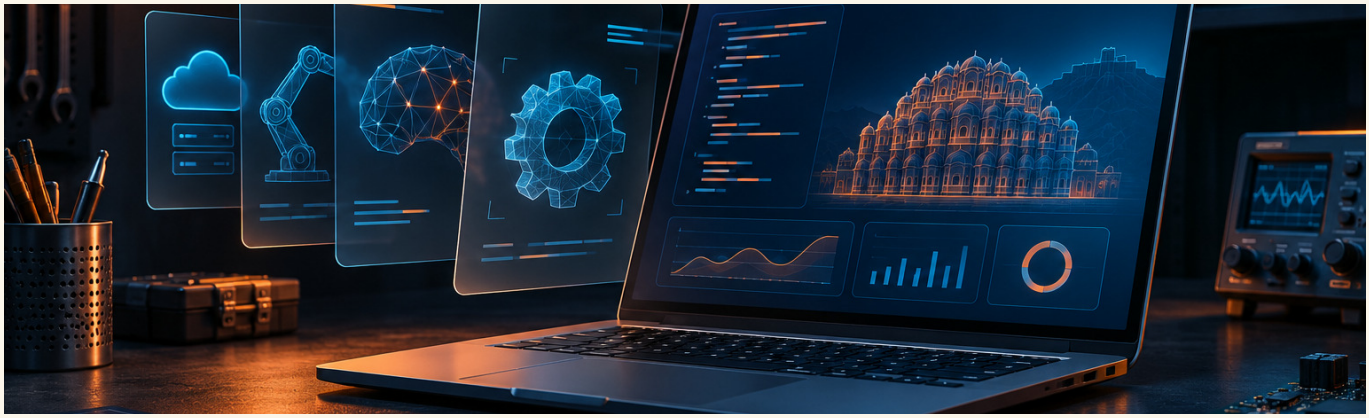
Java Testing

Core concepts



01

JUnit assertions, fixtures and parameterized cases

02

Mocking collaborators and test doubles

03

Spring service and repository integration tests

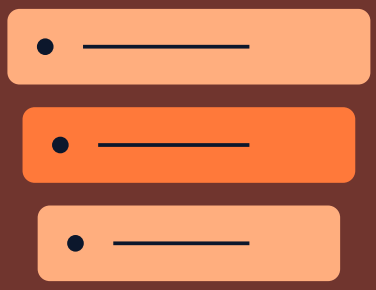
Model the domain

Identify data, actions and boundaries before writing the first class.

Java Testing

Applied skills

- **Model**
- **Execute**
- **Verify result**



04 API response validation and failure cases

05 Selenium locators, waits and test isolation

06 Build reports, CI and flaky-test analysis

PROJECT DELIVERABLES

A runnable Java project, test results and notes on design and error handling.

Java Testing

Portfolio project

Regression Suite for a Booking Service

Test booking rules with JUnit, then verify API and browser behaviour using repeatable scenarios.



Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

Java Testing

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SCAN FOR MAP

Check course details

Java Testing

Course content

MODULES 01–02

01

Lessons & practice

- JUnit assertions
- Fixtures
- Parameterized cases

HANDS-ON — Write parameterized JUnit tests for valid, boundary and invalid inputs.

02

Lessons & practice

- Mocking collaborators
- Test doubles

HANDS-ON — Replace a collaborator with a test double and verify the behaviour that matters.

Java Testing

Course content

MODULES 03–04

03

Lessons & practice

- Spring service
- Repository integration tests

HANDS-ON Test service logic and repository persistence with repeatable fixtures.

04

Lessons & practice

- API response validation
- Failure cases

HANDS-ON Check successful API requests and structured errors with assertions on the response.

Java Testing

Course content

MODULES 05–06

05

Lessons & practice

- Selenium locators
- Waits
- Test isolation

HANDS-ON Use stable locators and explicit waits to test a simple form.

06

Lessons & practice

- Build reports
- CI
- Flaky-test analysis

HANDS-ON Run the suite in CI and use a report to investigate one flaky test.

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JAVA

Helidon

SAMPLE PROJECT

Service Health Dashboard API



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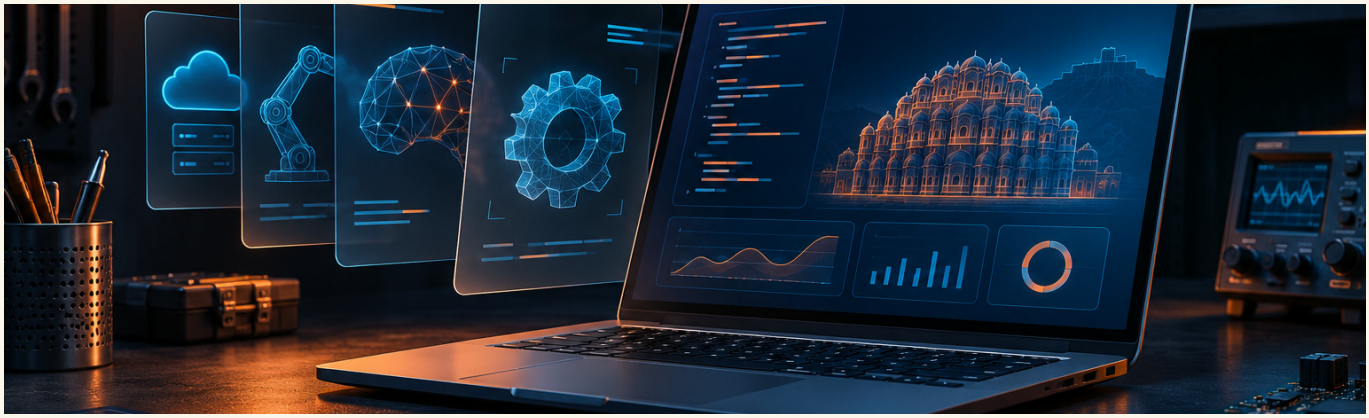
Helidon

Core concepts



01 Helidon SE and MP service models

02 Routing, configuration and JSON endpoints

03 Dependency injection and persistence integration

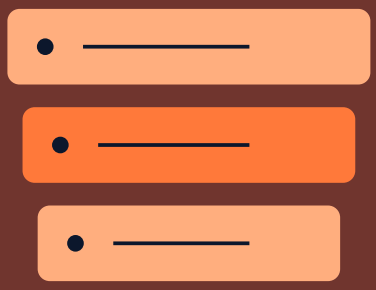
Model the domain

Identify data, actions and boundaries before writing the first class.

Helidon

Applied skills

- **Model**
- **Execute**
- **Verify result**



04 Health checks, metrics and OpenAPI basics

05 Error handling and integration tests

06 Container builds and runtime configuration

PROJECT DELIVERABLES

A runnable Java project, test results and notes on design and error handling.

Helidon

Portfolio project

Service Health Dashboard API

Build a Helidon service that reads example records and exposes health and metrics endpoints.



Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

Helidon

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Helidon

Course content

MODULES 01–02

01

Lessons & practice

- Helidon SE
- MP service models

HANDS-ON

Compare how Helidon SE and MP organise a minimal endpoint and configuration.

02

Lessons & practice

- Routing
- Configuration
- JSON endpoints

HANDS-ON

Build a JSON endpoint that reads a runtime setting and validates input.

Helidon

Course content

MODULES 03–04

03

Lessons & practice

- Dependency injection
- Persistence integration

HANDS-ON Connect a practice service to a persistence layer through a clear interface.

04

Lessons & practice

- Health checks
- Metrics
- OpenAPI basics

HANDS-ON Add a health check and document one endpoint and its response schema.

Helidon

Course content

MODULES 05–06

05

Lessons & practice

- Error handling
- Integration tests

HANDS-ON Test a successful route and a validation error and inspect the resulting logs.

06

Lessons & practice

- Container builds
- Runtime configuration

HANDS-ON Build a container image and verify the service starts with supplied settings.

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JAVA

Big Data with Java

SAMPLE PROJECT

Daily Event Aggregator



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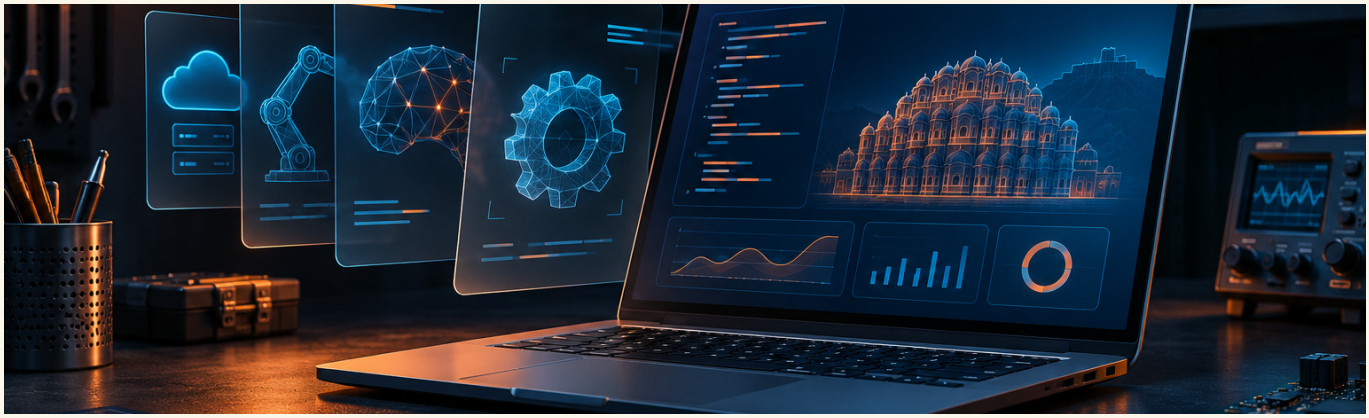
Big Data with Java

Core concepts



01 Distributed data and batch architecture

02 Java serialization and structured data formats

03 HDFS storage and MapReduce processing

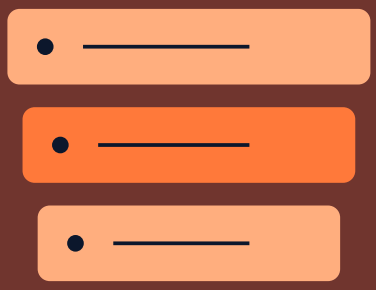
Model the domain

Identify data, actions and boundaries before writing the first class.

Big Data with Java

Applied skills

- **Model**
- **Execute**
- **Verify result**



04 Spark transformations and dataset operations

05 Partitioning, skew and processing reliability

06 Result validation, logging and performance review

PROJECT DELIVERABLES

A runnable Java project, test results and notes on design and error handling.

Big Data with Java

Portfolio project

Daily Event Aggregator

Transform batches of Java-readable event records into partitioned daily counts and verify the output.



Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

Big Data with Java

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Big Data with Java

Course content

MODULES 01–02

01

Lessons & practice

- Distributed data
- Batch architecture

HANDS-ON

Identify stages in a batch pipeline and sketch how records are distributed.

02

Lessons & practice

- Java serialization
- Structured data formats

HANDS-ON

Convert a sample event row into a typed record and validate malformed input.

Big Data with Java

Course content

MODULES 03–04

03

Lessons & practice

- HDFS storage
- MapReduce processing

HANDS-ON Run a small MapReduce job and compare outputs with known event counts.

04

Lessons & practice

- Spark transformations
- Dataset operations

HANDS-ON Transform a Spark dataset and aggregate daily totals for a sample input.

Big Data with Java

Course content

MODULES 05–06

05

Lessons & practice

- Partitioning
- Skew
- Processing reliability

HANDS-ON

Compare partitions, identify uneven distribution and explain the reliability impact.

06

Lessons & practice

- Result validation
- Logging
- Performance review

HANDS-ON

Verify aggregate results and use logs to explain one performance finding.

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JAVA

Kafka with Java

SAMPLE PROJECT

Order Status Stream



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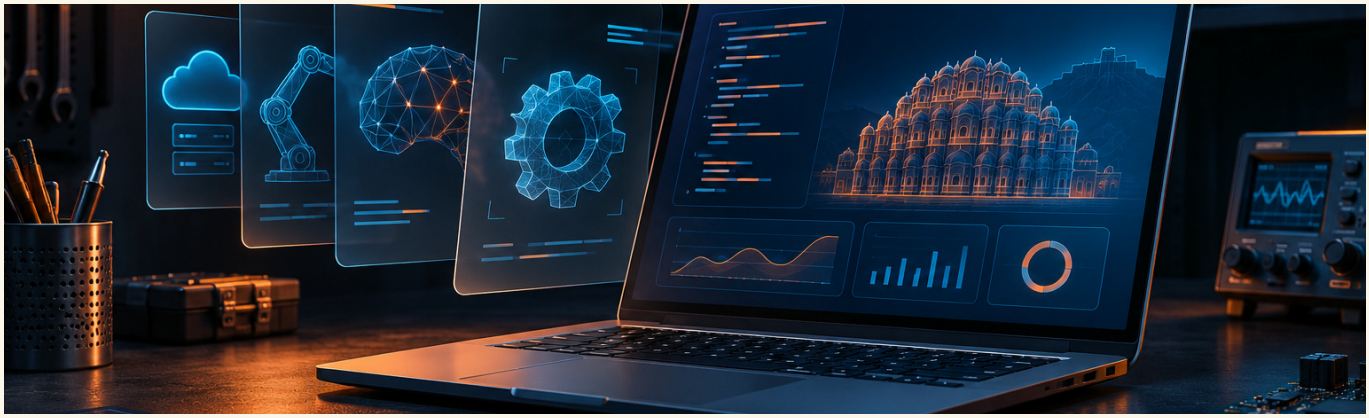
Kafka with Java

Core concepts



01 Topics, partitions, brokers and offsets

02 Java producers, keys and serialization

03 Consumers, groups and delivery semantics

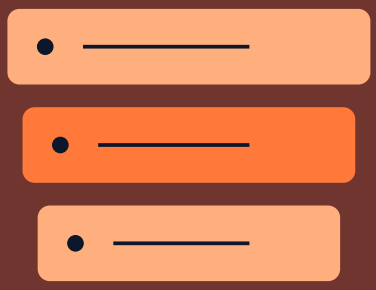
Model the domain

Identify data, actions and boundaries before writing the first class.

Kafka with Java

Applied skills

- **Model**
- **Execute**
- **Verify result**



04 Retry handling, duplicate events and idempotency

05 Schema evolution and stream-processing concepts

06 Lag metrics, integration tests and deployment review

PROJECT DELIVERABLES

A runnable Java project, test results and notes on design and error handling.

Kafka with Java

Portfolio project

Order Status Stream

Publish sample order events and build a consumer that handles duplicates and restarts safely.

ILLUSTRATIVE PROJECT SKETCH

SCENARIO		EXPECTED EVIDENCE
01>	**Model**	Sample input or fixture
02>	**Execute**	Record the observed result
03>	**Verify result**	Compare against expectations

Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

Kafka with Java

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SCAN FOR MAP

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Kafka with Java

Course content

MODULES 01–02

01

Lessons & practice

- Topics
- Partitions
- Brokers
- Offsets

HANDS-ON

Create a practice topic and describe how records map to partitions and offsets.

02

Lessons & practice

- Java producers
- Keys
- Serialization

HANDS-ON

Publish keyed order events from Java with a repeatable record format.

Kafka with Java

Course content

MODULES 03–04

03

Lessons & practice

- Consumers
- Groups
- Delivery semantics

HANDS-ON Consume a sample batch and restart a consumer to observe offset behaviour.

04

Lessons & practice

- Retry handling
- Duplicate events
- Idempotency

HANDS-ON Feed duplicate events and verify an idempotent update produces one result.

Kafka with Java

Course content

MODULES 05–06

05

Lessons & practice

- Schema evolution
- Stream-processing concepts

HANDS-ON

Extend an event format and confirm how an older consumer handles compatible fields.

06

Lessons & practice

- Lag metrics
- Integration tests
- Deployment review

HANDS-ON

Check consumer lag and run a local integration test before explaining deployment trade-offs.

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JAVA

Java Interview Preparation

SAMPLE PROJECT

Java Interview Portfolio



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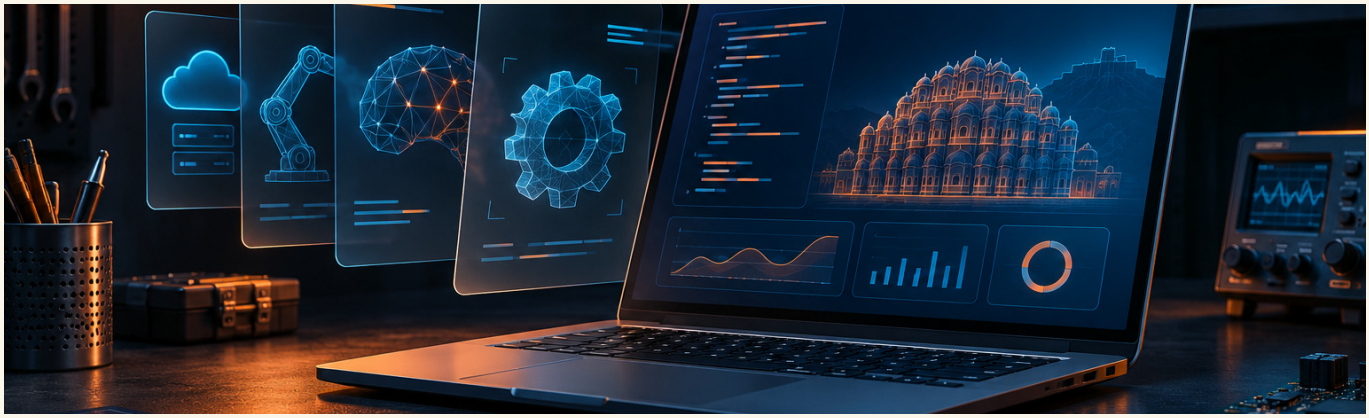
Java Interview Preparation

Core concepts



01 Core Java, JVM and language questions

02 OOP, collections and generics trade-offs

03 Arrays, strings and timed problem-solving

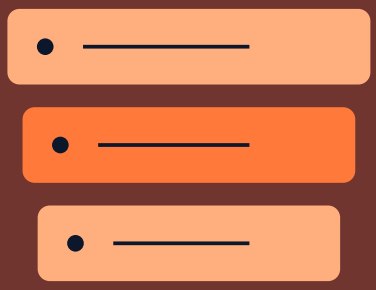
Model the domain

Identify data, actions and boundaries before writing the first class.

Java Interview Preparation

Applied skills

- **Model**
- **Execute**
- **Verify result**



04 SQL, JDBC, Spring Boot and REST reviews

05 Concurrency, debugging and code-review exercises

06 Mock interviews and project walkthroughs

PROJECT DELIVERABLES

A runnable Java project, test results and notes on design and error handling.

Java Interview Preparation

Portfolio project

Java Interview Portfolio

Create a short repository of solved problems and present the reasoning behind one Java project.



Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

Java Interview Preparation

Course fees

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SCAN FOR MAP

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Java Interview Preparation

Course content

MODULES 01–02

01

Lessons & practice

- Core Java
- JVM
- Language questions

HANDS-ON

Explain JVM execution and predict the result of short Java snippets.

02

Lessons & practice

- OOP
- Collections
- Generics trade-offs

HANDS-ON

Compare collection choices and write examples using interfaces and generics.

Java Interview Preparation

Course content

MODULES 03–04

03

Lessons & practice

- Arrays
- Strings
- Timed problem-solving

HANDS-ON Solve a timed array or string problem and explain the complexity.

04

Lessons & practice

- SQL
- JDBC
- Spring Boot
- REST reviews

HANDS-ON Trace a Spring Boot request and explain the SQL and JDBC choices behind it.

Java Interview Preparation

Course content

MODULES 05–06

05

Lessons & practice

- Concurrency
- Debugging
- Code-review exercises

HANDS-ON

Diagnose a concurrency or logic issue and discuss the smallest maintainable fix.

06

Lessons & practice

- Mock interviews
- Project walkthroughs

HANDS-ON

Present one project in a mock interview using a tested workflow and clear trade-offs.

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JAVA

Java Backend Development

SAMPLE PROJECT

Order Processing Backend



JAVA BACKEND PATHWAY

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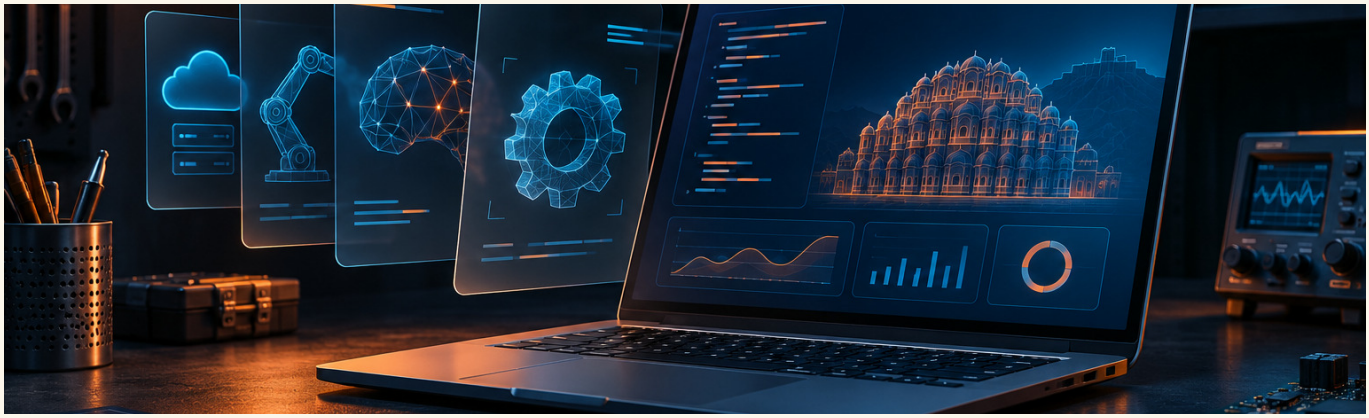
Java Backend Development

Core concepts



01

Core Java, JVM, OOP and collections

02

Exceptions, generics, streams and file I/O

03

JDBC, SQL, Servlets and JSP

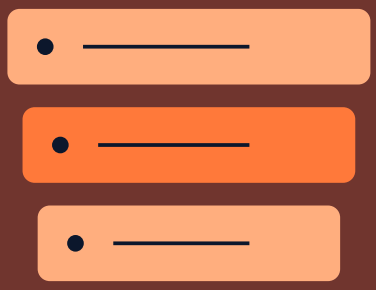
Model the domain

Identify data, actions and boundaries before writing the first class.

Java Backend Development

Applied skills

- **Model**
- **Execute**
- **Verify result**



04 Spring Boot REST controllers and services

05 Hibernate/JPA relationships and transactions

06 API tests, deployment and interview preparation

PROJECT DELIVERABLES

A runnable Java project, test results and notes on design and error handling.

Java Backend Development

Portfolio project

Order Processing Backend

Build an order service that validates requests, persists orders and rolls back a failed stock update.

ILLUSTRATIVE PROJECT SKETCH

SCENARIO		EXPECTED EVIDENCE
01>	**Model**	Sample input or fixture
02>	**Execute**	Record the observed result
03>	**Verify result**	Compare against expectations

Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

Java Backend Development

Course fees

JAVA BACKEND PATHWAY

₹22,500

MODULE FEES INR

Core Java / Java Programming	**₹6,500**
Advanced Java (Servlets & JSP)	**₹8,000**
Spring Framework & Hibernate	**₹8,000**

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SCAN FOR MAP

Check course details

Java Backend Development

Course content

MODULES 01–02

01

Lessons & practice

- Core Java
- JVM
- OOP
- Collections

HANDS-ON

Represent orders in Java with object-oriented rules and collections.

02

Lessons & practice

- Exceptions
- Generics
- Streams
- File I/O

HANDS-ON

Load orders from a file and group them with streams while handling invalid values.

Java Backend Development

Course content

MODULES 03–04

03

Lessons & practice

- JDBC
- SQL
- Servlets
- JSP

HANDS-ON Use JDBC and SQL for persistence and trace a simple Servlet/JSP request.

04

Lessons & practice

- Spring Boot REST controllers
- Services

HANDS-ON Build and validate a Spring Boot order endpoint and service.

Java Backend Development

Course content

MODULES 05–06

05

Lessons & practice

- Hibernate/JPA relationships
- Transactions

HANDS-ON

Map order entities with Hibernate and verify rollback after a failed stock update.

06

Lessons & practice

- API tests
- Deployment
- Interview preparation

HANDS-ON

Run API tests and present a request walkthrough with deployment notes.

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DATA & AI

Hadoop

SAMPLE PROJECT

Batch Log Summariser



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Hadoop

Core concepts



01

Hadoop architecture and distributed data

02

HDFS blocks, replication and storage operations

03

YARN scheduling and resource roles

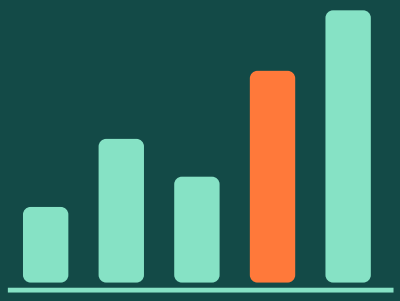
Define success

Select a dataset and decide how to measure a useful result.

Hadoop

Applied skills

- **Source data**
- **Baseline**
- **Validation**



04 MapReduce mapping, shuffling and reducing

05 Hive-style table and query concepts

06 Job monitoring, output validation and tuning basics

PROJECT DELIVERABLES

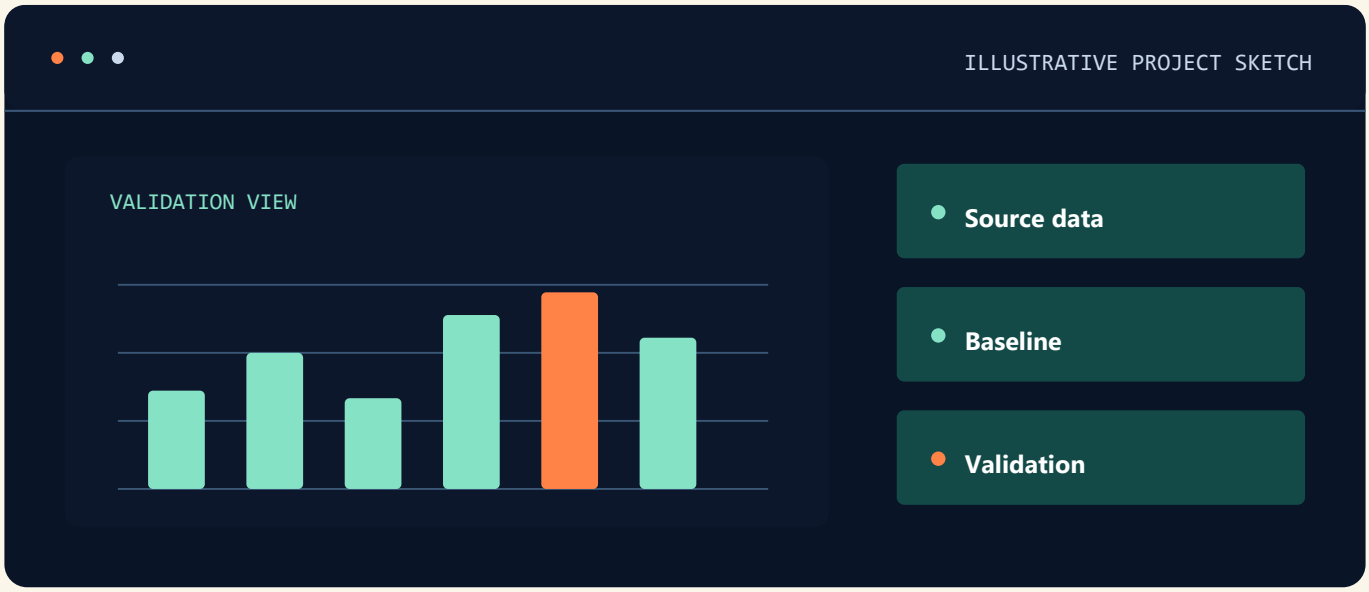
A reproducible analysis or demo, validation checks and a short findings summary.

Hadoop

Portfolio project

Batch Log Summariser

Run a batch job on synthetic logs and validate the output against known counts.



Define success

Select a dataset and decide how to measure a useful result.

Validate results

Compare against a baseline or trusted total and explain any discrepancy.

A reproducible analysis or demo, validation checks and a short findings summary.

Hadoop

Course fees

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SCAN FOR MAP

Check course details

Hadoop

Course content

MODULES 01–02

01

Lessons & practice

- Hadoop architecture
- Distributed data

HANDS-ON

Sketch how HDFS, YARN and MapReduce participate in a batch processing job.

02

Lessons & practice

- HDFS blocks
- Replication
- Storage operations

HANDS-ON

Compare block and replication settings in a practice environment and verify stored files.

Hadoop

Course content

MODULES 03–04

03

Lessons & practice

- YARN scheduling
- Resource roles

HANDS-ON Inspect job scheduling and record resource allocations for a sample batch.

04

Lessons & practice

- MapReduce mapping
- Shuffling
- Reducing

HANDS-ON Count sample events with map and reduce phases and check expected totals.

Hadoop

Course content

MODULES 05–06

05

Lessons & practice

- Hive-style table
- Query concepts

HANDS-ON Query a structured sample output through a Hive-style table.

06

Lessons & practice

- Job monitoring
- Output validation
- Tuning basics

HANDS-ON Read job logs, check result consistency and explain one tuning decision.

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DATA & AI

Data Science

SAMPLE PROJECT

Customer Churn Analysis



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Data Science

Core concepts



01	Python, NumPy, pandas and exploratory analysis
02	Data cleaning, joins and feature preparation
03	Statistics, sampling and visualisation

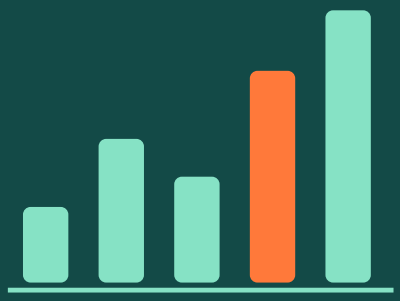
Define success

Select a dataset and decide how to measure a useful result.

Data Science

Applied skills

- **Source data**
- **Baseline**
- **Validation**



04 Supervised and unsupervised learning foundations

05 Model evaluation, cross-validation and interpretation

06 Reproducible notebooks and capstone communication

PROJECT DELIVERABLES

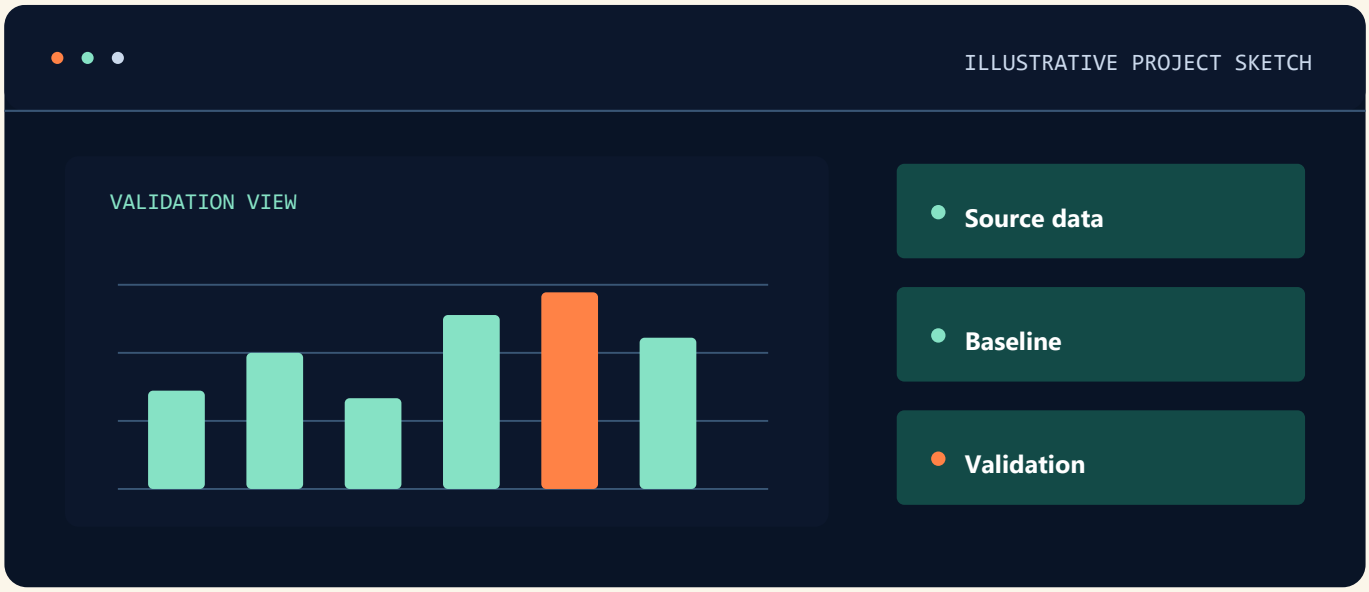
A reproducible analysis or demo, validation checks and a short findings summary.

Data Science

Portfolio project

Customer Churn Analysis

Clean a sample dataset, train a baseline model and present error analysis and recommendations.



Define success

Select a dataset and decide how to measure a useful result.

Validate results

Compare against a baseline or trusted total and explain any discrepancy.

A reproducible analysis or demo, validation checks and a short findings summary.

Data Science

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Data Science

Course content

MODULES 01–02

01

Lessons & practice

- Python
- NumPy
- Pandas
- Exploratory analysis

HANDS-ON — Use pandas and NumPy to profile a dataset and chart its distributions.

02

Lessons & practice

- Data cleaning
- Joins
- Feature preparation

HANDS-ON — Clean records, join a lookup and record treatment for missing or duplicate values.

Data Science

Course content

MODULES 03–04

03

Lessons & practice

- Statistics
- Sampling
- Visualisation

HANDS-ON Compare a sample statistic across segments and explain a sampling limitation.

04

Lessons & practice

- Supervised
- Unsupervised learning foundations

HANDS-ON Fit a baseline supervised model and compare results with an exploratory cluster view.

Data Science

Course content

MODULES 05–06

05

Lessons & practice

- Model evaluation
- Cross-validation
- Interpretation

HANDS-ON — Evaluate a model with suitable metrics and report an error pattern.

06

Lessons & practice

- Reproducible notebooks
- Capstone communication

HANDS-ON — Deliver a reproducible notebook with results, limitations and a concise recommendation.

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PRACTICAL TRAINING IN JAIPUR

Data Analytics

Python, SQL, Excel and Power BI

Clean data, answer business questions and build dashboards you can explain.



Four tools, one workflow

Follow a sales question from raw records to a report you can present to a business team.

Python

Clean files and explore patterns with NumPy, pandas, Matplotlib and Plotly.

SQL

Retrieve, join and summarise data stored in relational tables.

Excel

Validate records, build formulas and create PivotTable summaries.

Power BI

Model relationships, define DAX measures and build a filterable report.

Who it’s for

Students and working professionals who want to analyse data and communicate findings. Basic spreadsheet familiarity helps.

START WITH A QUESTION

Bring a business question, such as which region grew fastest or which category drove the most sales.

Start with the business question

Decide what to measure, check the source data and explain how you reached the result.

01

Define the metrics

Clarify the reporting period, the unit of analysis and what counts as a sale, an order or a return.

02

Check the data

Inspect types, duplicates, missing values and invalid rows. Record the rules used to clean or exclude records.

03

Explain the result

Compare the right groups, label units and state which filters or data limitations affect the interpretation.

PRACTICE

Define sales revenue and average order value before creating charts for a retail dataset.

Calculate with Python

Use notebooks, Python fundamentals and NumPy arrays to work with numeric data.

unit-revenue.py

```
01  import numpy as np
02  quantity = np.array([2, 4, 3])
03  unit_price = np.array([450, 250, 600])
04  line_revenue = quantity * unit_price
05  print(line_revenue.sum())
```

Python basics

Use variables, lists, dictionaries, functions and basic file handling.

NumPy arrays

Work with shapes, slicing, masks and vectorised operations.

Summary statistics

Compare count, mean, median, spread and outliers in a sample dataset.

PRACTICE

Compute revenue per line item and check the result against a manual total.

Clean and combine data

Turn CSV or Excel exports into analysis-ready DataFrames.

sales-cleaning.py

```
import pandas as pd
sales = pd.read_csv("sales.csv", parse_dates=["order_date"])
sales = sales.drop_duplicates(subset=["line_id"])
sales["revenue"] = sales["quantity"] * sales["unit_price"]
totals = sales.groupby("region")["revenue"].sum()
```

Inspect

Check columns, types, row counts and missing values after import.

Transform

Filter rows, standardise dates, handle missing values and merge reference tables.

Summarise

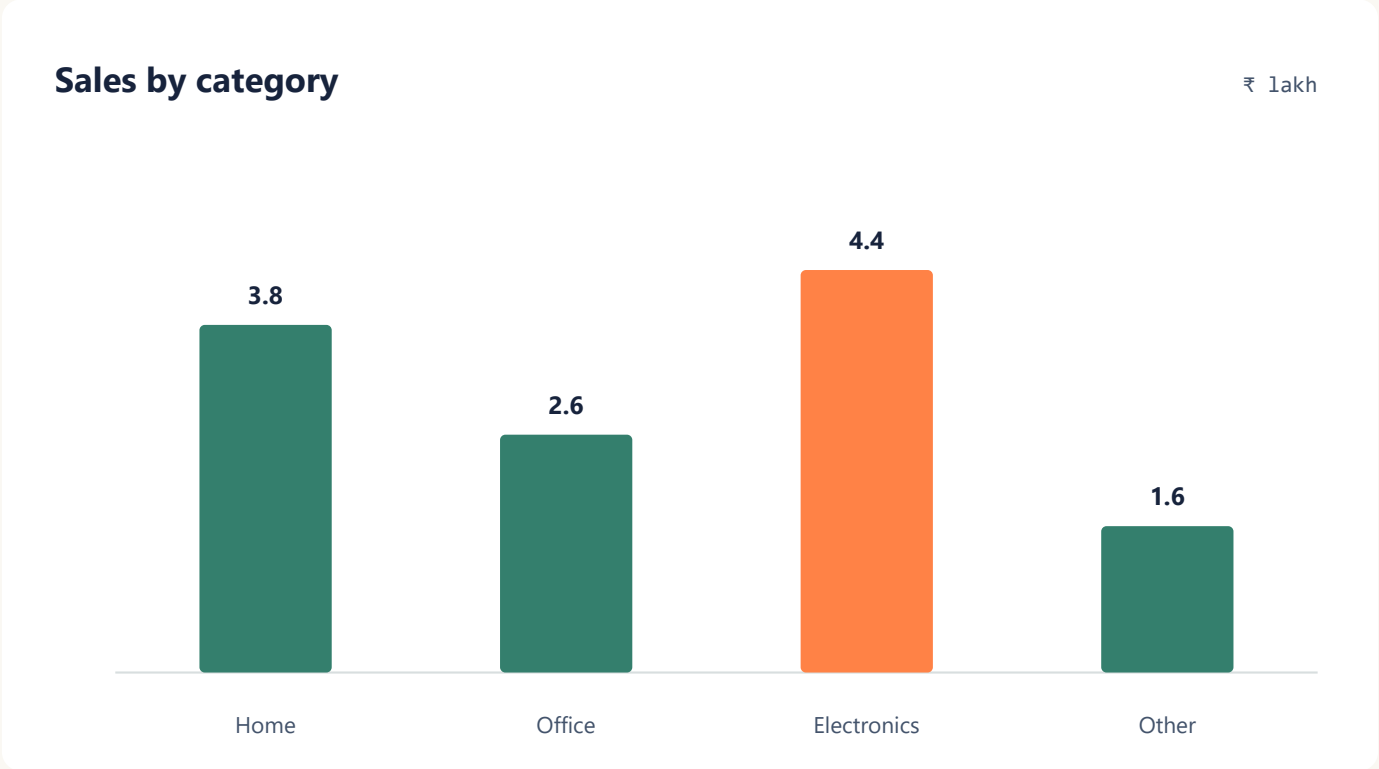
Use groupby, aggregation and pivot tables. Export clean results for reporting.

PRACTICE

Join sales to product categories and produce a revenue summary by region.

Choose a chart that fits

Use static and interactive charts to show comparisons, distributions and trends.



ILLUSTRATIVE DATA

Matplotlib

Create clear bar, line and scatter charts with labelled axes and consistent units.

Plotly

Build interactive charts with hover details and use them to explore a dataset.

PRACTICE

Plot sales by category and explain which comparison the chart makes easy to see.

Query sales records with SQL

Retrieve the rows you need and summarise them in the database before building a report.

regional-sales.sql

```sql
SELECT c.region, SUM(s.revenue) AS total_revenue
FROM sales AS s
JOIN customers AS c ON s.customer_id = c.customer_id
GROUP BY c.region
ORDER BY total_revenue DESC;
```

Queries

Use SELECT, WHERE, ORDER BY, CASE and aggregations.

Joins and grouping

Combine tables with JOIN and filter grouped results with HAVING.

Analytical queries

Practise subqueries, CTEs and window functions for ranking or trends.

PRACTICE

Rank regions by sales and confirm that the join does not duplicate order lines.

Analyse data in a workbook

Organise a sales export so the numbers can be filtered, calculated and checked.

01 **Structure the sheet**

Use tables, consistent headers, dates and numeric formats. Apply sorting, filters and validation.

02 **Write formulas**

Use cell references, IF, SUMIFS and COUNTIFS to calculate sales and check data quality.

03 **Review and communicate**

Use conditional formatting, summaries and simple charts to explain where sales changed.

PRACTICE

Create a sales workbook showing revenue and the number of orders for each region.

Build a repeatable report

Reduce manual spreadsheet steps by using lookups, pivot summaries and a refreshable data import.

01

Look up reference data

Use XLOOKUP or INDEX/MATCH to match product IDs to names and categories. Check how missing matches are handled.

02

Summarise with PivotTables

Group dates, compare categories and use slicers and PivotCharts for a filterable summary.

03

Transform with Power Query

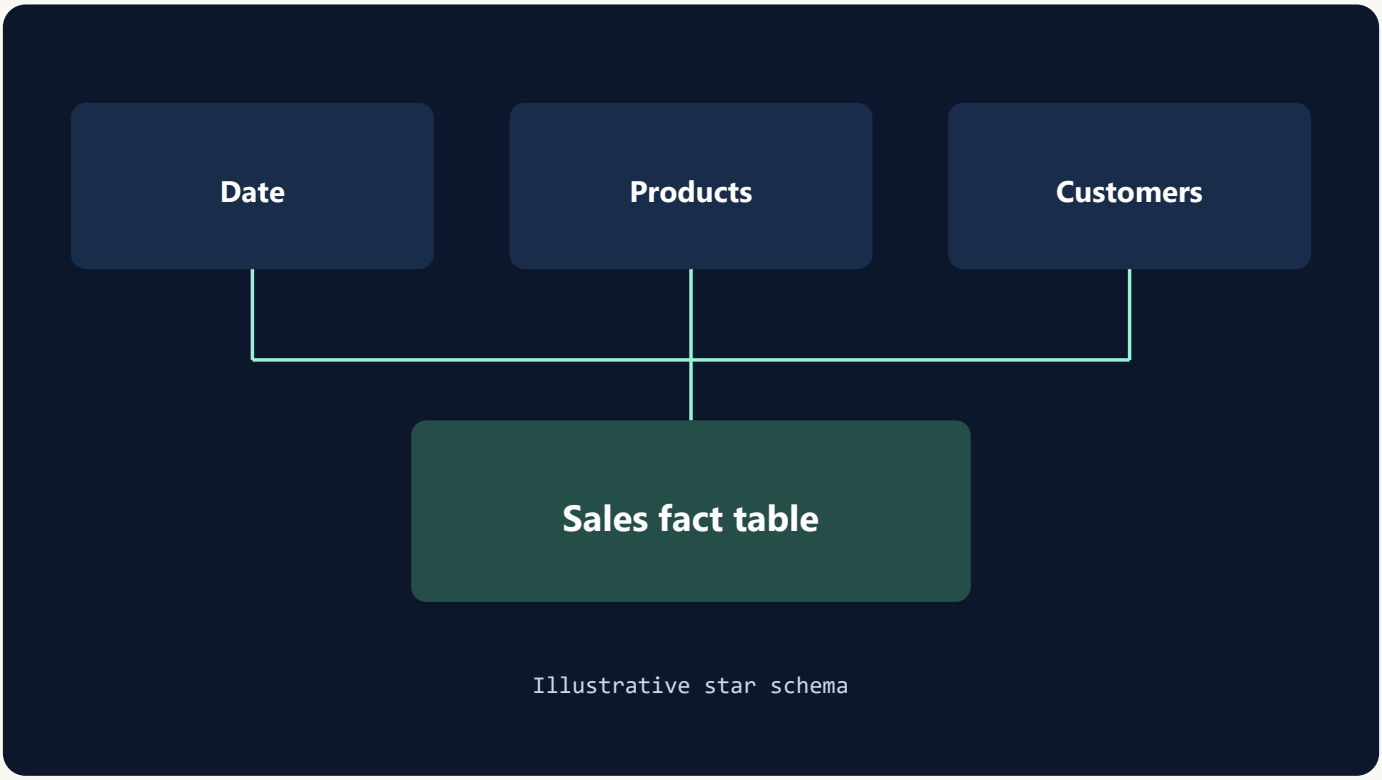
Set types, split columns, merge or append tables and refresh the results when new files arrive.

PRACTICE

Import a new sales file and refresh the workbook summary without rebuilding formulas.

Build a model and measures

Shape the data in Power Query, relate tables and write measures that respond to report filters.



Data model

Use a date table and define one-to-many relationships with clear keys.

DAX measures

Calculate total revenue, distinct orders and average order value. Review filter context.

PRACTICE

Check that total revenue matches your SQL query, then compare the result under a region filter.

Design an interactive report

Build a report that answers the main question and lets readers explore the details.

01

Plan the report pages

Put key metrics and a trend on the overview. Add detail views for products, categories or regions.

02

Add useful interactions

Use slicers, filters, drill-through and tooltips so readers can investigate a change.

03

Check and share

Validate measures, review chart labels and learn how Power BI reports can be published and refreshed.

PRACTICE

Select a region in a slicer and explain how the sales trend and order metrics change.

Retail sales dashboard

Investigate what drove sales changes across quarters, regions and product categories.



ILLUSTRATIVE DASHBOARD WITH SAMPLE DATA

Prepare

Clean the sales data in Python or Excel.

Verify

Check totals and groupings with SQL.

Present

Build a Power BI report and explain the strongest trend.

PROJECT DEMO

Show the dashboard, identify the highest-sales quarter and describe what you checked before reporting it.

Present your analysis

Show the question, the evidence and the business action your report supports.

01

Document the source

Record the data fields, reporting period, cleaning decisions and the definitions of key metrics.

02

Keep reproducible work

Include SQL queries, a Python notebook, a workbook and screenshots or a walkthrough of the report.

03

Explain a finding

Use one chart and one verified number to describe the change, then explain what you would investigate next.

INTERVIEW PRACTICE

Walk through the project from raw data to the finished report in a short interview-style demo.

Data Analytics course fees

Fee breakdown for the four modules. All amounts are in Indian rupees.

MODULE	MODULE FEE
Python for Data Analytics NumPy, pandas, Matplotlib and Plotly	₹7,500
SQL Filtering, joins, aggregations and analytical queries	₹7,000
Excel and Advanced Excel Formulas, lookups, PivotTables and Power Query	₹7,000
Power BI Data modelling, DAX measures and interactive reports	₹10,000

TOTAL COURSE FEE ₹31,500

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COURSE ENQUIRIES

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SCAN FOR MAP

Data Analytics course details

Data Analytics

Course content

MODULES 01–02

01

Lessons & practice

- Excel formulas
- Validation
- PivotTables

HANDS-ON

Build a validated Excel table and use a PivotTable to summarise sales by region.

02

Lessons & practice

- SQL filtering
- Grouping
- Joins
- Reporting

HANDS-ON

Write SQL joins and grouped totals and reconcile the result against the workbook.

Data Analytics

Course content

MODULES 03–04

03

Lessons & practice

- Python
- NumPy
- Pandas for data preparation

HANDS-ON Clean transaction rows with pandas and check numeric totals with NumPy.

04

Lessons & practice

- Matplotlib
- Plotly charts

HANDS-ON Create a Matplotlib chart and a Plotly version for the same sales question.

Data Analytics

Course content

MODULES 05–06

05

Lessons & practice

- Power Query
- Relationships
- DAX
- Report design

HANDS-ON — Build relationships and DAX measures in Power BI and exercise report filters.

06

Lessons & practice

- KPI reconciliation
- A retail analytics capstone

HANDS-ON — Reconcile the headline KPIs and present one conclusion backed by the dashboard.

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DATA & AI

Business Analytics

SAMPLE PROJECT

Branch Performance Brief



COURSE FEE

Fee on enquiry

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Business Analytics

Core concepts



01

Business questions and metric definitions

02

Spreadsheet cleaning and SQL aggregations

03

Descriptive statistics and segmentation

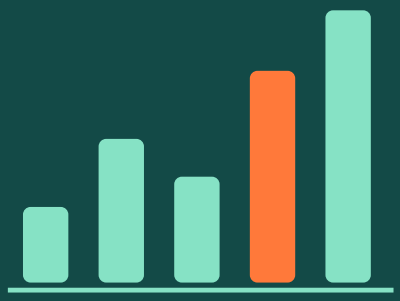
Define success

Select a dataset and decide how to measure a useful result.

Business Analytics

Applied skills

- **Source data**
- **Baseline**
- **Validation**



04 Forecasting and scenario fundamentals

05 Dashboards, comparisons and stakeholder storytelling

06 Recommendation briefs and decision reviews

PROJECT DELIVERABLES

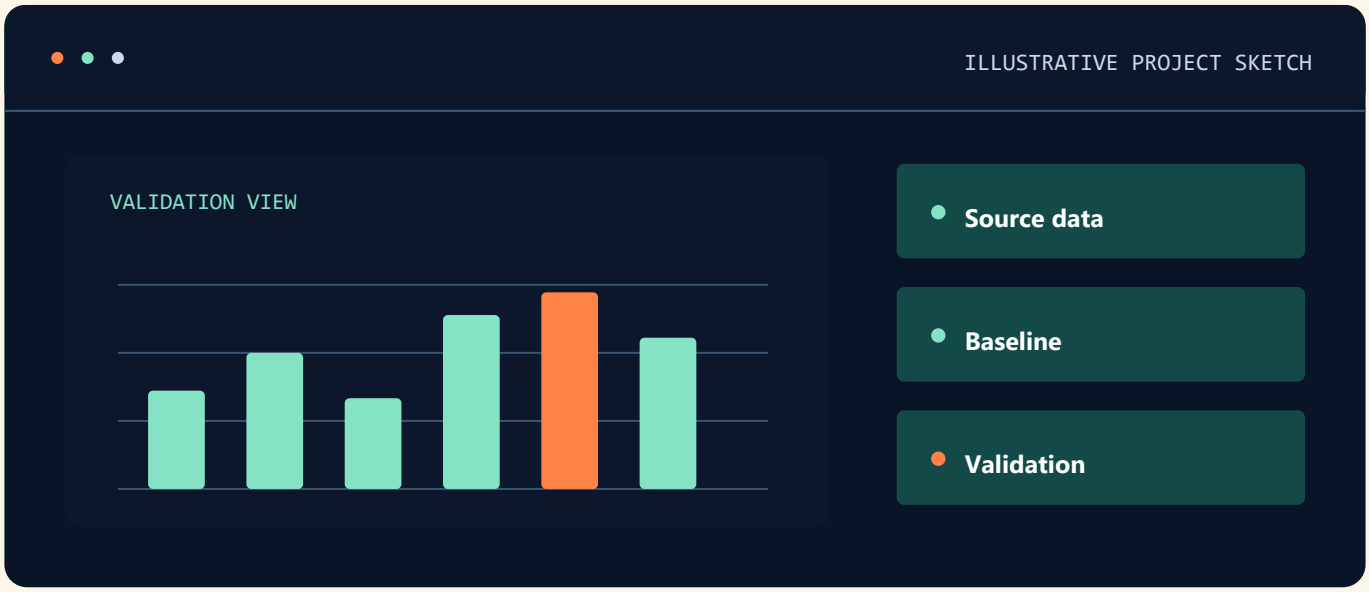
A reproducible analysis or demo, validation checks and a short findings summary.

Business Analytics

Portfolio project

Branch Performance Brief

Compare performance across sample stores, identify improvement areas and present actionable recommendations.



Define success

Select a dataset and decide how to measure a useful result.

Validate results

Compare against a baseline or trusted total and explain any discrepancy.

A reproducible analysis or demo, validation checks and a short findings summary.

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Check course details

Business Analytics

Course content

MODULES 01–02

01

Lessons & practice

- Business questions
- Metric definitions

HANDS-ON Write a business question with a defined denominator and time period.

02

Lessons & practice

- Spreadsheet cleaning
- SQL aggregations

HANDS-ON Clean branch records and verify grouped totals in Excel and SQL.

Business Analytics

Course content

MODULES 03–04

03

Lessons & practice

- Descriptive statistics
- Segmentation

HANDS-ON Compare branch segments using a summary statistic and visual distribution.

04

Lessons & practice

- Forecasting
- Scenario fundamentals

HANDS-ON Fit a simple forecast or scenario and compare it against a baseline.

Business Analytics

Course content

MODULES 05–06

05

Lessons & practice

- Dashboards
- Comparisons
- Stakeholder storytelling

HANDS-ON Build a short dashboard that makes the comparison clear to a stakeholder.

06

Lessons & practice

- Recommendation briefs
- Decision reviews

HANDS-ON Write a decision brief with an action, expected impact and measure of success.

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DATA & AI

Machine Learning

SAMPLE PROJECT

Delivery Delay Predictor



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Fee on enquiry

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Machine Learning

Core concepts



01 Python data preparation and feature engineering

02 Regression, classification and baseline models

03 Clustering and dimensionality reduction

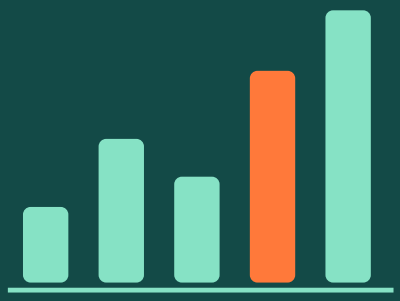
Define success

Select a dataset and decide how to measure a useful result.

Machine Learning

Applied skills

- **Source data**
- **Baseline**
- **Validation**



04 Data splits, leakage prevention and metrics

05 Model tuning, cross-validation and interpretation

06 TensorFlow/Keras introduction and project evaluation

PROJECT DELIVERABLES

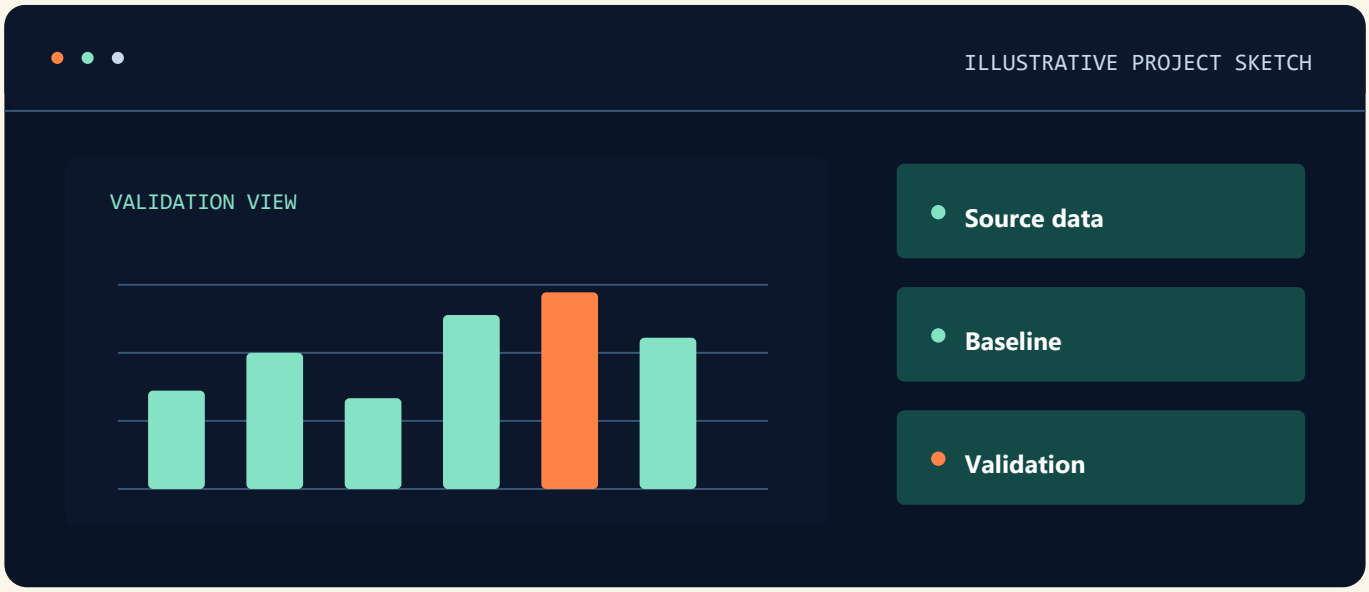
A reproducible analysis or demo, validation checks and a short findings summary.

Machine Learning

Portfolio project

Delivery Delay Predictor

Train and compare models on sample delivery data with a time-aware split, then analyse errors.



Define success

Select a dataset and decide how to measure a useful result.

Validate results

Compare against a baseline or trusted total and explain any discrepancy.

A reproducible analysis or demo, validation checks and a short findings summary.

Machine Learning

Course fees

COURSE FEE

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RELATED MODULE	INR
Machine Learning & Deep Learning	₹12,500

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SCAN FOR MAP

Check course details

Machine Learning

Course content

MODULES 01–02

01

Lessons & practice

- Python data preparation
- Feature engineering

HANDS-ON

Prepare features and separate training and evaluation data before transforming it.

02

Lessons & practice

- Regression
- Classification
- Baseline models

HANDS-ON

Compare regression or classification models with a simple baseline.

Machine Learning

Course content

MODULES 03–04

03

Lessons & practice

- Clustering
- Dimensionality reduction

HANDS-ON

Cluster sample records or project features into fewer dimensions and interpret the result.

04

Lessons & practice

- Data splits
- Leakage prevention
- Metrics

HANDS-ON

Choose a metric and split strategy and explain how you prevented data leakage.

Machine Learning

Course content

MODULES 05–06

05

Lessons & practice

- Model tuning
- Cross-validation
- Interpretation

HANDS-ON Tune a model with cross-validation and inspect a repeatable error pattern.

06

Lessons & practice

- TensorFlow/Keras introduction
- Project evaluation

HANDS-ON Train a small example neural model and compare its costs and errors with the baseline.

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DATA & AI

Artificial Intelligence

SAMPLE PROJECT

Document Topic Classifier



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Artificial Intelligence

Core concepts



01

AI tasks, search and decision-making concepts

02

Data preparation and evaluation fundamentals

03

Supervised learning and model selection

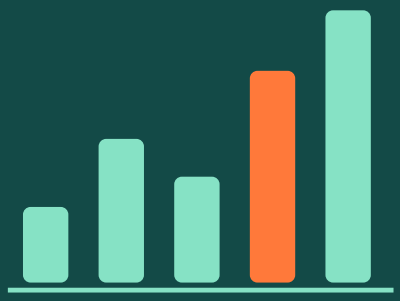
Define success

Select a dataset and decide how to measure a useful result.

Artificial Intelligence

Applied skills

- **Source data**
- **Baseline**
- **Validation**



04 Neural networks and deep learning basics

05 Natural language and generative AI overview

06 Application evaluation and responsible AI practice

PROJECT DELIVERABLES

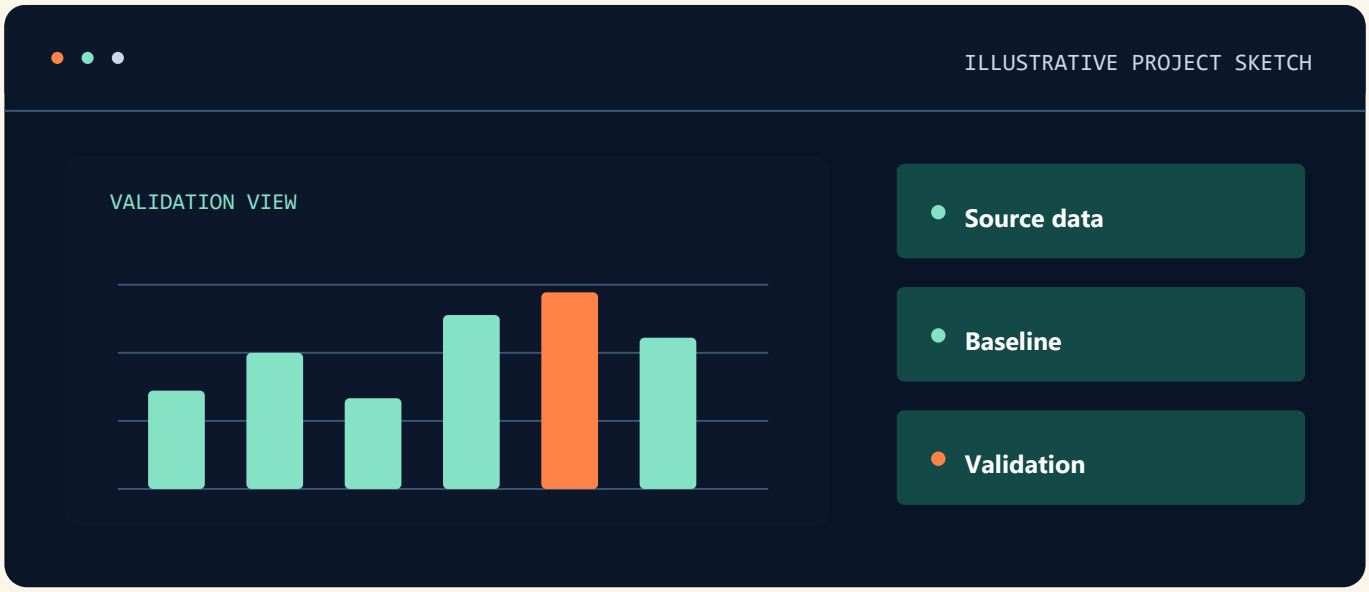
A reproducible analysis or demo, validation checks and a short findings summary.

Artificial Intelligence

Portfolio project

Document Topic Classifier

Build a topic classifier for public documents and compare a simple baseline with a learned model.



Define success

Select a dataset and decide how to measure a useful result.

Validate results

Compare against a baseline or trusted total and explain any discrepancy.

A reproducible analysis or demo, validation checks and a short findings summary.

Artificial Intelligence

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Artificial Intelligence

Course content

MODULES 01–02

01

Lessons & practice

- AI tasks
- Search
- Decision-making concepts

HANDS-ON Compare a rule-based and a learned approach for a small decision task.

02

Lessons & practice

- Data preparation
- Evaluation fundamentals

HANDS-ON Prepare examples and define what a correct result looks like before model evaluation.

Artificial Intelligence

Course content

MODULES 03–04

03

Lessons & practice

- Supervised learning
- Model selection

HANDS-ON Train a supervised classifier and justify which baseline to compare against.

04

Lessons & practice

- Neural networks
- Deep learning basics

HANDS-ON Explain a simple neural network and compare training and evaluation results.

Artificial Intelligence

Course content

MODULES 05–06

05

Lessons & practice

- Natural language
- Generative AI overview

HANDS-ON

Compare an NLP classifier with a generative prompt for a sample document task.

06

Lessons & practice

- Application evaluation
- Responsible AI practice

HANDS-ON

Evaluate output for accuracy and document review and oversight steps.

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DATA & AI

Generative AI

SAMPLE PROJECT

Course FAQ Assistant



COURSE FEE

Fee on enquiry

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Generative AI

Core concepts



01 Generative models, transformers and tokens

02 Prompt structure and output evaluation

03 Model APIs and structured outputs

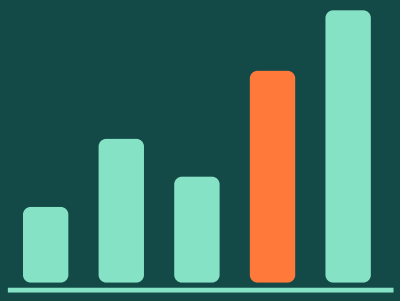
Define success

Select a dataset and decide how to measure a useful result.

Generative AI

Applied skills

- **Source data**
- **Baseline**
- **Validation**



04 Embeddings, search and retrieval-augmented generation

05 Human review, privacy and hallucination checks

06 Application integration, testing and cost tracking

PROJECT DELIVERABLES

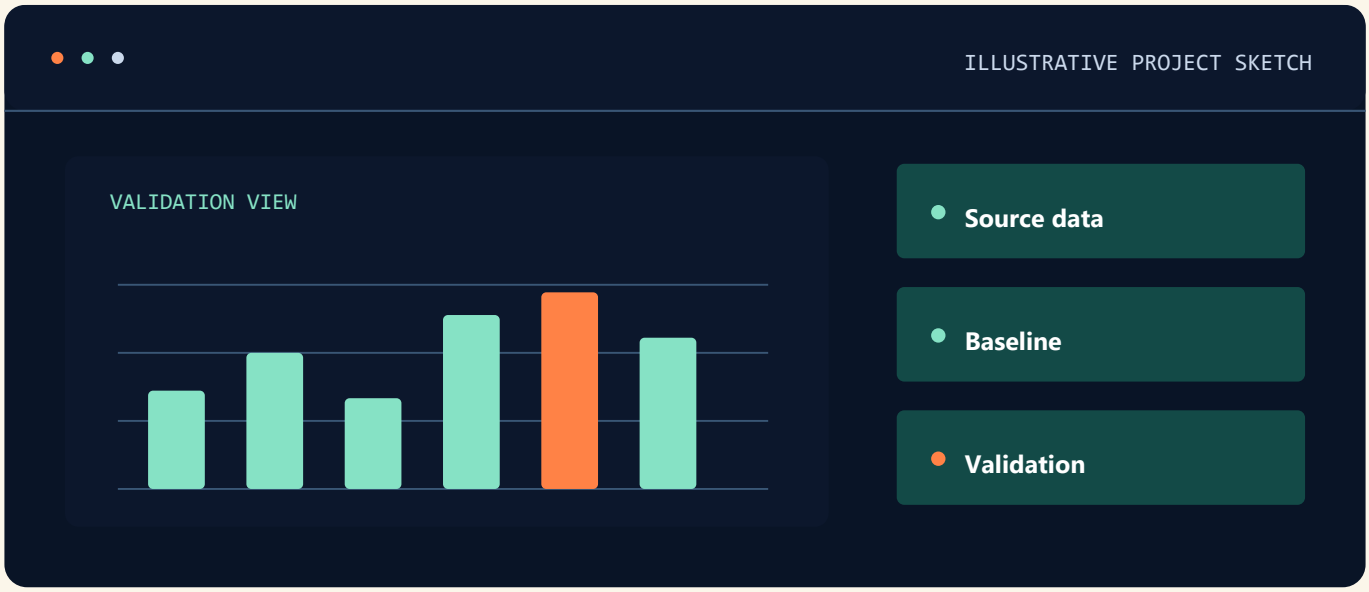
A reproducible analysis or demo, validation checks and a short findings summary.

Generative AI

Portfolio project

Course FAQ Assistant

Build a retrieval-based FAQ assistant using public course material and check its answers against source passages.



Define success

Select a dataset and decide how to measure a useful result.

Validate results

Compare against a baseline or trusted total and explain any discrepancy.

A reproducible analysis or demo, validation checks and a short findings summary.

Generative AI

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Generative AI

Course content

MODULES 01–02

01

Lessons & practice

- Generative models
- Transformers
- Tokens

HANDS-ON

Compare token use for two example prompts and explain model input and output limits.

02

Lessons & practice

- Prompt structure
- Output evaluation

HANDS-ON

Write and test a structured prompt with a small evaluation set.

Generative AI

Course content

MODULES 03–04

03

Lessons & practice

- Model APIs
- Structured outputs

HANDS-ON Parse a structured model response and handle an invalid or incomplete result.

04

Lessons & practice

- Embeddings
- Search
- Retrieval-augmented generation

HANDS-ON Retrieve relevant public FAQ passages and check an answer against its source.

Generative AI

Course content

MODULES 05–06

05

Lessons & practice

- Human review
- Privacy
- Hallucination checks

HANDS-ON

Review incorrect answers and record where a human should verify output.

06

Lessons & practice

- Application integration
- Testing
- Cost tracking

HANDS-ON

Build a small FAQ demo and record tests, failure handling and expected API costs.

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DATA & AI

Power BI

SAMPLE PROJECT

Sales and Margin Dashboard



COURSE FEE

₹10,000

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Power BI

Core concepts



01 Connect and profile data sources

02 Clean and transform with Power Query

03 Star schemas, relationships and filter direction

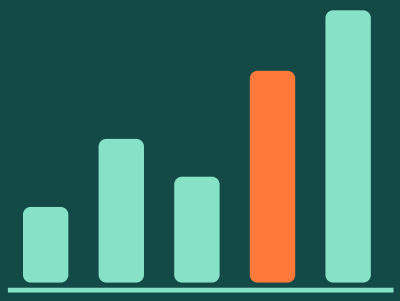
Define success

Select a dataset and decide how to measure a useful result.

Power BI

Applied skills

- **Source data**
- **Baseline**
- **Validation**



04 DAX measures, context and time comparisons

05 Report interactions, drill-through and accessibility

06 Refresh, publishing and row-level security concepts

PROJECT DELIVERABLES

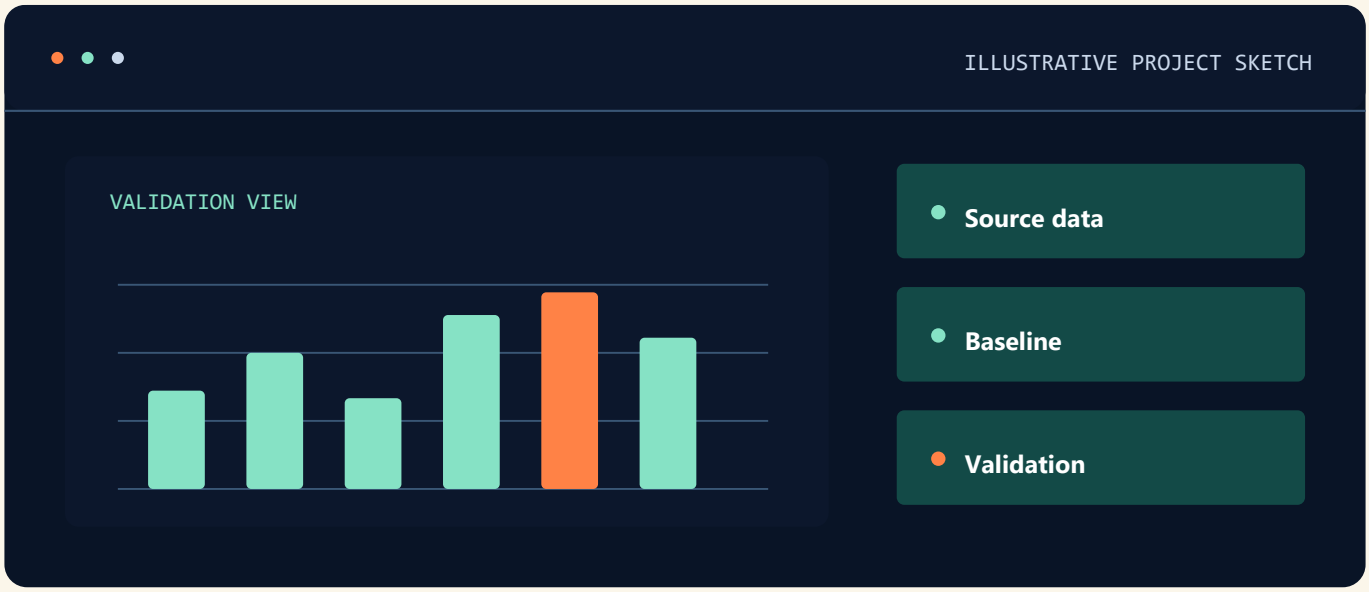
A reproducible analysis or demo, validation checks and a short findings summary.

Power BI

Portfolio project

Sales and Margin Dashboard

Model sales data, create DAX measures and validate dashboard totals against a trusted worksheet.



Define success

Select a dataset and decide how to measure a useful result.

Validate results

Compare against a baseline or trusted total and explain any discrepancy.

A reproducible analysis or demo, validation checks and a short findings summary.

Power BI

Course fees

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Check course details

Power BI

Course content

MODULES 01–02

01

Lessons & practice

- Connect
- Profile data sources

HANDS-ON Connect two sample tables and record their field types and data-quality issues.

02

Lessons & practice

- Clean
- Transform with Power Query

HANDS-ON Clean and combine records in Power Query with reproducible transformations.

Power BI

Course content

MODULES 03–04

03

Lessons & practice

- Star schemas
- Relationships
- Filter direction

HANDS-ON Build a star schema and trace how a dimension filter propagates.

04

Lessons & practice

- DAX measures
- Context
- Time comparisons

HANDS-ON Create DAX measures and verify totals for a selected date range.

Power BI

Course content

MODULES 05–06

05

Lessons & practice

- Report interactions
- Drill-through
- Accessibility

HANDS-ON Add drill-through and accessible report interactions and test filter states.

06

Lessons & practice

- Refresh
- Publishing
- Row-level security concepts

HANDS-ON Document refresh settings, publishing and a sample row-level security rule.

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SQL

SAMPLE PROJECT

Customer Orders Report



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SQL

Core concepts



01	Relational models, tables and constraints
02	SELECT, WHERE, ORDER BY and NULL logic
03	Aggregation, GROUP BY and HAVING

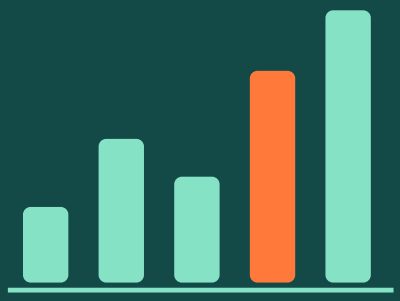
Define success

Select a dataset and decide how to measure a useful result.

SQL

Applied skills

- **Source data**
- **Baseline**
- **Validation**



04 Joins, subqueries and common table expressions

05 Window functions and transaction basics

06 Views, indexes and query plan interpretation

PROJECT DELIVERABLES

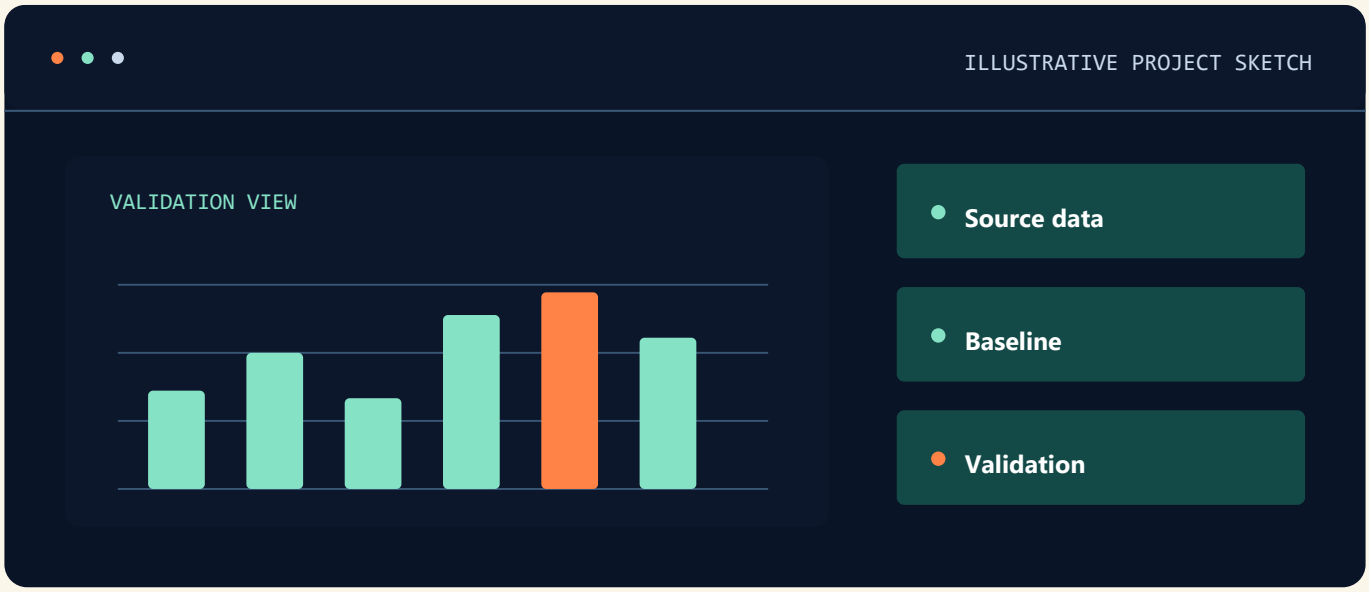
A reproducible analysis or demo, validation checks and a short findings summary.

SQL

Portfolio project

Customer Orders Report

Write reusable queries that explain sales by customer, product and month across related tables.



Define success

Select a dataset and decide how to measure a useful result.

Validate results

Compare against a baseline or trusted total and explain any discrepancy.

A reproducible analysis or demo, validation checks and a short findings summary.

SQL

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SCAN FOR MAP

Check course details

SQL

Course content

MODULES 01–02

01

Lessons & practice

- Relational models
- Tables
- Constraints

HANDS-ON Create linked customer and order tables with primary and foreign keys.

02

Lessons & practice

- SELECT
- WHERE
- ORDER BY
- NULL logic

HANDS-ON Write filtering and sorting queries that handle NULLs consciously.

SQL

Course content

MODULES 03–04

03

Lessons & practice

- Aggregation
- GROUP BY
- HAVING

HANDS-ON Group sales by product and filter aggregate results with HAVING.

04

Lessons & practice

- Joins
- Subqueries
- Common table expressions

HANDS-ON Compare a join with a CTE or subquery for the same business question.

SQL

Course content

MODULES 05–06

05

Lessons & practice

- Window functions
- Transaction basics

HANDS-ON Use a window function for running totals and test a transaction rollback.

06

Lessons & practice

- Views
- Indexes
- Query plan interpretation

HANDS-ON Inspect a query plan and compare results with and without a suitable index.

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DATA & AI

Advanced Excel

SAMPLE PROJECT

Monthly Operations Workbook



EXCEL & ADVANCED EXCEL

₹7,000

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Advanced Excel

Core concepts



01

Cell references, tables and data validation

02

Conditional, date and text functions

03

XLOOKUP, INDEX/MATCH and error handling

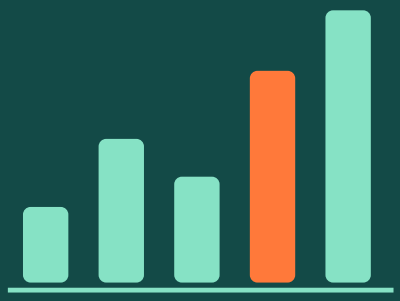
Define success

Select a dataset and decide how to measure a useful result.

Advanced Excel

Applied skills

- **Source data**
- **Baseline**
- **Validation**



04 PivotTables, slicers and chart design

05 Power Query cleanup and workbook refresh

06 Reconciliation checks and dashboard delivery

PROJECT DELIVERABLES

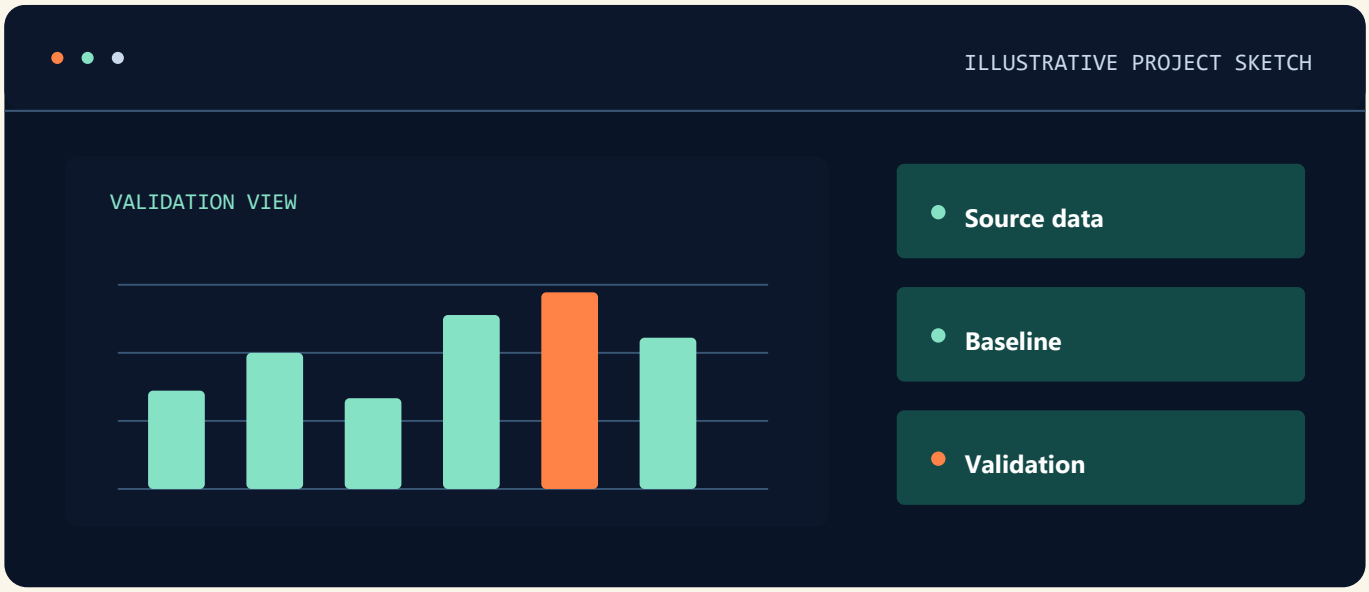
A reproducible analysis or demo, validation checks and a short findings summary.

Advanced Excel

Portfolio project

Monthly Operations Workbook

Build a repeatable workbook that validates incoming data and reports branch metrics through PivotTables.



Define success

Select a dataset and decide how to measure a useful result.

Validate results

Compare against a baseline or trusted total and explain any discrepancy.

A reproducible analysis or demo, validation checks and a short findings summary.

Advanced Excel

Course fees

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SCAN FOR MAP

Check course details

Advanced Excel

Course content

MODULES 01–02

01

Lessons & practice

- Cell references
- Tables
- Data validation

HANDS-ON Build a structured table with reference formulas and validated category inputs.

02

Lessons & practice

- Conditional
- Date
- Text functions

HANDS-ON Clean date and text fields and flag records with a conditional formula.

Advanced Excel

Course content

MODULES 03–04

03

Lessons & practice

- XLOOKUP
- INDEX/MATCH
- Error handling

HANDS-ON Compare lookup methods and show a meaningful result for missing keys.

04

Lessons & practice

- PivotTables
- Slicers
- Chart design

HANDS-ON Create a PivotTable with slicers and a chart that supports a decision.

Advanced Excel

Course content

MODULES 05–06

05

Lessons & practice

- Power Query cleanup
- Workbook refresh

HANDS-ON Build a Power Query cleanup and refresh it with a new sample file.

06

Lessons & practice

- Reconciliation checks
- Dashboard delivery

HANDS-ON Reconcile workbook totals and deliver a dashboard with refresh instructions.

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DATA & AI

AI Tools

SAMPLE PROJECT

Reusable Reporting Workflow



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AI Tools

Core concepts



01 Match AI tool capabilities to office tasks

02 Prompt structure, context and iteration

03 Drafting, summarising and spreadsheet assistance

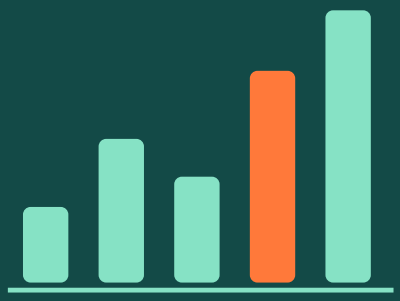
Define success

Select a dataset and decide how to measure a useful result.

AI Tools

Applied skills

- **Source data**
- **Baseline**
- **Validation**



04 Image and presentation workflow basics

05 Privacy, citations and output verification

06 Repeatable templates and human approval steps

PROJECT DELIVERABLES

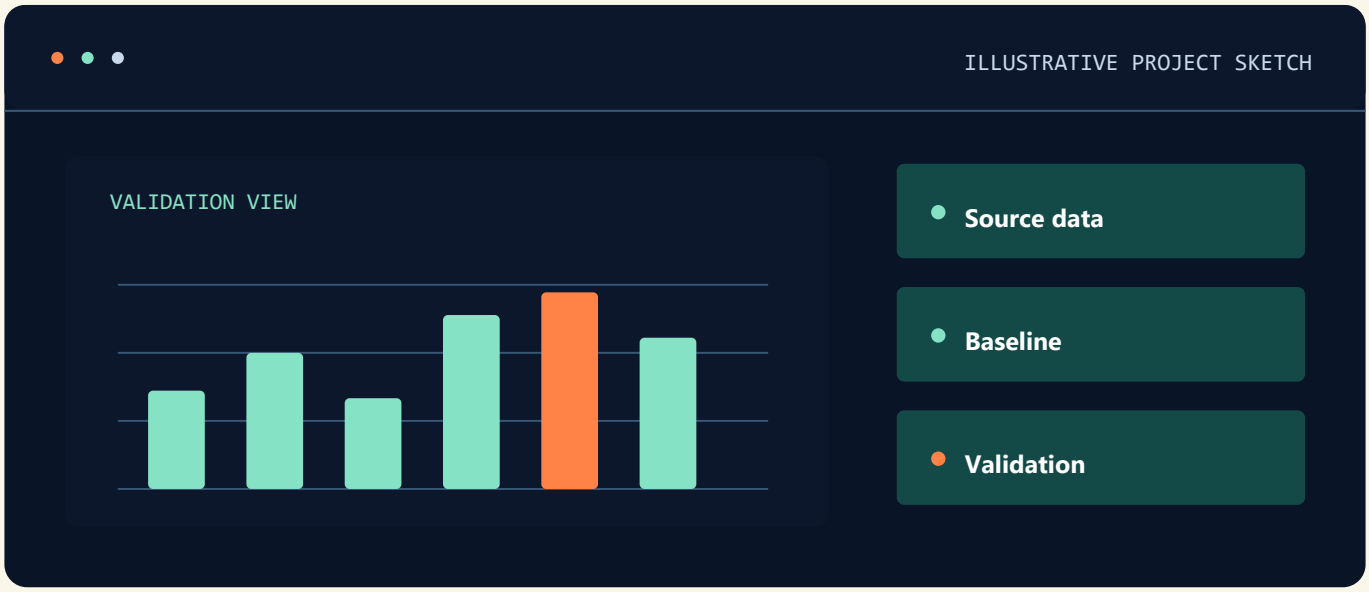
A reproducible analysis or demo, validation checks and a short findings summary.

AI Tools

Portfolio project

Reusable Reporting Workflow

Build a prompt and review checklist that turns public notes into a consistent report without losing source detail.



Define success

Select a dataset and decide how to measure a useful result.

Validate results

Compare against a baseline or trusted total and explain any discrepancy.

A reproducible analysis or demo, validation checks and a short findings summary.

AI Tools

Course fees

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Check course details

AI Tools

Course content

MODULES 01–02

01 Match AI tool capabilities to office tasks

Lessons & practice

HANDS-ON Compare two tools on the same office task and record capability and review requirements.

02

Lessons & practice

- Prompt structure
- Context
- Iteration

HANDS-ON Write a structured prompt and revise it after checking the first output.

AI Tools

Course content

MODULES 03–04

03

Lessons & practice

- Drafting
- Summarising
- Spreadsheet assistance

HANDS-ON Summarise a source document and verify a spreadsheet calculation separately.

04

Lessons & practice

- Image
- Presentation workflow basics

HANDS-ON Create a draft presentation with accessible visuals and check the generated labels.

AI Tools

Course content

MODULES 05–06

05

Lessons & practice

- Privacy
- Citations
- Output verification

HANDS-ON Remove private data from a sample and check citations against the source.

06

Lessons & practice

- Repeatable templates
- Human approval steps

HANDS-ON Create a reusable template that includes a human approval step.

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DATA & AI

AI, Machine Learning & Applied AI Development

SAMPLE PROJECT

AI-Powered Support Triage



COMPLETE PROGRAMME

₹35,000

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AI, Machine Learning & Applied AI Development

Core concepts



01	Python, NumPy, pandas, Matplotlib and Plotly
02	Statistics, feature engineering and reproducible datasets
03	Scikit-learn models, validation and tuning

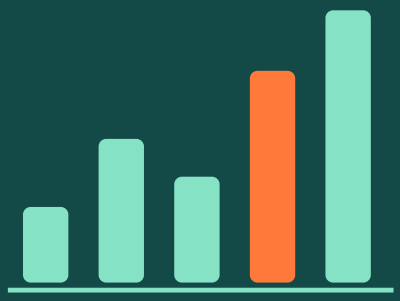
Define success

Select a dataset and decide how to measure a useful result.

AI, Machine Learning & Applied AI Development

Applied skills

- **Source data**
- **Baseline**
- **Validation**



04 TensorFlow and Keras deep-learning foundations

05 NLP, transformers and LLM application integration

06 Streamlit or FastAPI delivery and evaluation

PROJECT DELIVERABLES

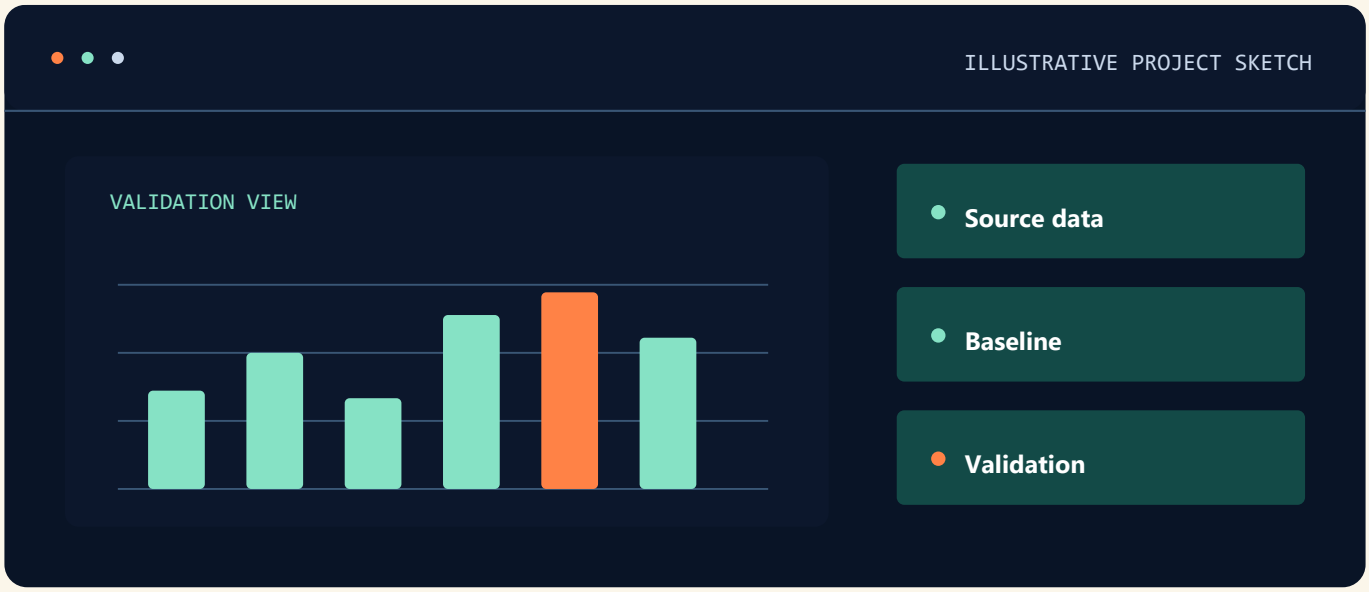
A reproducible analysis or demo, validation checks and a short findings summary.

AI, Machine Learning & Applied AI Development

Portfolio project

AI-Powered Support Triage

Build a model that categorises synthetic support requests and an app that shows results with human review controls.



Define success

Select a dataset and decide how to measure a useful result.

Validate results

Compare against a baseline or trusted total and explain any discrepancy.

A reproducible analysis or demo, validation checks and a short findings summary.

AI, Machine Learning & Applied AI Development

Course fees

COMPLETE PROGRAMME

₹35,000

MODULE FEES INR

Python & Data Science Foundation	**₹7,500**
Machine Learning & Deep Learning	**₹12,500**
Applied AI & ML Development	**₹15,000**

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AI, Machine Learning & Applied AI Development

Course content

MODULES 01–02

01

Lessons & practice

- Python
- NumPy
- Pandas
- Matplotlib
- Plotly

HANDS-ON Profile a dataset with NumPy and pandas and compare two chart formats.

02

Lessons & practice

- Statistics
- Feature engineering
- Reproducible datasets

HANDS-ON Build reproducible data splits and record feature assumptions and statistics.

AI, Machine Learning & Applied AI Development

Course content

MODULES 03–04

03

Lessons & practice

- Scikit-learn models
- Validation
- Tuning

HANDS-ON Compare scikit-learn baselines and validate a tuned model on held-out data.

04

Lessons & practice

- TensorFlow
- Keras deep-learning foundations

HANDS-ON Fit a small Keras model and explain training and validation curves.

AI, Machine Learning & Applied AI Development

Course content

MODULES 05–06

05

Lessons & practice

- NLP
- Transformers
- LLM application integration

HANDS-ON

Build an NLP or LLM component with source checks and representative failure reviews.

06

Lessons & practice

- Streamlit or FastAPI delivery
- Evaluation

HANDS-ON

Deliver a Streamlit or FastAPI demo with evaluation notes and run instructions.

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CLOUD & DEVOPS

Cloud Computing

SAMPLE PROJECT

Cloud Service Blueprint



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Cloud Computing

Core concepts



01 Cloud service models, regions and availability zones

02 Virtual machines, storage and managed databases

03 Cloud networks, routing and access boundaries

Trace the deployment

Document the components, access boundary and expected health signal.

Cloud Computing

Applied skills

- **Environment**
- **Service**
- **Health signals**



04 Identity, least privilege and shared responsibility

05 Monitoring, backups and recovery basics

06 Deployment patterns, tagging and cost controls

PROJECT DELIVERABLES

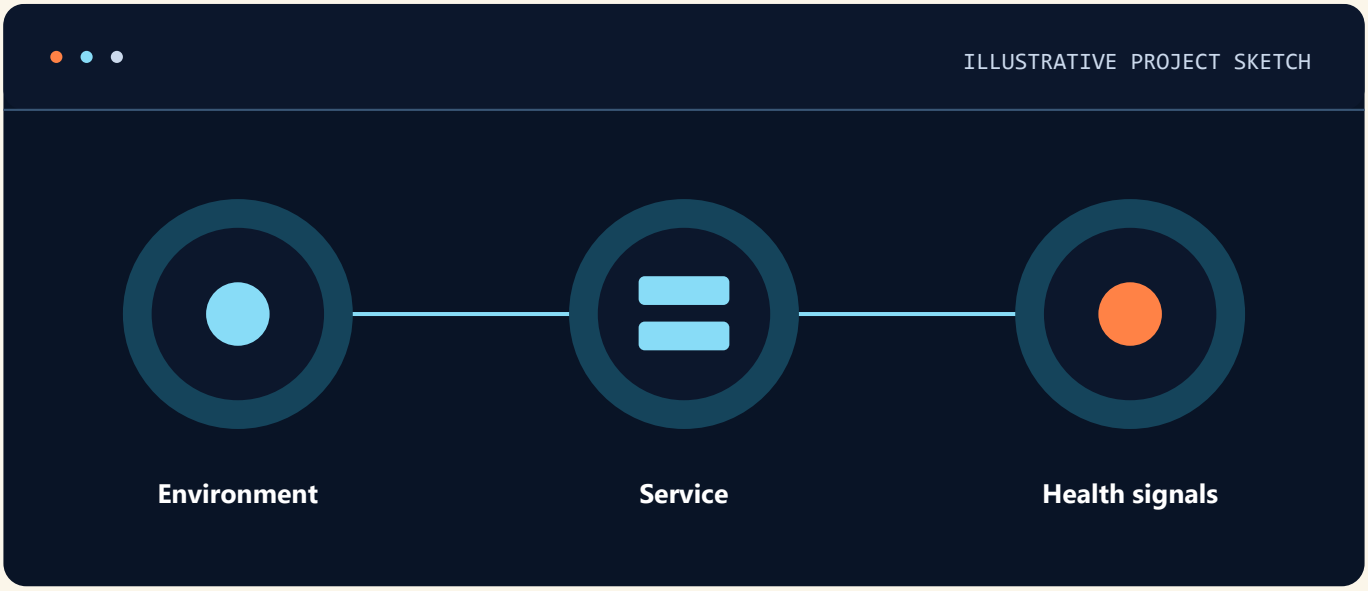
An architecture diagram, deployment notes and evidence of a health or recovery check.

Cloud Computing

Portfolio project

Cloud Service Blueprint

Deploy a small practice app, document its network and access settings and estimate operating costs.



Trace the deployment

Document the components, access boundary and expected health signal.

Rehearse recovery

Use a practice environment to check the documented recovery or rollback.

An architecture diagram, deployment notes and evidence of a health or recovery check.

Cloud Computing

Course fees

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SCAN FOR MAP

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Cloud Computing

Course content

MODULES 01–02

01

Lessons & practice

- Cloud service models
- Regions
- Availability zones

HANDS-ON

Match a sample workload to a cloud service model and regional availability requirements.

02

Lessons & practice

- Virtual machines
- Storage
- Managed databases

HANDS-ON

Compare storage and managed database choices for the same small application.

Cloud Computing

Course content

MODULES 03–04

03

Lessons & practice

- Cloud networks
- Routing
- Access boundaries

HANDS-ON — Draw the network path and record where the public and private boundaries are.

04

Lessons & practice

- Identity
- Least privilege
- Shared responsibility

HANDS-ON — Create a least-privilege access plan and identify customer and provider responsibilities.

Cloud Computing

Course content

MODULES 05–06

05

Lessons & practice

- Monitoring
- Backups
- Recovery basics

HANDS-ON — Check a service alert and rehearse recovery from a practice backup.

06

Lessons & practice

- Deployment patterns
- Tagging
- Cost controls

HANDS-ON — Design a tagged deployment and estimate its operating cost for a sample month.

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CLOUD & DEVOPS

AWS

SAMPLE PROJECT

AWS Web App Deployment



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AWS

Core concepts



01	AWS regions, accounts and IAM roles
02	EC2, EBS and S3 storage options
03	VPC subnets, routes and security groups

Trace the deployment

Document the components, access boundary and expected health signal.

AWS

Applied skills

- **Environment**
- **Service**
- **Health signals**



04 RDS, Lambda and managed service concepts

05 CloudWatch, backups and budget alerts

06 Availability, deployment and infrastructure documentation

PROJECT DELIVERABLES

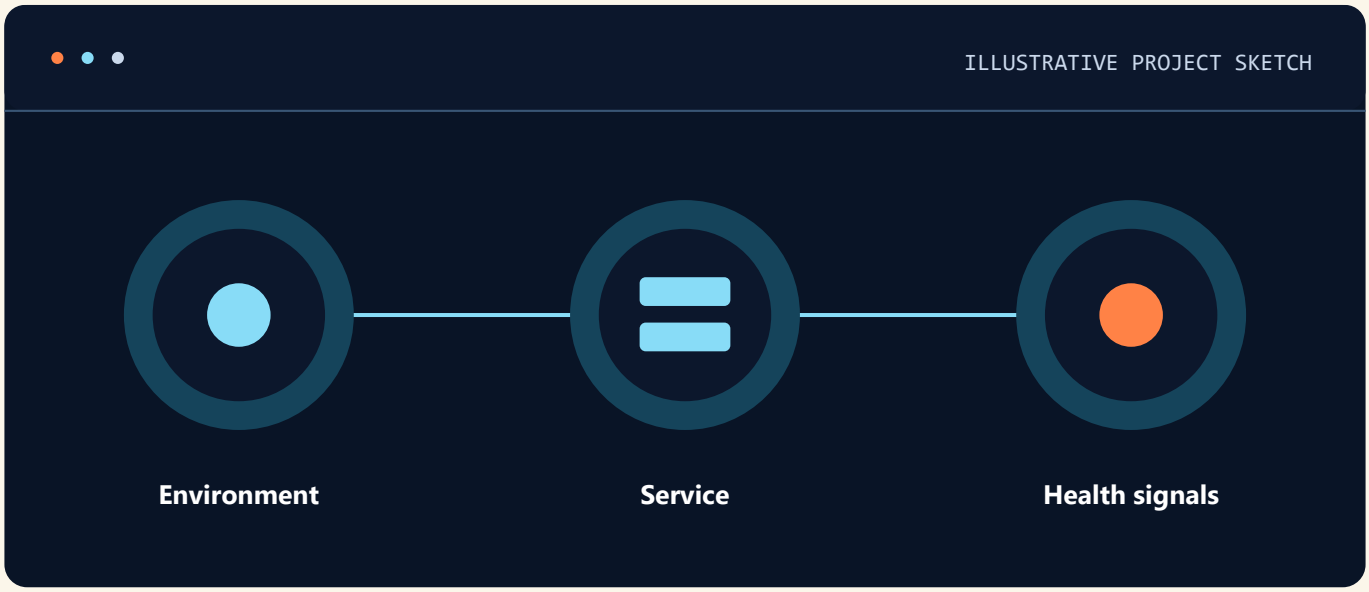
An architecture diagram, deployment notes and evidence of a health or recovery check.

AWS

Portfolio project

AWS Web App Deployment

Deploy an example service on AWS with private storage, limited access and a budget alert.



Trace the deployment

Document the components, access boundary and expected health signal.

Rehearse recovery

Use a practice environment to check the documented recovery or rollback.

An architecture diagram, deployment notes and evidence of a health or recovery check.

AWS

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SCAN FOR MAP

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AWS

Course content

MODULES 01–02

01

Lessons & practice

- AWS regions
- Accounts
- IAM roles

HANDS-ON

Choose a region and document narrowly scoped IAM access for a sample service.

02

Lessons & practice

- EC2
- EBS
- S3 storage options

HANDS-ON

Compare EC2, EBS and S3 using a small workload and record storage trade-offs.

AWS

Course content

MODULES 03–04

03

Lessons & practice

- VPC subnets
- Routes
- Security groups

HANDS-ON

Draw public and private VPC subnets and review the intended security group rules.

04

Lessons & practice

- RDS
- Lambda
- Managed service concepts

HANDS-ON

Compare a sample RDS-backed service and a small Lambda task.

AWS

Course content

MODULES 05–06

05

Lessons & practice

- CloudWatch
- Backups
- Budget alerts

HANDS-ON

Set up a practice health metric and record how backup and budget alerts would be verified.

06

Lessons & practice

- Availability
- Deployment
- Infrastructure documentation

HANDS-ON

Document a repeatable sample deployment and test that it can be torn down.

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CLOUD & DEVOPS

Azure

SAMPLE PROJECT

Azure Service Deployment



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Azure

Core concepts



01	Azure subscriptions, resource groups and regions
02	Microsoft Entra ID, RBAC and managed identities
03	Virtual networks, network security groups and VMs

Trace the deployment

Document the components, access boundary and expected health signal.

Azure

Applied skills

- **Environment**
- **Service**
- **Health signals**



04 Blob Storage, Azure SQL and App Service

05 Azure Monitor, backups and cost management

06 Deployment workflows and configuration review

PROJECT DELIVERABLES

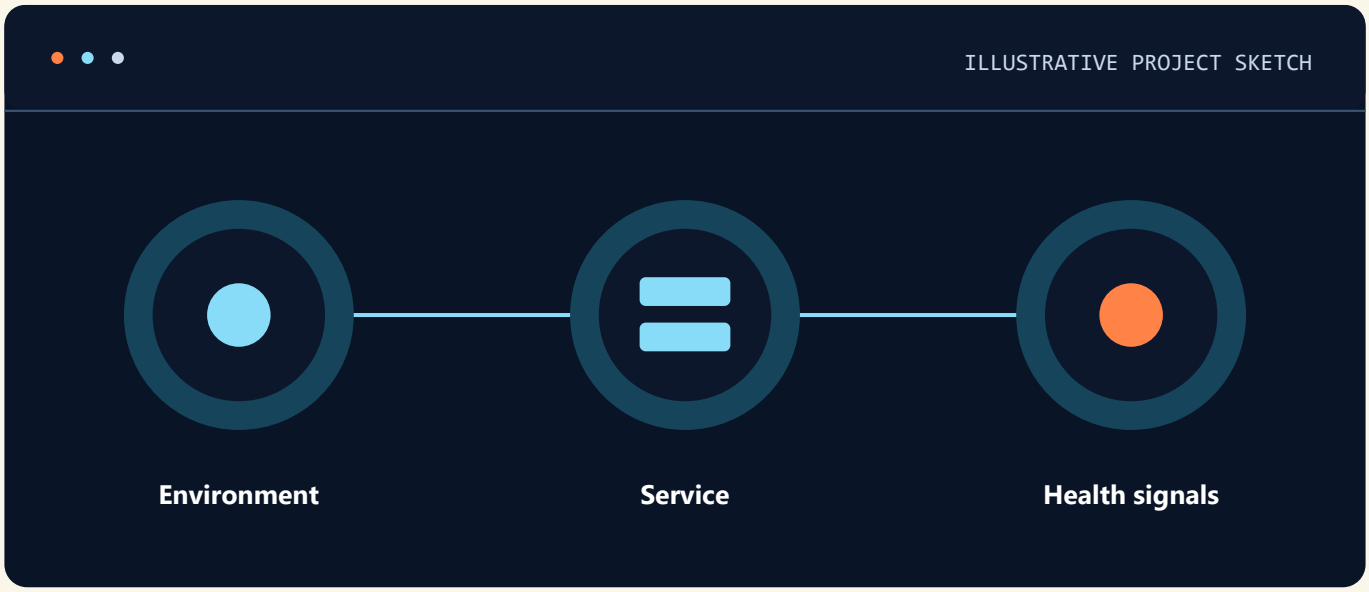
An architecture diagram, deployment notes and evidence of a health or recovery check.

Azure

Portfolio project

Azure Service Deployment

Host a training app with App Service, apply a managed identity and review logs and resource costs.



Trace the deployment

Document the components, access boundary and expected health signal.

Rehearse recovery

Use a practice environment to check the documented recovery or rollback.

An architecture diagram, deployment notes and evidence of a health or recovery check.

Azure

Course fees

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SCAN FOR MAP

Check course details

Azure

Course content

MODULES 01–02

01

Lessons & practice

- Azure subscriptions
- Resource groups
- Regions

HANDS-ON

Organise a practice deployment into a subscription, resource group and region.

02

Lessons & practice

- Microsoft Entra ID
- RBAC
- Managed identities

HANDS-ON

Define a least-privilege access assignment using Entra ID and managed identity.

Azure

Course content

MODULES 03–04

03

Lessons & practice

- Virtual networks
- Network security groups
- VMs

HANDS-ON Draw a virtual network and verify expected access for a sample VM.

04

Lessons & practice

- Blob Storage
- Azure SQL
- App Service

HANDS-ON Compare App Service, Blob Storage and Azure SQL for a small workflow.

Azure

Course content

MODULES 05–06

05

Lessons & practice

- Azure Monitor
- Backups
- Cost management

HANDS-ON Inspect logs, document a backup check and set a practice cost threshold.

06

Lessons & practice

- Deployment workflows
- Configuration review

HANDS-ON Deploy a sample service and review configuration, access and cleanup.

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CLOUD & DEVOPS

Google Cloud

SAMPLE PROJECT

Google Cloud App Delivery



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Google Cloud

Core concepts



01 Projects, organisations, regions and IAM

02 Compute Engine, Cloud Run and deployment choices

03 VPC networks and firewall policy basics

Trace the deployment

Document the components, access boundary and expected health signal.

Google Cloud

Applied skills

- **Environment**
- **Service**
- **Health signals**



04 Cloud Storage, Cloud SQL and BigQuery overview

05 Logging, monitoring and billing budgets

06 Service accounts, reliability and cost review

PROJECT DELIVERABLES

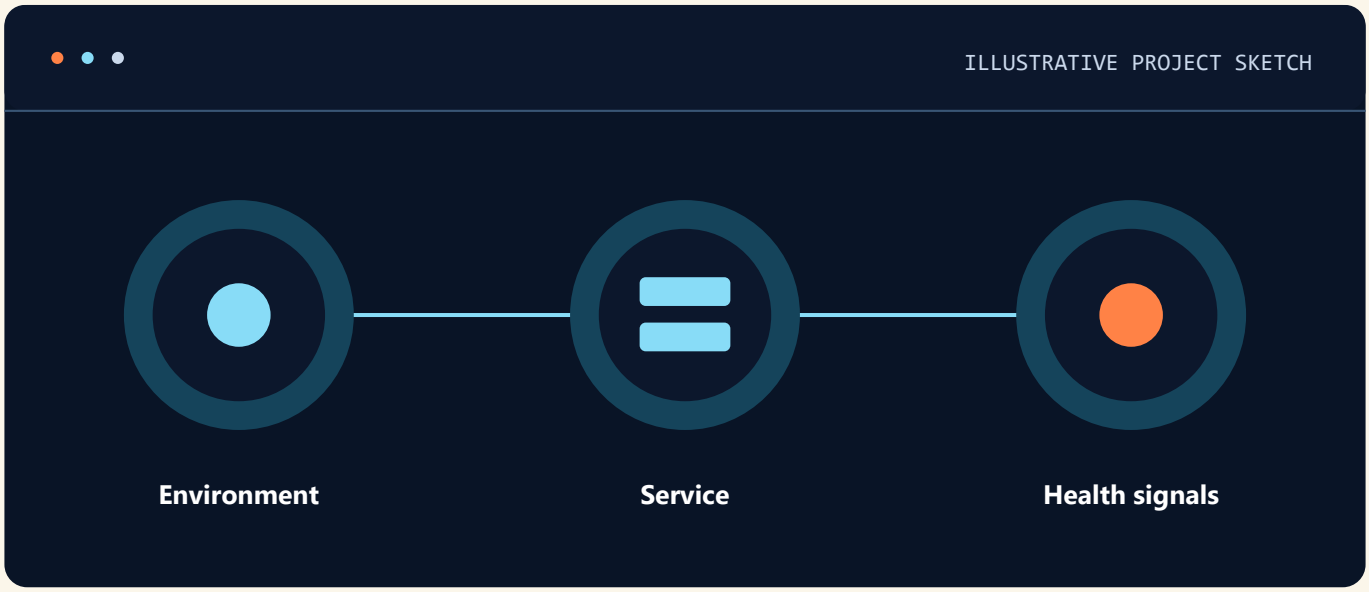
An architecture diagram, deployment notes and evidence of a health or recovery check.

Google Cloud

Portfolio project

Google Cloud App Delivery

Deploy a sample service on Cloud Run and validate limited access, logging and budget visibility.



Trace the deployment

Document the components, access boundary and expected health signal.

Rehearse recovery

Use a practice environment to check the documented recovery or rollback.

An architecture diagram, deployment notes and evidence of a health or recovery check.

Google Cloud

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SCAN FOR MAP

Check course details

Google Cloud

Course content

MODULES 01–02

01

Lessons & practice

- Projects
- Organisations
- Regions
- IAM

HANDS-ON

Assign sample project roles and explain how the organisation and region affect access.

02

Lessons & practice

- Compute Engine
- Cloud Run
- Deployment choices

HANDS-ON

Run a practice app on Cloud Run and compare it with a Compute Engine deployment.

Google Cloud

Course content

MODULES 03–04

03

Lessons & practice

- VPC networks
- Firewall policy basics

HANDS-ON Map a sample VPC path and document the intended firewall policy.

04

Lessons & practice

- Cloud Storage
- Cloud SQL
- BigQuery overview

HANDS-ON Compare Cloud Storage, Cloud SQL and BigQuery for one sample workload.

Google Cloud

Course content

MODULES 05–06

05

Lessons & practice

- Logging
- Monitoring
- Billing budgets

HANDS-ON Review logging and metrics and define a budget reminder for the project.

06

Lessons & practice

- Service accounts
- Reliability
- Cost review

HANDS-ON Check workload identity, expected cost and a basic recovery procedure.

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CLOUD & DEVOPS

DevOps

SAMPLE PROJECT

Release Pipeline for a Demo App



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DevOps

Core concepts



01

Linux, Git and collaborative workflows

02

Build automation and reproducible tests

03

CI/CD stages, approvals and release artifacts

Trace the deployment

Document the components, access boundary and expected health signal.

DevOps

Applied skills

- **Environment**
- **Service**
- **Health signals**



04 Containers, registries and deployment basics

05 Infrastructure as code and secrets management

06 Observability, rollback and release documentation

PROJECT DELIVERABLES

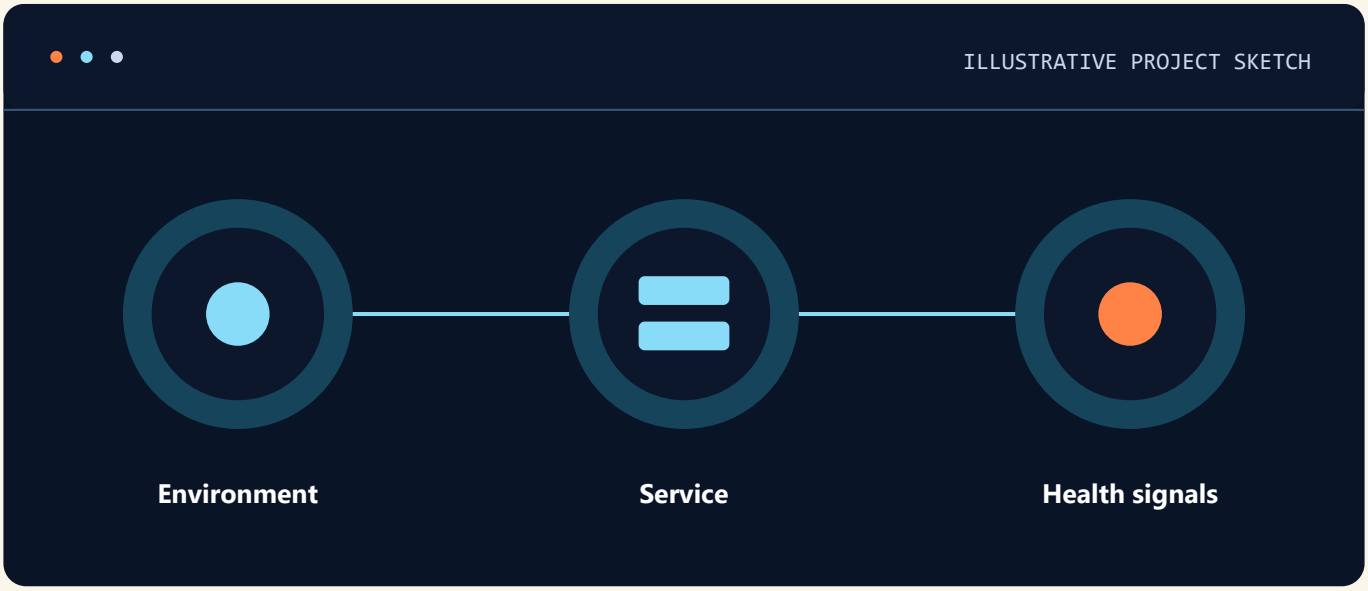
An architecture diagram, deployment notes and evidence of a health or recovery check.

DevOps

Portfolio project

Release Pipeline for a Demo App

Create a pipeline that tests a change, builds a container and deploys it with a rollback check.



Trace the deployment

Document the components, access boundary and expected health signal.

Rehearse recovery

Use a practice environment to check the documented recovery or rollback.

An architecture diagram, deployment notes and evidence of a health or recovery check.

DevOps

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SCAN FOR MAP

Check course details

DevOps

Course content

MODULES 01–02

01

Lessons & practice

- Linux
- Git
- Collaborative workflows

HANDS-ON Create a Git branch, review a change and trace it through a Linux environment.

02

Lessons & practice

- Build automation
- Reproducible tests

HANDS-ON Make a build and its tests reproducible from a clean checkout.

DevOps

Course content

MODULES 03–04

03

Lessons & practice

- CI/CD stages
- Approvals
- Release artifacts

HANDS-ON Design a CI/CD pipeline with checks, release records and a manual approval.

04

Lessons & practice

- Containers
- Registries
- Deployment basics

HANDS-ON Package a training app in a container and validate its deployment configuration.

DevOps

Course content

MODULES 05–06

05

Lessons & practice

- Infrastructure as code
- Secrets management

HANDS-ON

Document infrastructure configuration and keep test credentials outside source control.

06

Lessons & practice

- Observability
- Rollback
- Release documentation

HANDS-ON

Rehearse a rollback and record how logs and health signals confirm it.

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CLOUD & DEVOPS

Docker

SAMPLE PROJECT

Containerised Catalogue App



COURSE FEE

Fee on enquiry

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Docker

Core concepts



01 Images, containers, layers and registries

02 Dockerfiles, caching and build context

03 Volumes, bind mounts and network basics

Trace the deployment

Document the components, access boundary and expected health signal.

Docker

Applied skills

- **Environment**
- **Service**
- **Health signals**



04 Docker Compose services and environment settings

05 Multi-stage builds and least-privilege defaults

06 Logs, health checks and image publishing

PROJECT DELIVERABLES

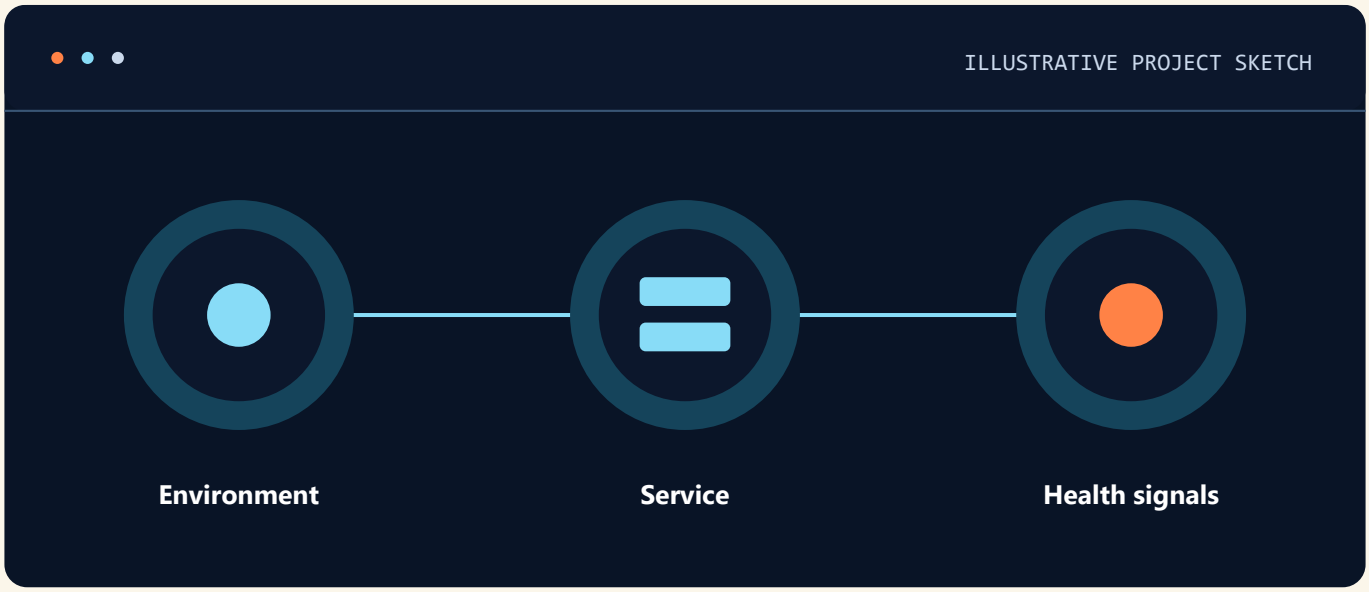
An architecture diagram, deployment notes and evidence of a health or recovery check.

Docker

Portfolio project

Containerised Catalogue App

Package a training app and database as a local Compose stack and verify storage survives a restart.



Trace the deployment

Document the components, access boundary and expected health signal.

Rehearse recovery

Use a practice environment to check the documented recovery or rollback.

An architecture diagram, deployment notes and evidence of a health or recovery check.

Docker

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SCAN FOR MAP

Check course details

Docker

Course content

MODULES 01–02

01

Lessons & practice

- Images
- Containers
- Layers
- Registries

HANDS-ON — Build an image, run a container and explain how a tag identifies the version.

02

Lessons & practice

- Dockerfiles
- Caching
- Build context

HANDS-ON — Revise a Dockerfile and observe how changing layer order affects a rebuild.

Docker

Course content

MODULES 03–04

03

Lessons & practice

- Volumes
- Bind mounts
- Network basics

HANDS-ON Restart a container and confirm its named volume preserves sample data.

04

Lessons & practice

- Docker Compose services
- Environment settings

HANDS-ON Use Compose to run a practice app and database with scoped settings.

Docker

Course content

MODULES 05–06

05

Lessons & practice

- Multi-stage builds
- Least-privilege defaults

HANDS-ON

Compare a multi-stage build with the original and verify the container uses limited privileges.

06

Lessons & practice

- Logs
- Health checks
- Image publishing

HANDS-ON

Inspect container logs and health status and document image publishing and cleanup.

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CLOUD & DEVOPS

Kubernetes

SAMPLE PROJECT

Kubernetes Application Rollout



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Kubernetes

Core concepts



01 Cluster components, Pods and namespaces

02 Deployments, ReplicaSets and Services

03 ConfigMaps, Secrets and resource limits

Trace the deployment

Document the components, access boundary and expected health signal.

Kubernetes

Applied skills

- **Environment**
- **Service**
- **Health signals**



04 Ingress, probes and persistent volumes

05 Rollouts, rollback and scaling

06 Logs, events and deployment troubleshooting

PROJECT DELIVERABLES

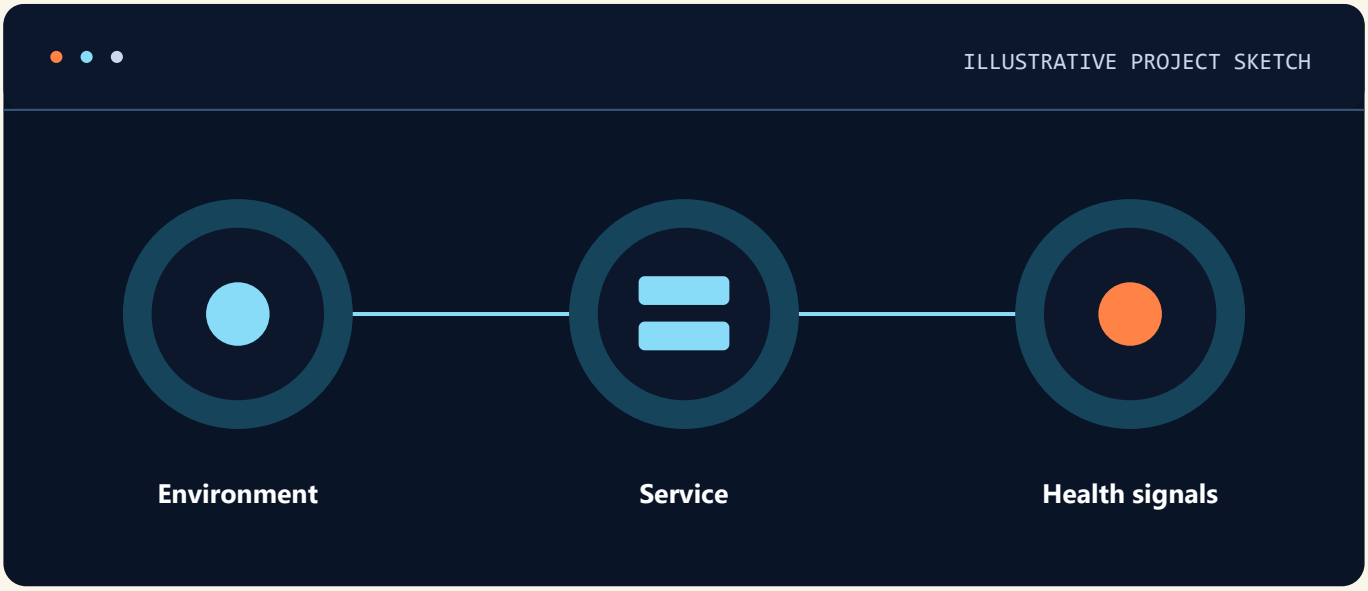
An architecture diagram, deployment notes and evidence of a health or recovery check.

Kubernetes

Portfolio project

Kubernetes Application Rollout

Run a sample service in a practice cluster and verify rollout, health checks, scaling and recovery.



Trace the deployment

Document the components, access boundary and expected health signal.

Rehearse recovery

Use a practice environment to check the documented recovery or rollback.

An architecture diagram, deployment notes and evidence of a health or recovery check.

Kubernetes

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SCAN FOR MAP

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Kubernetes

Course content

MODULES 01–02

01

Lessons & practice

- Cluster components
- Pods
- Namespaces

HANDS-ON — Start a sample Pod in a practice namespace and identify which components manage it.

02

Lessons & practice

- Deployments
- ReplicaSets
- Services

HANDS-ON — Create a Deployment and Service and verify stable access to the demo.

Kubernetes

Course content

MODULES 03–04

03

Lessons & practice

- ConfigMaps
- Secrets
- Resource limits

HANDS-ON Apply resource limits and separate sample configuration from sensitive values.

04

Lessons & practice

- Ingress
- Probes
- Persistent volumes

HANDS-ON Exercise a readiness probe and confirm mounted data persists across restarts.

Kubernetes

Course content

MODULES 05–06

05

Lessons & practice

- Rollouts
- Rollback
- Scaling

HANDS-ON Roll out a new image, check scaling and rehearse rollback.

06

Lessons & practice

- Logs
- Events
- Deployment troubleshooting

HANDS-ON Use events and logs to diagnose a practice deployment failure.

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CYBER SECURITY

Cyber Security

SAMPLE PROJECT

Small Business Security Baseline



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Cyber Security

Core concepts



01	Security principles and common risk categories
02	Network, operating-system and identity fundamentals
03	Permissions, patching and secure configuration

Review the scope

Identify assets and trust boundaries in a supplied scenario.

Cyber Security

Applied skills

- **Assets**
- **Controls**
- **Evidence**



04 Vulnerability reports, prioritisation and remediation

05 Logging, alert handling and incident response

06 Security policies, reporting and control validation

PROJECT DELIVERABLES

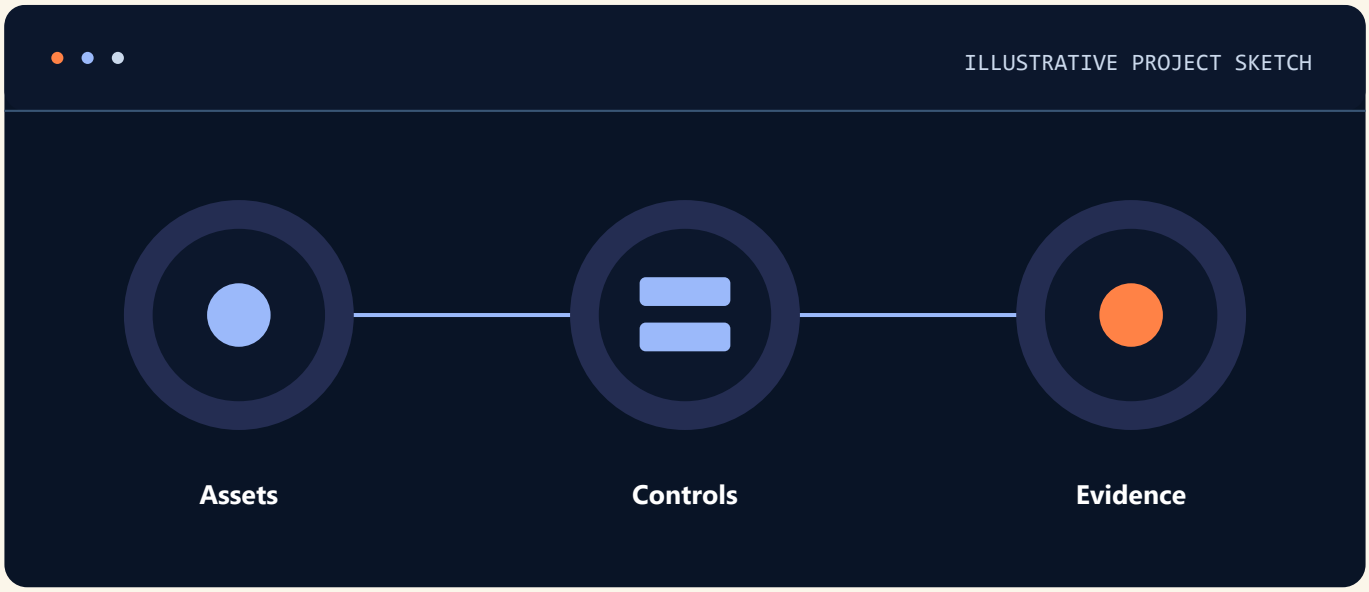
A security review, prioritised mitigations and the evidence needed to verify each fix.

Cyber Security

Portfolio project

Small Business Security Baseline

Review a sample environment, map its risks to controls and write a prioritised remediation plan.



Review the scope

Identify assets and trust boundaries in a supplied scenario.

Prioritise fixes

Rank the supplied findings and describe evidence for verifying each mitigation.

A security review, prioritised mitigations and the evidence needed to verify each fix.

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SCAN FOR MAP

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Cyber Security

Course content

MODULES 01–02

01

Lessons & practice

- Security principles
- Common risk categories

HANDS-ON Map risks in a sample organisation to proportionate defensive controls.

02

Lessons & practice

- Network
- Operating-system
- Identity fundamentals

HANDS-ON Draw identity, host and network trust boundaries for an example environment.

Cyber Security

Course content

MODULES 03–04

03

Lessons & practice

- Permissions
- Patching
- Secure configuration

HANDS-ON — Review a hardening checklist and confirm least-privilege and patch decisions.

04

Lessons & practice

- Vulnerability reports
- Prioritisation
- Remediation

HANDS-ON — Prioritise supplied vulnerability findings and propose evidence for closure.

Cyber Security

Course content

MODULES 05–06

05

Lessons & practice

- Logging
- Alert handling
- Incident response

HANDS-ON — Triage a synthetic alert and write a containment and escalation summary.

06

Lessons & practice

- Security policies
- Reporting
- Control validation

HANDS-ON — Produce a control report with owners, test evidence and remaining risks.

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CYBER SECURITY

Ethical Hacking

SAMPLE PROJECT

Security Assessment Review



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Ethical Hacking

Core concepts



01 Ethics, authorisation and assessment boundaries

02 Network, host and application security fundamentals

03 Threat modelling and exposure review

Review the scope

Identify assets and trust boundaries in a supplied scenario.

Ethical Hacking

Applied skills

- **Assets**
- **Controls**
- **Evidence**



04 Interpreting vulnerability evidence and risk scores

05 Mitigation selection and secure configuration

06 Report writing, disclosure and retest planning

PROJECT DELIVERABLES

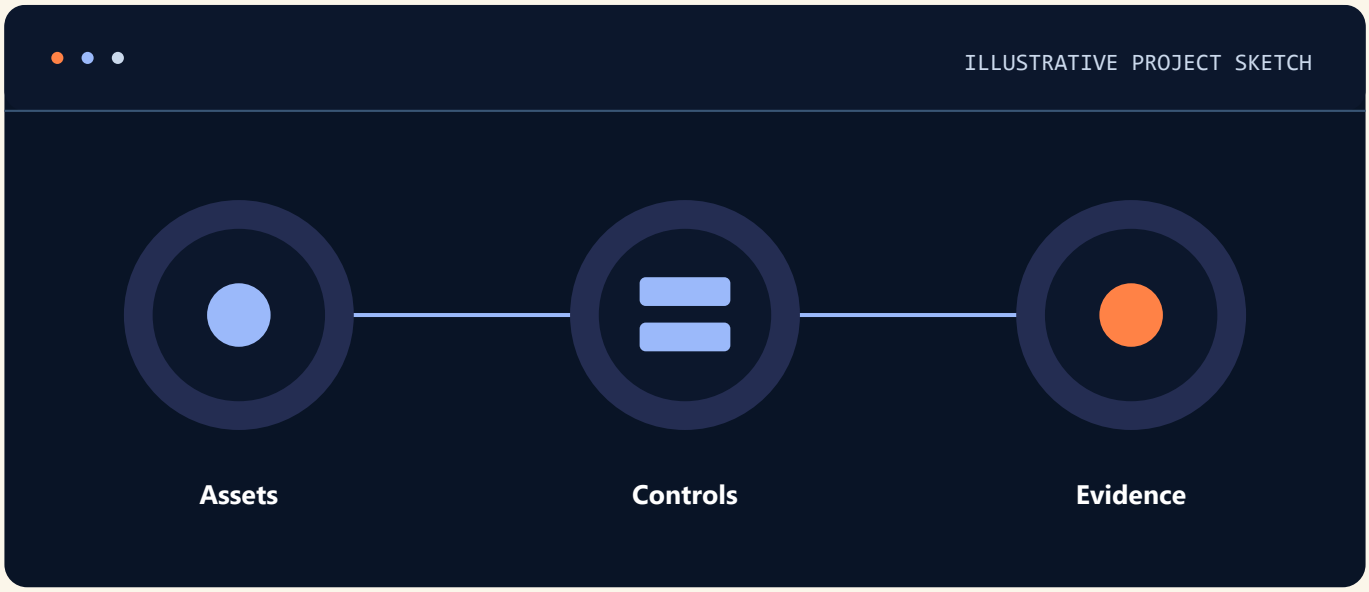
A security review, prioritised mitigations and the evidence needed to verify each fix.

Ethical Hacking

Portfolio project

Security Assessment Review

Use supplied findings to prioritise fixes, prepare an assessment report and define evidence for retesting.



Review the scope

Identify assets and trust boundaries in a supplied scenario.

Prioritise fixes

Rank the supplied findings and describe evidence for verifying each mitigation.

A security review, prioritised mitigations and the evidence needed to verify each fix.

Ethical Hacking

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SCAN FOR MAP

Check course details

Ethical Hacking

Course content

MODULES 01–02

01

Lessons & practice

- Ethics
- Authorisation
- Assessment boundaries

HANDS-ON

Write an assessment scope with authorisation, communication and stop conditions.

02

Lessons & practice

- Network
- Host
- Application security fundamentals

HANDS-ON

Review a sample architecture and identify appropriate host and application controls.

Ethical Hacking

Course content

MODULES 03–04

03

Lessons & practice

- Threat modelling
- Exposure review

HANDS-ON Map assets and trust boundaries using a sample design.

04

Lessons & practice

- Interpreting vulnerability evidence
- Risk scores

HANDS-ON Interpret supplied findings and explain severity, impact and evidence gaps.

Ethical Hacking

Course content

MODULES 05–06

05

Lessons & practice

- Mitigation selection
- Secure configuration

HANDS-ON Propose fixes and define criteria a defender can use to verify each fix.

06

Lessons & practice

- Report writing
- Disclosure
- Retest planning

HANDS-ON Write a responsible disclosure and retest plan from a supplied case file.

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CYBER SECURITY

Certified Ethical Hacker (CEH) Preparation

SAMPLE PROJECT

Security Findings Dossier



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Certified Ethical Hacker (CEH) Preparation

Core concepts



01 Security ethics and written assessment scope

02 Network, web and endpoint risk categories

03 Authentication and access control concepts

Review the scope

Identify assets and trust boundaries in a supplied scenario.

Certified Ethical Hacker (CEH) Preparation

Applied skills

- **Assets**
- **Controls**
- **Evidence**



04 Vulnerability classification and evidence interpretation

05 Hardening, logging and compensating controls

06 Reporting, disclosure and structured revision

PROJECT DELIVERABLES

A security review, prioritised mitigations and the evidence needed to verify each fix.

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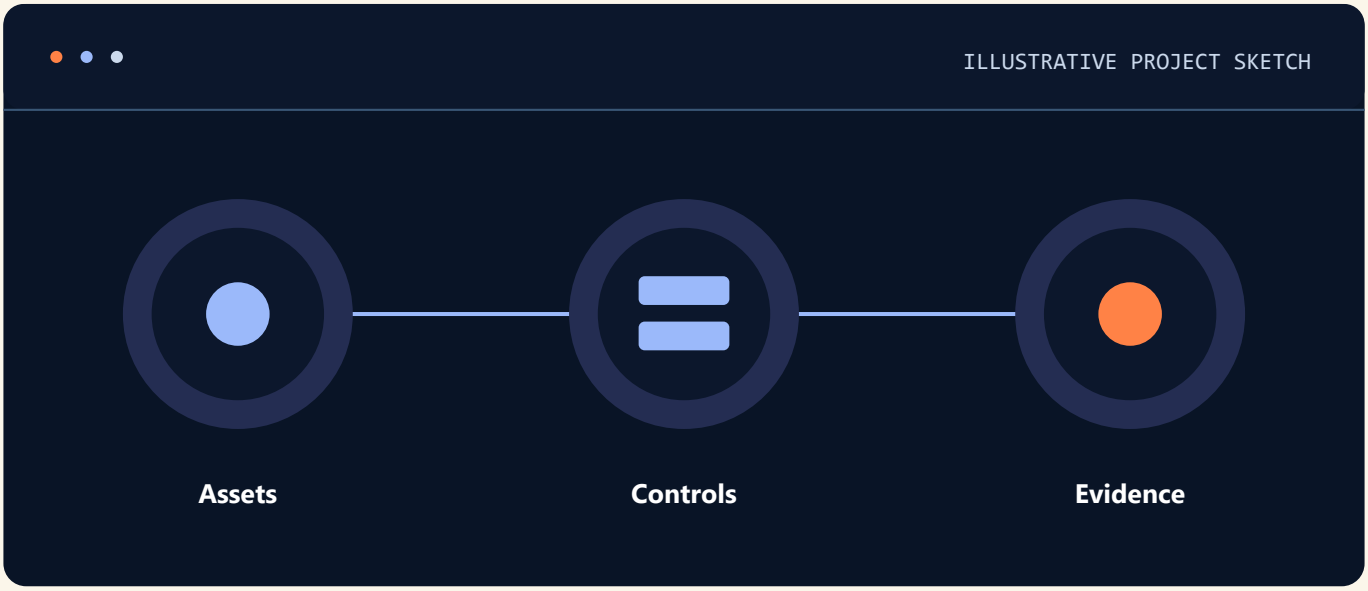
Portfolio project

Security Findings Dossier

Organise sample findings by severity and impact, then propose verification steps for the remediation team.



Review the scope

Identify assets and trust boundaries in a supplied scenario.

Prioritise fixes

Rank the supplied findings and describe evidence for verifying each mitigation.

A security review, prioritised mitigations and the evidence needed to verify each fix.

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Certified Ethical Hacker (CEH) Preparation

Course content

MODULES 01–02

01

Lessons & practice

- Security ethics
- Written assessment scope

HANDS-ON Review a written scope and document what is authorised and excluded.

02

Lessons & practice

- Network
- Web
- Endpoint risk categories

HANDS-ON Classify sample network, web and endpoint control gaps by impact.

Certified Ethical Hacker (CEH) Preparation

Course content

MODULES 03–04

03

Lessons & practice

- Authentication
- Access control concepts

HANDS-ON Compare access control decisions for two roles using an example matrix.

04

Lessons & practice

- Vulnerability classification
- Evidence interpretation

HANDS-ON Read supplied findings and describe the evidence required to substantiate them.

Certified Ethical Hacker (CEH) Preparation

Course content

MODULES 05–06

05

Lessons & practice

- Hardening
- Logging
- Compensating controls

HANDS-ON

Recommend hardening, logging and compensating controls for a sample environment.

06

Lessons & practice

- Reporting
- Disclosure
- Structured revision

HANDS-ON

Prepare a revision report that connects risk, mitigation and validation.

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CYBER SECURITY

SOC Analyst

SAMPLE PROJECT

Alert Triage and Incident Timeline



COURSE FEE

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SOC Analyst

Core concepts



01

SOC roles, workflows and escalation criteria

02

Endpoint, identity and network log sources

03

SIEM queries and event correlation

Review the scope

Identify assets and trust boundaries in a supplied scenario.

SOC Analyst

Applied skills

- **Assets**
- **Controls**
- **Evidence**



04 Alert triage, severity and false-positive review

05 Incident timeline, containment and evidence handling

06 Detection tuning, metrics and handover reports

PROJECT DELIVERABLES

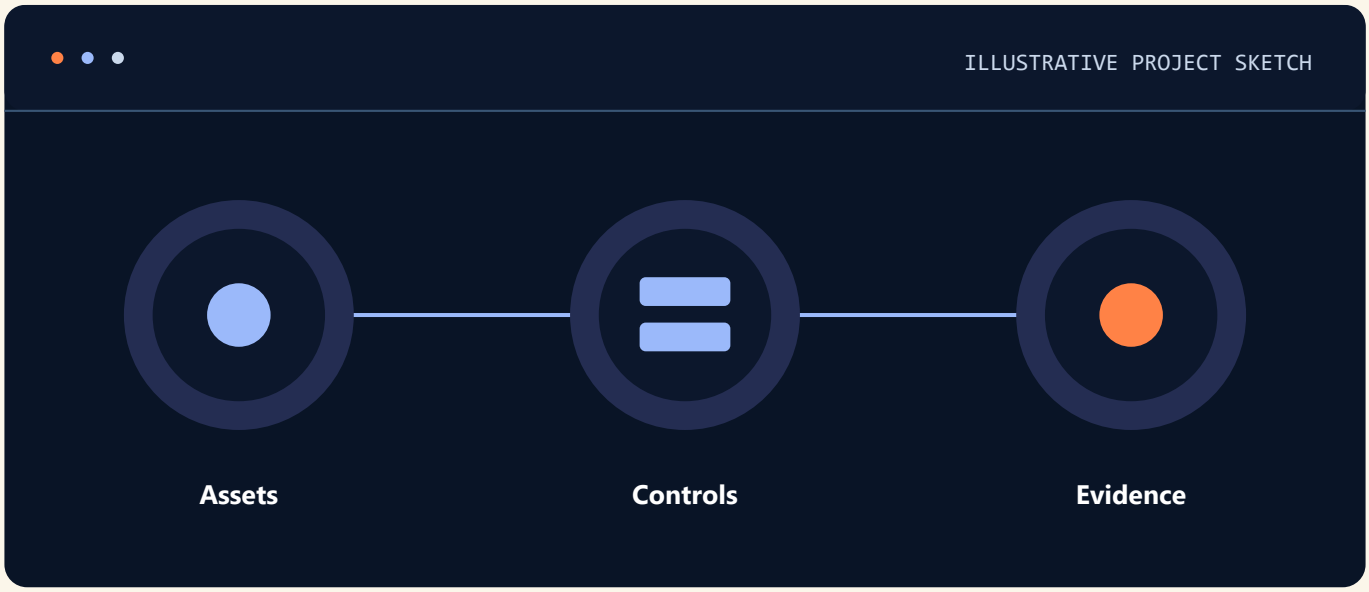
A security review, prioritised mitigations and the evidence needed to verify each fix.

SOC Analyst

Portfolio project

Alert Triage and Incident Timeline

Review synthetic endpoint and sign-in logs to decide which alerts to escalate and document the timeline.



Review the scope

Identify assets and trust boundaries in a supplied scenario.

Prioritise fixes

Rank the supplied findings and describe evidence for verifying each mitigation.

A security review, prioritised mitigations and the evidence needed to verify each fix.

SOC Analyst

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SCAN FOR MAP

Check course details

SOC Analyst

Course content

MODULES 01–02

01

Lessons & practice

- SOC roles
- Workflows
- Escalation criteria

HANDS-ON Write working escalation criteria for a practice alert queue.

02

Lessons & practice

- Endpoint
- Identity
- Network log sources

HANDS-ON Identify which identity, network and endpoint events support a sample incident timeline.

SOC Analyst

Course content

MODULES 03–04

03

Lessons & practice

- SIEM queries
- Event correlation

HANDS-ON Correlate synthetic logs by time and asset to investigate a supplied alert.

04

Lessons & practice

- Alert triage
- Severity
- False-positive review

HANDS-ON Separate a likely incident from a false positive and document the reasoning.

SOC Analyst

Course content

MODULES 05–06

05

Lessons & practice

- Incident timeline
- Containment
- Evidence handling

HANDS-ON

Build a timeline and recommend a containment action and preservation of evidence.

06

Lessons & practice

- Detection tuning
- Metrics
- Handover reports

HANDS-ON

Review detection quality and prepare a handover with metrics and open tasks.

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CYBER SECURITY

Penetration Testing

SAMPLE PROJECT

Assessment Readout and Retest Plan



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Penetration Testing

Core concepts



01	Rules of engagement, authorisation and scope
02	Threat models, asset inventories and exposure review
03	Review of authentication and access control design

Review the scope

Identify assets and trust boundaries in a supplied scenario.

Penetration Testing

Applied skills

- **Assets**
- **Controls**
- **Evidence**



04 Evaluation of supplied security findings

05 Prioritised remediation and mitigation validation

06 Executive summaries and technical report writing

PROJECT DELIVERABLES

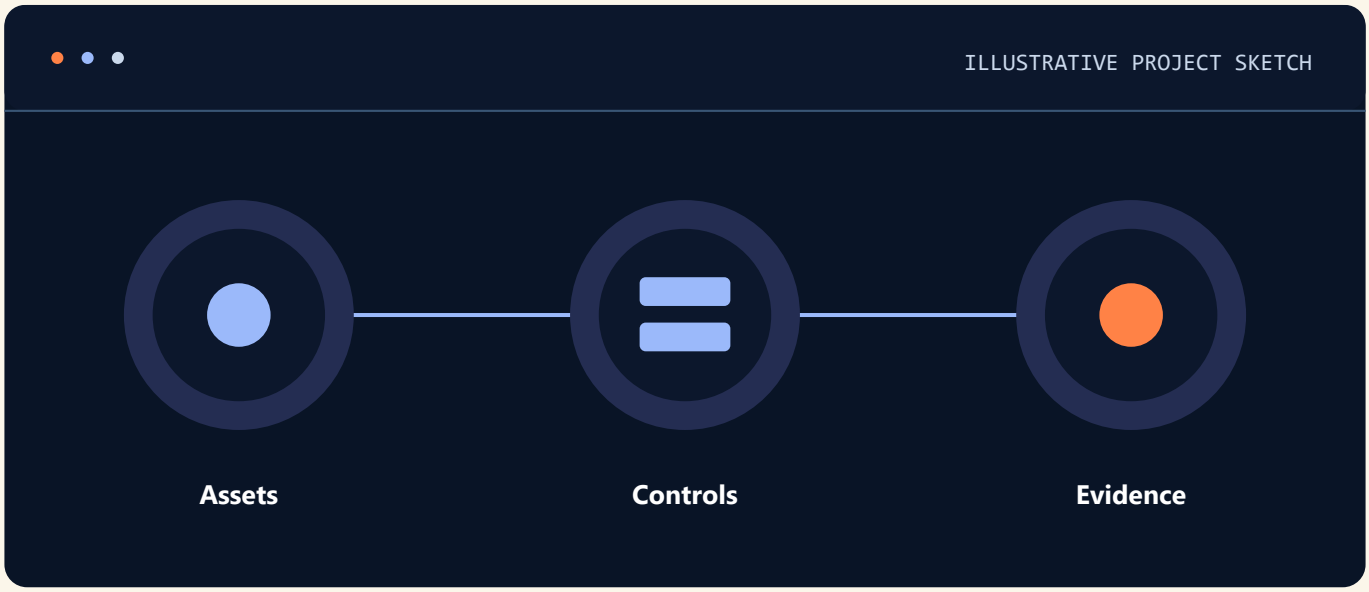
A security review, prioritised mitigations and the evidence needed to verify each fix.

Penetration Testing

Portfolio project

Assessment Readout and Retest Plan

Turn a provided assessment evidence pack into technical findings, an executive summary and a retest plan.



Review the scope

Identify assets and trust boundaries in a supplied scenario.

Prioritise fixes

Rank the supplied findings and describe evidence for verifying each mitigation.

A security review, prioritised mitigations and the evidence needed to verify each fix.

Penetration Testing

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SCAN FOR MAP

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Penetration Testing

Course content

MODULES 01–02

01

Lessons & practice

- Rules of engagement
- Authorisation
- Scope

HANDS-ON Write rules of engagement and verify contacts, scope and stop conditions.

02

Lessons & practice

- Threat models
- Asset inventories
- Exposure review

HANDS-ON Map assets and controls from a supplied environment diagram.

Penetration Testing

Course content

MODULES 03–04

03 Lessons & practice

- Review of authentication
- Access control design

HANDS-ON Review an access-control matrix for excessive permissions in a sample design.

04 **Evaluation of supplied security findings** Lessons & practice

HANDS-ON Classify supplied findings and document confidence and evidence gaps.

Penetration Testing

Course content

MODULES 05–06

05

Lessons & practice

- Prioritised remediation
- Mitigation validation

HANDS-ON

Recommend steps for the owner to verify remediation and record remaining risk.

06

Lessons & practice

- Executive summaries
- Technical report writing

HANDS-ON

Write a concise executive summary and a reproducible evidence appendix for supplied results.

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CYBER SECURITY

Network Security

SAMPLE PROJECT

Secure Office Network Design



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Network Security

Core concepts



01	Network layers, traffic flow and trust boundaries
02	Segmentation, VLANs and secure routing concepts
03	Firewall rules, ACLs and VPN fundamentals

Review the scope

Identify assets and trust boundaries in a supplied scenario.

Network Security

Applied skills

- **Assets**
- **Controls**
- **Evidence**



04 Identity, certificates and secure protocols

05 Network log review and anomaly detection concepts

06 Configuration baseline, change review and verification

PROJECT DELIVERABLES

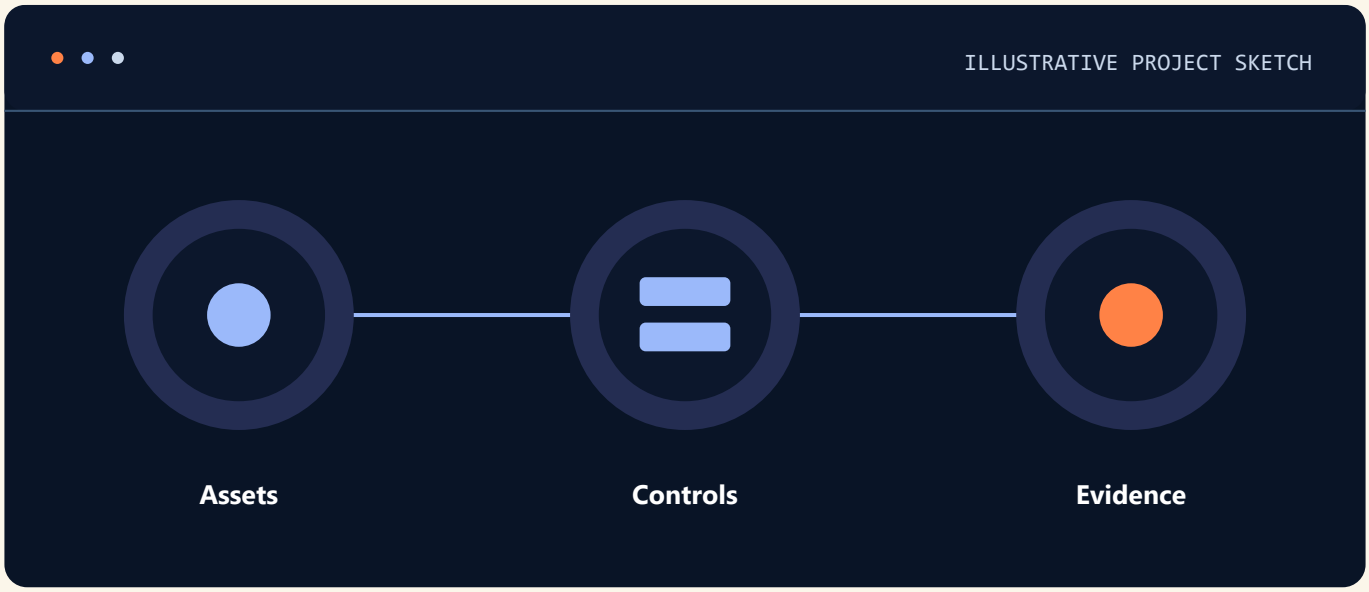
A security review, prioritised mitigations and the evidence needed to verify each fix.

Network Security

Portfolio project

Secure Office Network Design

Draw a segmented office network and specify access rules, logs and checks for each segment.



Review the scope

Identify assets and trust boundaries in a supplied scenario.

Prioritise fixes

Rank the supplied findings and describe evidence for verifying each mitigation.

A security review, prioritised mitigations and the evidence needed to verify each fix.

Network Security

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SCAN FOR MAP

Check course details

Network Security

Course content

MODULES 01–02

01

Lessons & practice

- Network layers
- Traffic flow
- Trust boundaries

HANDS-ON Draw intended traffic paths and place trust boundaries on a sample topology.

02

Lessons & practice

- Segmentation
- VLANs
- Secure routing concepts

HANDS-ON Design VLAN segments and explain permitted traffic between them.

Network Security

Course content

MODULES 03–04

03

Lessons & practice

- Firewall rules
- ACLs
- VPN fundamentals

HANDS-ON Review a supplied firewall, ACL and VPN policy against requirements.

04

Lessons & practice

- Identity
- Certificates
- Secure protocols

HANDS-ON Document certificates and identity checks for a practice service.

Network Security

Course content

MODULES 05–06

05

Lessons & practice

- Network log review
- Anomaly detection concepts

HANDS-ON

Compare synthetic network logs and flag deviations from expected behaviour.

06

Lessons & practice

- Configuration baseline
- Change review
- Verification

HANDS-ON

Verify a defensive baseline and record which checks establish that a change worked.

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SOFTWARE TESTING

Software Testing

SAMPLE PROJECT

Application Quality Report



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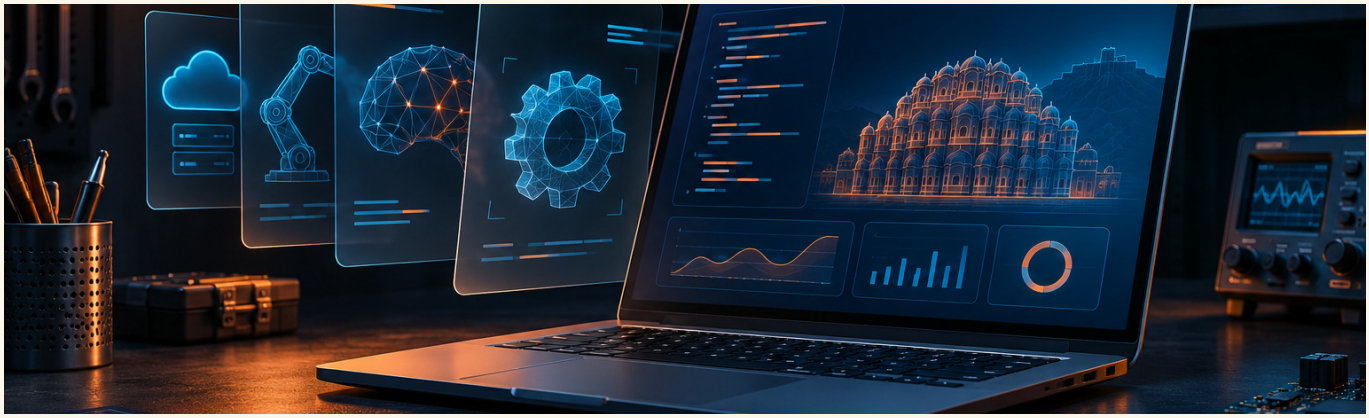
Software Testing

Core concepts



01 Quality principles, SDLC and testing lifecycles

02 Test levels, types and risk-based coverage

03 Equivalence classes, boundaries and test data

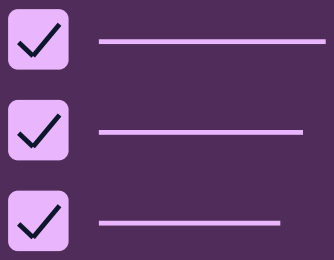
Select the risks

Choose a critical user flow and list representative test conditions.

Software Testing

Applied skills

- **Test cases**
- **Test run**
- **Evidence**



04 Exploratory testing and defect reports

05 API, browser and automation foundations

06 Regression planning, reporting and release criteria

PROJECT DELIVERABLES

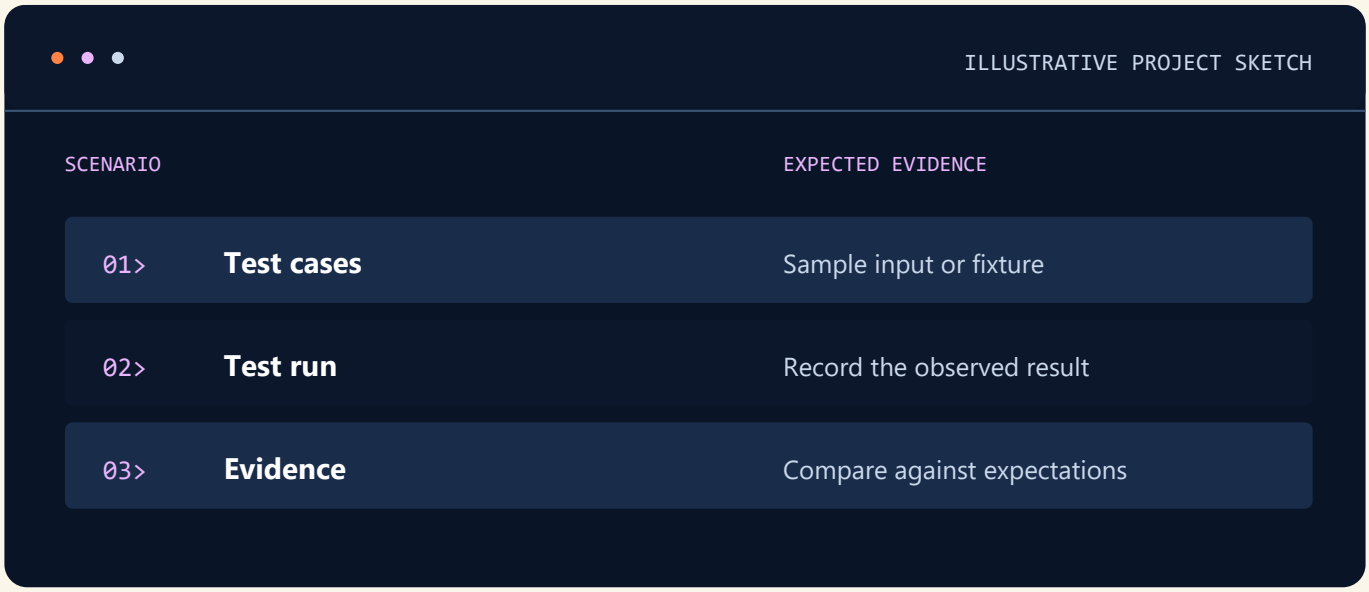
A test plan, evidence from representative scenarios and a summary of open issues.

Software Testing

Portfolio project

Application Quality Report

Design tests for a booking flow, record defects and deliver a risk-based release recommendation.



Select the risks

Choose a critical user flow and list representative test conditions.

Collect evidence

Capture expected and observed results and summarise any release risks.

A test plan, evidence from representative scenarios and a summary of open issues.

Software Testing

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SCAN FOR MAP

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Software Testing

Course content

MODULES 01–02

01

Lessons & practice

- Quality principles
- SDLC
- Testing lifecycles

HANDS-ON Trace requirements through testing stages and draft suitable release checks.

02

Lessons & practice

- Test levels
- Types
- Risk-based coverage

HANDS-ON Rank release risks and select unit, integration and browser checks.

Software Testing

Course content

MODULES 03–04

03

Lessons & practice

- Equivalence classes
- Boundaries
- Test data

HANDS-ON Create boundary and equivalence test data for checkout totals.

04

Lessons & practice

- Exploratory testing
- Defect reports

HANDS-ON Run an exploratory session and write a reproducible defect report.

Software Testing

Course content

MODULES 05–06

05

Lessons & practice

- API
- Browser
- Automation foundations

HANDS-ON

Compare a UI test and an API assertion for the same business rule.

06

Lessons & practice

- Regression planning
- Reporting
- Release criteria

HANDS-ON

Plan a regression run and recommend a release decision based on recorded evidence.

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SOFTWARE TESTING

Manual Testing

SAMPLE PROJECT

Checkout Test Pack



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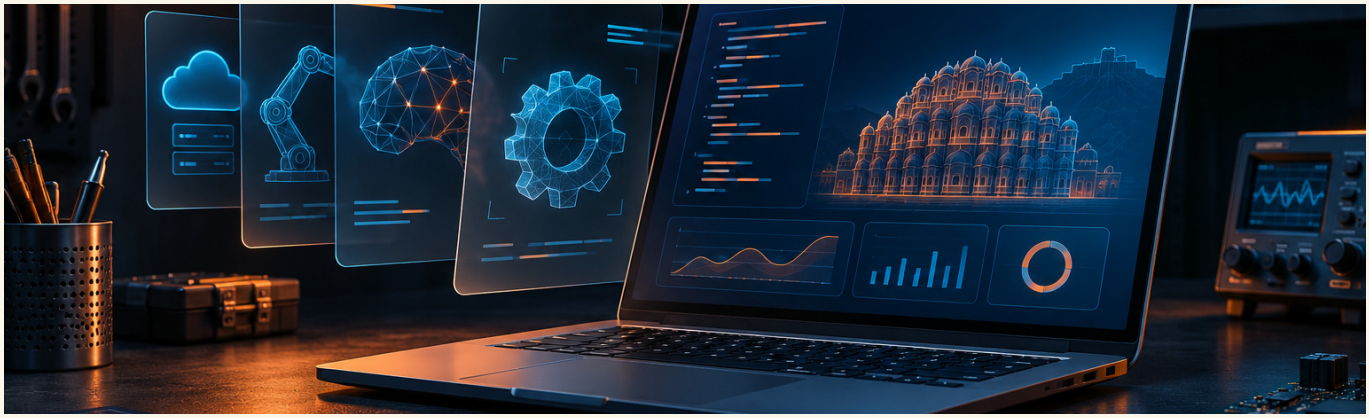
Manual Testing

Core concepts



01 Requirements review and test planning

02 Test cases, test data and traceability

03 Boundary, equivalence and decision-table techniques

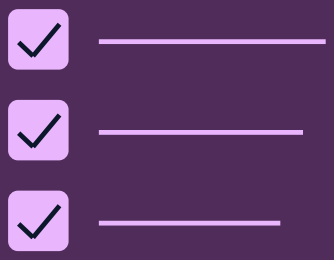
Select the risks

Choose a critical user flow and list representative test conditions.

Manual Testing

Applied skills

- **Test cases**
- **Test run**
- **Evidence**



04 Exploratory, smoke and regression execution

05 Severity, priority and defect lifecycle

06 Results reporting and release sign-off practice

PROJECT DELIVERABLES

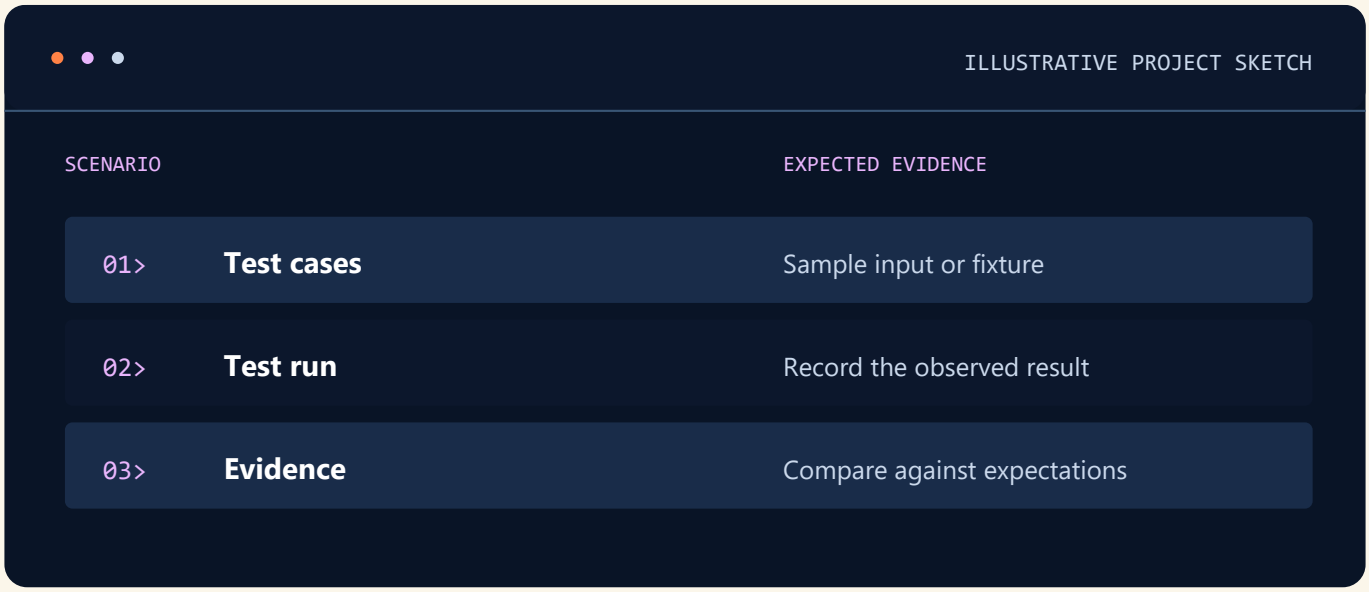
A test plan, evidence from representative scenarios and a summary of open issues.

Manual Testing

Portfolio project

Checkout Test Pack

Create checkout scenarios, execute tests with sample data and write reproducible defect reports.



Select the risks

Choose a critical user flow and list representative test conditions.

Collect evidence

Capture expected and observed results and summarise any release risks.

A test plan, evidence from representative scenarios and a summary of open issues.

Manual Testing

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SCAN FOR MAP

Check course details

Manual Testing

Course content

MODULES 01–02

01

Lessons & practice

- Requirements review
- Test planning

HANDS-ON Review a checkout requirement and turn it into testable acceptance criteria.

02

Lessons & practice

- Test cases
- Test data
- Traceability

HANDS-ON Link each test case to a requirement and prepare valid and invalid data.

Manual Testing

Course content

MODULES 03–04

03

Lessons & practice

- Boundary
- Equivalence
- Decision-table techniques

HANDS-ON Build a decision table and verify boundary values for quantities or discounts.

04

Lessons & practice

- Exploratory
- Smoke
- Regression execution

HANDS-ON Run exploratory, smoke and regression checks for the same workflow.

Manual Testing

Course content

MODULES 05–06

05

Lessons & practice

- Severity
- Priority
- Defect lifecycle

HANDS-ON

Report a problem with steps, observed result and priority rationale.

06

Lessons & practice

- Results reporting
- Release sign-off practice

HANDS-ON

Write a brief execution summary with open defects and release implications.

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SOFTWARE TESTING

Automation Testing

SAMPLE PROJECT

Repeatable Checkout Regression



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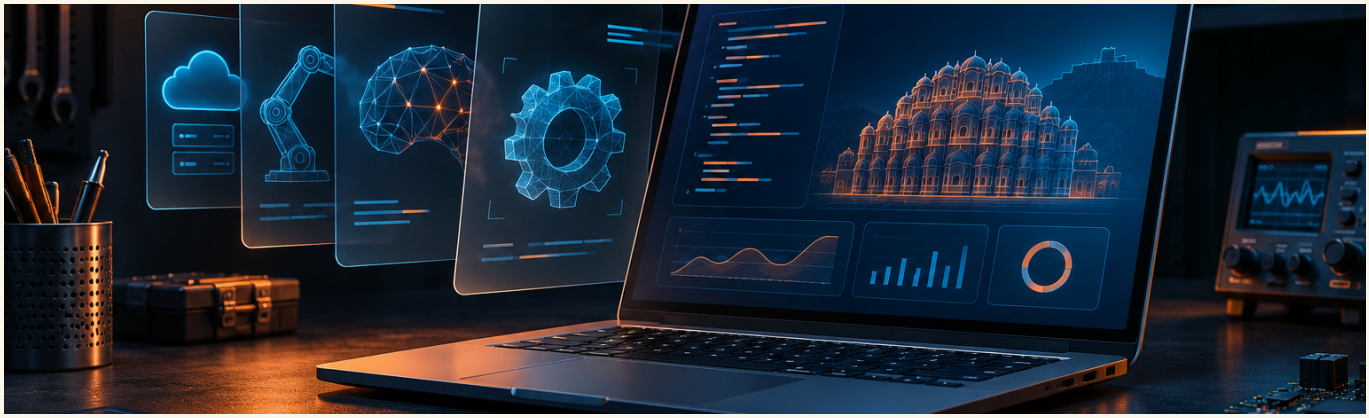
Automation Testing

Core concepts



01 Automation scope, runner and framework setup

02 Assertions, fixtures and test data isolation

03 Browser, component and API automation choices

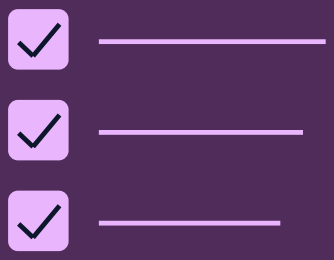
Select the risks

Choose a critical user flow and list representative test conditions.

Automation Testing

Applied skills

- **Test cases**
- **Test run**
- **Evidence**



04 Reusable helpers, selectors and synchronization

05 Headless execution, CI and reporting

06 Flaky-test analysis and maintenance

PROJECT DELIVERABLES

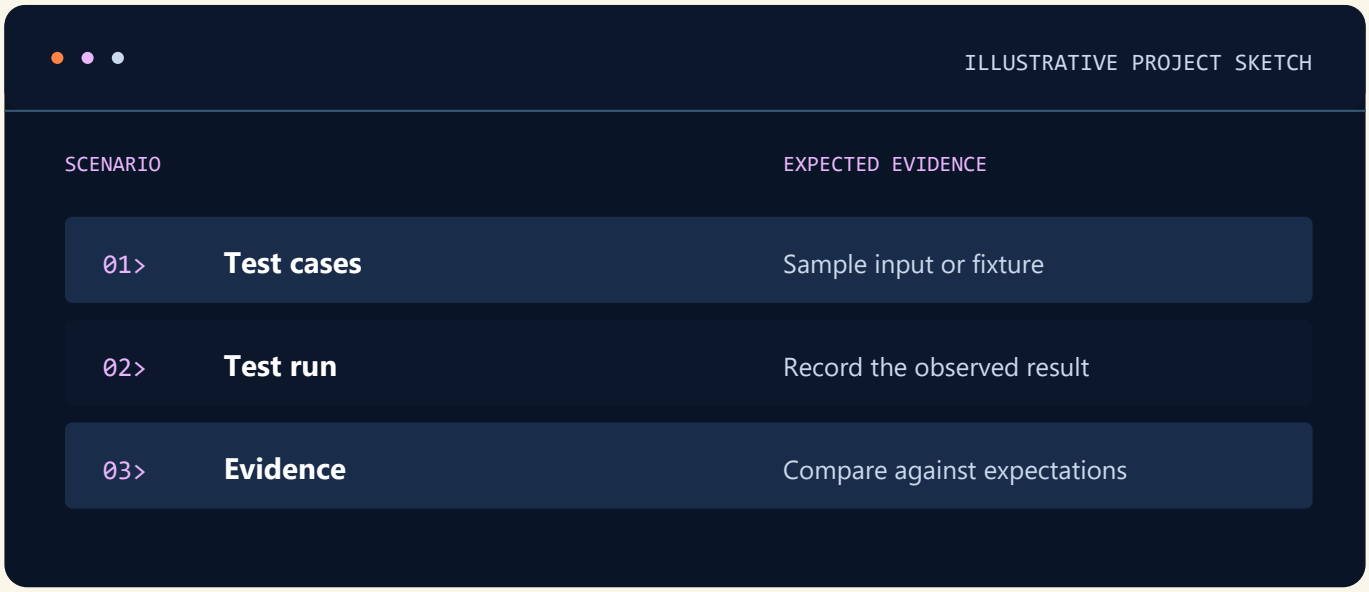
A test plan, evidence from representative scenarios and a summary of open issues.

Automation Testing

Portfolio project

Repeatable Checkout Regression

Automate a stable checkout path with fixtures, assertions and a CI report that helps diagnose failures.



Select the risks

Choose a critical user flow and list representative test conditions.

Collect evidence

Capture expected and observed results and summarise any release risks.

A test plan, evidence from representative scenarios and a summary of open issues.

Automation Testing

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SCAN FOR MAP

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Automation Testing

Course content

MODULES 01–02

01

Lessons & practice

- Automation scope
- Runner
- Framework setup

HANDS-ON Choose a stable feature to automate and explain the scope of the suite.

02

Lessons & practice

- Assertions
- Fixtures
- Test data isolation

HANDS-ON Build fixtures and assertions and verify tests leave data in a reproducible state.

Automation Testing

Course content

MODULES 03–04

03

Lessons & practice

- Browser
- Component
- API automation choices

HANDS-ON Compare browser, component and API automation for one rule.

04

Lessons & practice

- Reusable helpers
- Selectors
- Synchronization

HANDS-ON Refactor repeating selectors and waits into a maintainable page helper.

Automation Testing

Course content

MODULES 05–06

05

Lessons & practice

- Headless execution
- CI
- Reporting

HANDS-ON Run stable tests headlessly in CI and record failure evidence.

06

Lessons & practice

- Flaky-test analysis
- Maintenance

HANDS-ON Investigate a flaky test and document an evidence-based fix.

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SOFTWARE TESTING

Selenium

SAMPLE PROJECT

Browser Tests for an Enquiry Form



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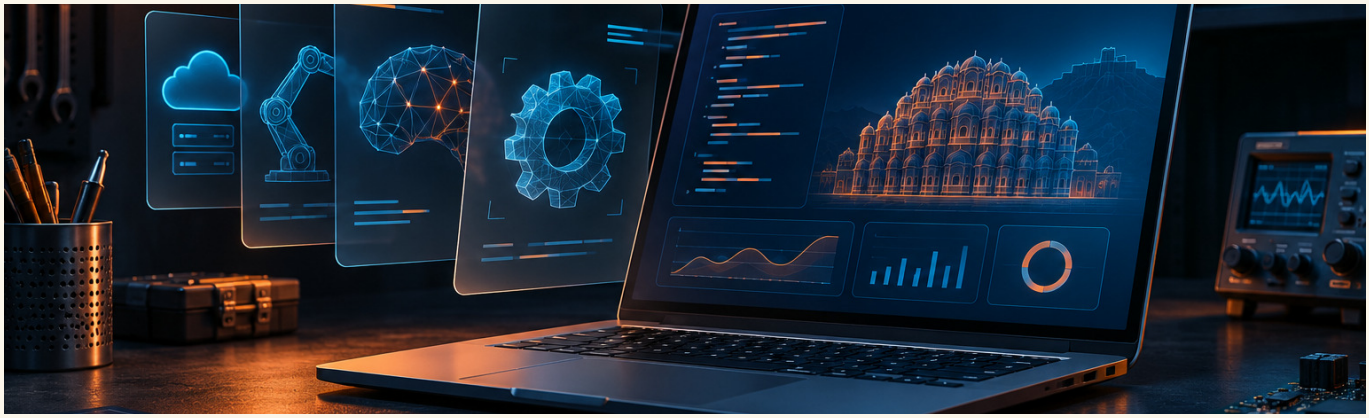
Selenium

Core concepts



01 WebDriver setup and browser lifecycle

02 Locators, navigation and wait strategies

03 Forms, alerts, tabs and frames

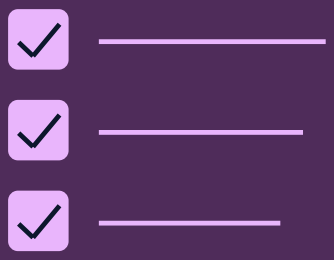
Select the risks

Choose a critical user flow and list representative test conditions.

Selenium

Applied skills

- **Test cases**
- **Test run**
- **Evidence**



04 Page objects, fixtures and assertions

05 Cross-browser execution and parallel basics

06 CI reporting and flaky-test debugging

PROJECT DELIVERABLES

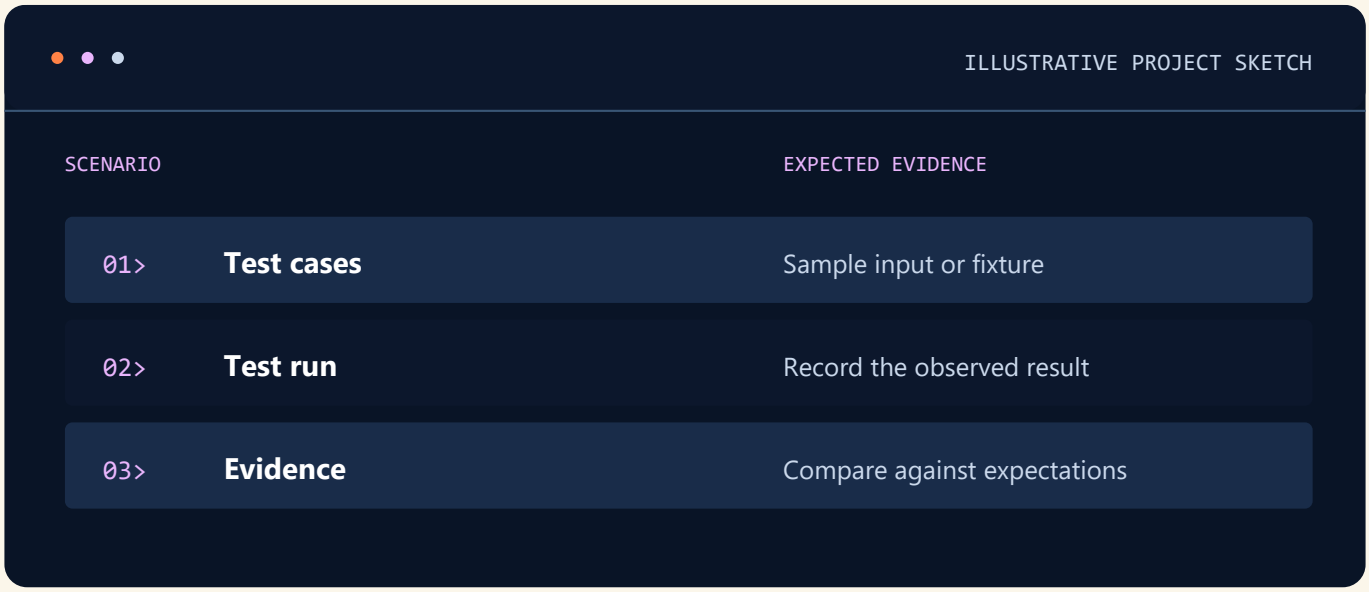
A test plan, evidence from representative scenarios and a summary of open issues.

Selenium

Portfolio project

Browser Tests for an Enquiry Form

Automate a test form across browser runs and investigate failures using screenshots and assertions.



Select the risks

Choose a critical user flow and list representative test conditions.

Collect evidence

Capture expected and observed results and summarise any release risks.

A test plan, evidence from representative scenarios and a summary of open issues.

Selenium

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SCAN FOR MAP

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Selenium

Course content

MODULES 01–02

01

Lessons & practice

- WebDriver setup
- Browser lifecycle

HANDS-ON — Start and close WebDriver predictably in a fixture.

02

Lessons & practice

- Locators
- Navigation
- Wait strategies

HANDS-ON — Choose robust locators and replace fixed sleeps with a condition-based wait.

Selenium

Course content

MODULES 03–04

03

Lessons & practice

- Forms
- Alerts
- Tabs
- Frames

HANDS-ON Automate a form that opens a tab or another browser context.

04

Lessons & practice

- Page objects
- Fixtures
- Assertions

HANDS-ON Separate selectors and actions into a page object and assert a user-visible result.

Selenium

Course content

MODULES 05–06

05

Lessons & practice

- Cross-browser execution
- Parallel basics

HANDS-ON Run a cross-browser check and record differences in behaviour.

06

Lessons & practice

- CI reporting
- Flaky-test debugging

HANDS-ON Capture failure screenshots and inspect a CI report to explain a failing test.

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SOFTWARE TESTING

API Testing

SAMPLE PROJECT

Booking API Contract Tests



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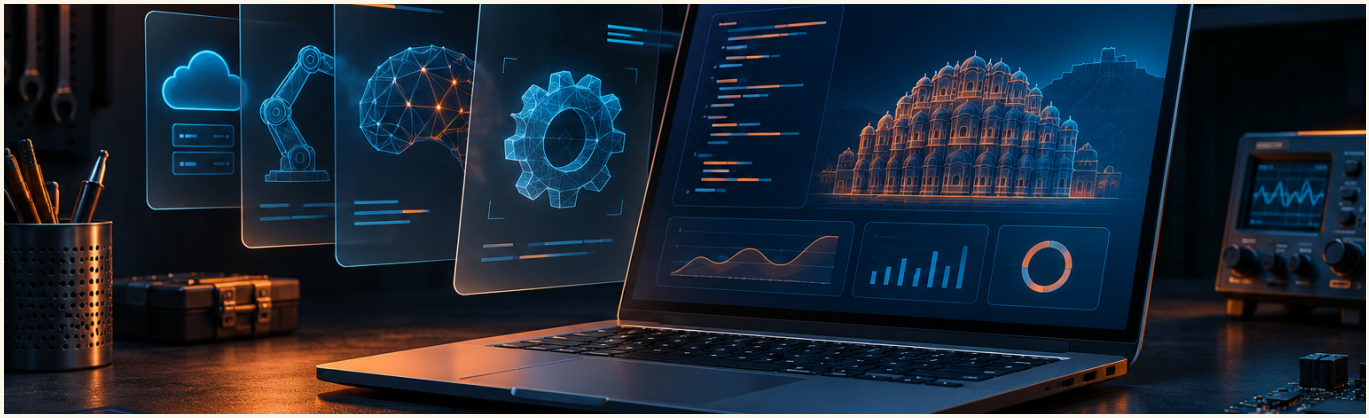
API Testing

Core concepts



01

HTTP, REST resources and JSON payloads

02

Methods, headers and response status codes

03

Test environments, data and authentication flows

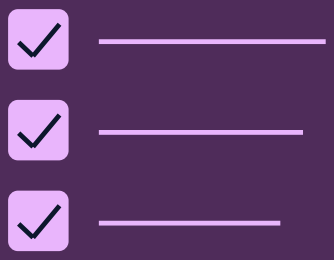
Select the risks

Choose a critical user flow and list representative test conditions.

API Testing

Applied skills

- **Test cases**
- **Test run**
- **Evidence**



04 Schema assertions, boundaries and error cases

05 Postman collections and automated API checks

06 CI reporting and contract regression

PROJECT DELIVERABLES

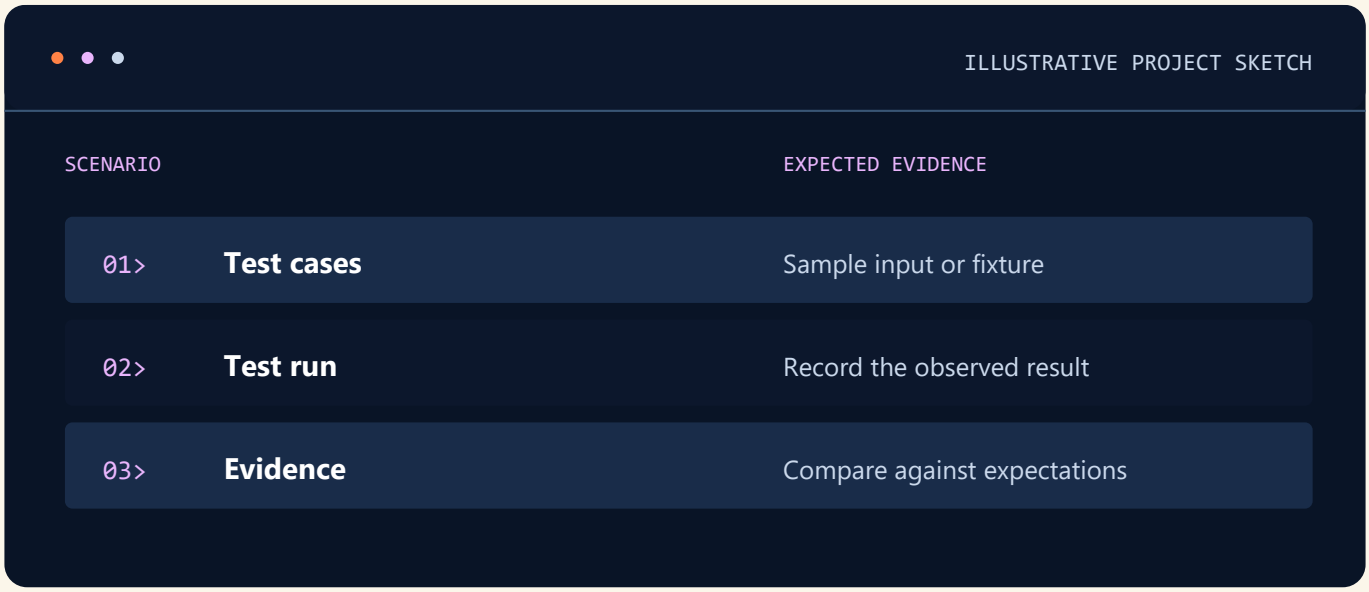
A test plan, evidence from representative scenarios and a summary of open issues.

API Testing

Portfolio project

Booking API Contract Tests

Check request validation, response schemas, status codes and errors with repeatable API tests.



Select the risks

Choose a critical user flow and list representative test conditions.

Collect evidence

Capture expected and observed results and summarise any release risks.

A test plan, evidence from representative scenarios and a summary of open issues.

API Testing

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SCAN FOR MAP

Check course details

API Testing

Course content

MODULES 01–02

01

Lessons & practice

- HTTP
- REST resources
- JSON payloads

HANDS-ON

Model sample requests and responses and check content types and JSON structure.

02

Lessons & practice

- Methods
- Headers
- Response status codes

HANDS-ON

Test the same endpoint with supported methods and assert the expected status codes.

API Testing

Course content

MODULES 03–04

03

Lessons & practice

- Test environments
- Data
- Authentication flows

HANDS-ON Use a practice environment and verify one authorised and one denied request.

04

Lessons & practice

- Schema assertions
- Boundaries
- Error cases

HANDS-ON Check schema fields, empty lists, validation errors and a recognised boundary.

API Testing

Course content

MODULES 05–06

05

Lessons & practice

- Postman collections
- Automated API checks

HANDS-ON Run a repeatable set of API checks using a Postman collection.

06

Lessons & practice

- CI reporting
- Contract regression

HANDS-ON Collect contract regression evidence in a CI run.

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SOFTWARE TESTING

Playwright

SAMPLE PROJECT

Browser Regression for a Booking Site



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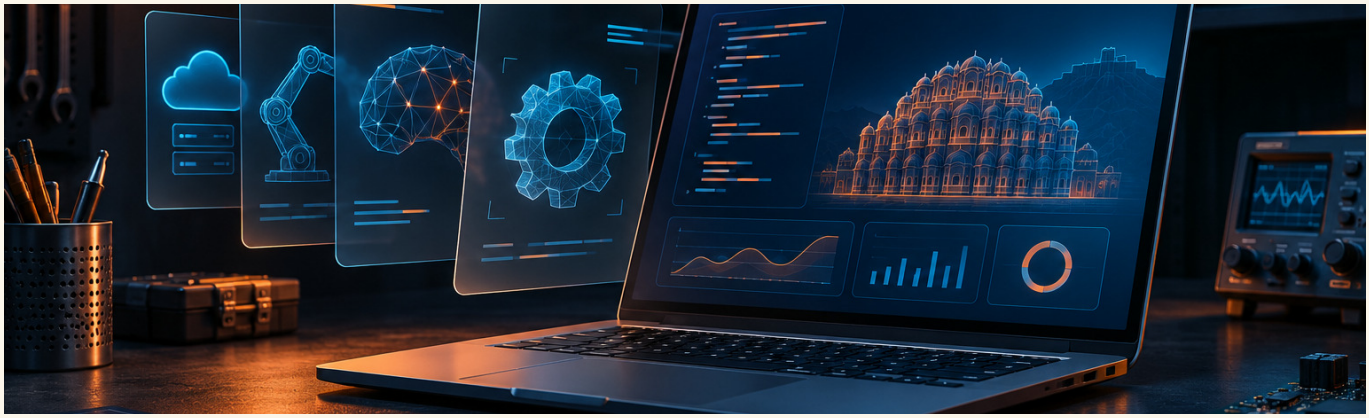
Playwright

Core concepts



01 Playwright setup, test runner and browsers

02 Accessibility locators and automatic waiting

03 Fixtures, browser contexts and test isolation

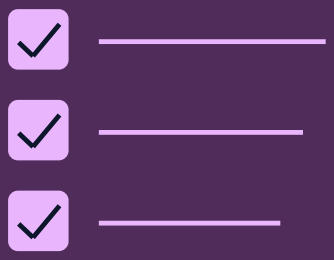
Select the risks

Choose a critical user flow and list representative test conditions.

Playwright

Applied skills

- **Test cases**
- **Test run**
- **Evidence**



04 Assertions, API helpers and controlled fixtures

05 Trace viewer, screenshots and debugging

06 Parallel execution, CI and HTML reports

PROJECT DELIVERABLES

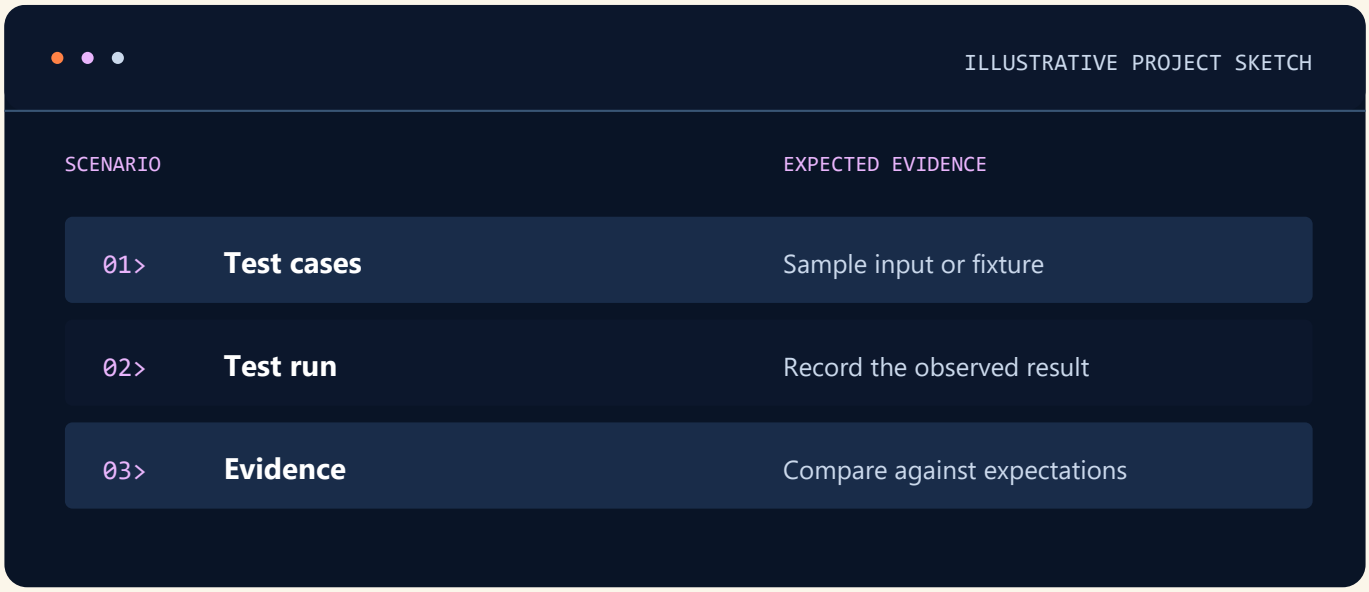
A test plan, evidence from representative scenarios and a summary of open issues.

Playwright

Portfolio project

Browser Regression for a Booking Site

Test a booking journey with isolated browser contexts, API fixtures and trace-based debugging.



Select the risks

Choose a critical user flow and list representative test conditions.

Collect evidence

Capture expected and observed results and summarise any release risks.

A test plan, evidence from representative scenarios and a summary of open issues.

Playwright

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SCAN FOR MAP

Check course details

Playwright

Course content

MODULES 01–02

01

Lessons & practice

- Playwright setup
- Test runner
- Browsers

HANDS-ON Set up the Playwright runner and execute one browser test.

02

Lessons & practice

- Accessibility locators
- Automatic waiting

HANDS-ON Use role-based locators and assert a result without adding a fixed sleep.

Playwright

Course content

MODULES 03–04

03

Lessons & practice

- Fixtures
- Browser contexts
- Test isolation

HANDS-ON Run tests in isolated browser contexts with reproducible fixtures.

04

Lessons & practice

- Assertions
- API helpers
- Controlled fixtures

HANDS-ON Use an API helper or a controlled fixture to prepare test data.

Playwright

Course content

MODULES 05–06

05

Lessons & practice

- Trace viewer
- Screenshots
- Debugging

HANDS-ON Use trace and screenshot evidence to explain a failed assertion.

06

Lessons & practice

- Parallel execution
- CI
- HTML reports

HANDS-ON Run a small suite in parallel and capture an HTML report.

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NETWORKING

Networking

SAMPLE PROJECT

Small Office Network Plan



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Networking

Core concepts



01	Network models, devices and cabling
02	IPv4, IPv6 and subnetting
03	Switching, VLANs and trunk fundamentals

Draw the topology

Label each device, connection and access boundary in a simulation.

Networking

Applied skills

- **Clients**
- **Connectivity**
- **Services**



04 Routing, DHCP, DNS and NAT concepts

05 Wi-Fi, access controls and secure management

06 Simulation, diagnostics and documentation

PROJECT DELIVERABLES

A topology, addressing plan and results from representative diagnostic checks.

Networking

Portfolio project

Small Office Network Plan

Design a small office topology and verify IP addressing, device connectivity and basic traffic controls.



Draw the topology

Label each device, connection and access boundary in a simulation.

Check connectivity

Record expected traffic paths and confirm results in the simulator.

A topology, addressing plan and results from representative diagnostic checks.

Networking

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SCAN FOR MAP

Check course details

Networking

Course content

MODULES 01–02

01

Lessons & practice

- Network models
- Devices
- Cabling

HANDS-ON Trace a request across a sample LAN and label the role of each device.

02

Lessons & practice

- IPv4
- IPv6
- Subnetting

HANDS-ON Create an IPv4 and IPv6 addressing plan and check for overlapping ranges.

Networking

Course content

MODULES 03–04

03

Lessons & practice

- Switching
- VLANs
- Trunk fundamentals

HANDS-ON — Build a VLAN and trunk layout in a simulator and test separation.

04

Lessons & practice

- Routing
- DHCP
- DNS
- NAT concepts

HANDS-ON — Verify a simulated client receives an address, resolves a name and reaches a routed network.

Networking

Course content

MODULES 05–06

05 — Lessons & practice

- Wi-Fi
- Access controls
- Secure management

HANDS-ON — Plan Wi-Fi access and demonstrate secure management controls in the lab.

06 — Lessons & practice

- Simulation
- Diagnostics
- Documentation

HANDS-ON — Isolate a simulated connectivity fault and record what fixed it.

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NETWORKING

CCNA

SAMPLE PROJECT

Branch Network Simulation



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CCNA

Core concepts



01 Network fundamentals, IPv4 and IPv6 addressing

02 Switching, VLAN trunks and spanning tree

03 Static routing and OSPF fundamentals

Draw the topology

Label each device, connection and access boundary in a simulation.

CCNA

Applied skills

- **Clients**
- **Connectivity**
- **Services**



04 DHCP, NAT, DNS and IP services

05 ACLs, wireless and secure device access

06 Automation concepts and connectivity troubleshooting

PROJECT DELIVERABLES

A topology, addressing plan and results from representative diagnostic checks.

CCNA

Portfolio project

Branch Network Simulation

Create a simulated branch with VLANs, routed subnets and verified connectivity rules.



Draw the topology

Label each device, connection and access boundary in a simulation.

Check connectivity

Record expected traffic paths and confirm results in the simulator.

A topology, addressing plan and results from representative diagnostic checks.

CCNA

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SCAN FOR MAP

Check course details

CCNA

Course content

MODULES 01–02

01

Lessons & practice

- Network fundamentals
- IPv4
- IPv6 addressing

HANDS-ON — Calculate subnets and assign IPv4 and IPv6 addresses to a branch lab.

02

Lessons & practice

- Switching
- VLAN trunks
- Spanning tree

HANDS-ON — Create VLANs and trunks and observe how spanning tree handles redundant links.

CCNA

Course content

MODULES 03–04

03

Lessons & practice

- Static routing
- OSPF fundamentals

HANDS-ON — Configure a local practice topology with static routing and OSPF and verify routes.

04

Lessons & practice

- DHCP
- NAT
- DNS
- IP services

HANDS-ON — Test DHCP leases, NAT and name resolution in the simulator.

CCNA

Course content

MODULES 05–06

05

Lessons & practice

- ACLs
- Wireless
- Secure device access

HANDS-ON — Check an ACL against required traffic and secure administrative access to the lab.

06

Lessons & practice

- Automation concepts
- Connectivity troubleshooting

HANDS-ON — Use diagnostics to isolate a connectivity fault and document the result.

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NETWORKING

CCNP

SAMPLE PROJECT

Enterprise Routing Lab



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CCNP

Core concepts



01	Enterprise architecture and resilient campus design
02	Advanced routing, OSPF and BGP principles
03	Route selection, redistribution and route policy

Draw the topology

Label each device, connection and access boundary in a simulation.

CCNP

Applied skills

- **Clients**
- **Connectivity**
- **Services**



04 Overlay networks and infrastructure services

05 Access controls, telemetry and operational visibility

06 Configuration verification and troubleshooting

PROJECT DELIVERABLES

A topology, addressing plan and results from representative diagnostic checks.

CCNP

Portfolio project

Enterprise Routing Lab

Validate routing between simulated branches and document how the topology responds to a link change.



Draw the topology

Label each device, connection and access boundary in a simulation.

Check connectivity

Record expected traffic paths and confirm results in the simulator.

A topology, addressing plan and results from representative diagnostic checks.

CCNP

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SCAN FOR MAP

Check course details

CCNP

Course content

MODULES 01–02

01

Lessons & practice

- Enterprise architecture
- Resilient campus design

HANDS-ON Compare two campus designs and justify a resilience decision.

02

Lessons & practice

- Advanced routing
- OSPF
- BGP principles

HANDS-ON Inspect OSPF and BGP routes in a practice network and explain the selected path.

CCNP

Course content

MODULES 03–04

03

Lessons & practice

- Route selection
- Redistribution
- Route policy

HANDS-ON Compare route policies and verify how a change affects reachability.

04

Lessons & practice

- Overlay networks
- Infrastructure services

HANDS-ON Explain how an overlay uses underlying infrastructure and document the expected traffic path.

CCNP

Course content

MODULES 05–06

05

Lessons & practice

- Access controls
- Telemetry
- Operational visibility

HANDS-ON Review access controls and compare telemetry before and after a lab change.

06

Lessons & practice

- Configuration verification
- Troubleshooting

HANDS-ON Reproduce a routing fault in a simulator and verify the fix with independent checks.

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NETWORKING

Linux

SAMPLE PROJECT

Linux Service Runbook



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Linux

Core concepts



01	Shell navigation, files and text processing
02	Users, groups, permissions and ownership
03	Processes, services, packages and systemd

Draw the topology

Label each device, connection and access boundary in a simulation.

Linux

Applied skills

- Clients
- Connectivity
- Services



04 Storage, networking and SSH administration basics

05 Shell scripting, scheduling and backups

06 Logs, troubleshooting and system health checks

PROJECT DELIVERABLES

A topology, addressing plan and results from representative diagnostic checks.

Linux

Portfolio project

Linux Service Runbook

Configure a practice service, apply permissions and document how to check status, logs and backups.



Draw the topology

Label each device, connection and access boundary in a simulation.

Check connectivity

Record expected traffic paths and confirm results in the simulator.

A topology, addressing plan and results from representative diagnostic checks.

Linux

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SCAN FOR MAP

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Linux

Course content

MODULES 01–02

01

Lessons & practice

- Shell navigation
- Files
- Text processing

HANDS-ON — Find, filter and organise sample files using shell and text tools.

02

Lessons & practice

- Users
- Groups
- Permissions
- Ownership

HANDS-ON — Create users and groups in a practice machine and check permissions on shared files.

Linux

Course content

MODULES 03–04

03

Lessons & practice

- Processes
- Services
- Packages
- Systemd

HANDS-ON — Install and inspect a sample service with package tools and systemd.

04

Lessons & practice

- Storage
- Networking
- SSH administration basics

HANDS-ON — Review storage, network and secure administrative access in a test setup.

Linux

Course content

MODULES 05–06

05

Lessons & practice

- Shell scripting
- Scheduling
- Backups

HANDS-ON Write a scheduled backup script and test recovery of a sample file.

06

Lessons & practice

- Logs
- Troubleshooting
- System health checks

HANDS-ON Use service logs and health checks to explain why a practice process failed.

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NETWORKING

Windows Server

SAMPLE PROJECT

Windows Domain Administration Lab



COURSE FEE

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Windows Server

Core concepts



01	Windows Server roles and administration tools
02	Active Directory, users, groups and OUs
03	DNS, DHCP and file-sharing services

Draw the topology

Label each device, connection and access boundary in a simulation.

Windows Server

Applied skills

- **Clients**
- **Connectivity**
- **Services**



04 Group Policy and permission planning

05 Event logs, updates, backups and recovery

06 PowerShell administration and troubleshooting

PROJECT DELIVERABLES

A topology, addressing plan and results from representative diagnostic checks.

Windows Server

Portfolio project

Windows Domain Administration Lab

Set up a practice domain with scoped access, shared folders and documented recovery checks.



Draw the topology

Label each device, connection and access boundary in a simulation.

Check connectivity

Record expected traffic paths and confirm results in the simulator.

A topology, addressing plan and results from representative diagnostic checks.

Windows Server

Course fees

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SCAN FOR MAP

Check course details

Windows Server

Course content

MODULES 01–02

01

Lessons & practice

- Windows Server roles
- Administration tools

HANDS-ON Select Windows Server roles and document the tools used to administer them.

02

Lessons & practice

- Active Directory
- Users
- Groups
- OUs

HANDS-ON Create sample users and groups in a practice Active Directory hierarchy.

Windows Server

Course content

MODULES 03–04

03

Lessons & practice

- DNS
- DHCP
- File-sharing services

HANDS-ON Verify DHCP, DNS and scoped access to a shared folder.

04

Lessons & practice

- Group Policy
- Permission planning

HANDS-ON Apply a GPO and test how permissions differ for two roles.

Windows Server

Course content

MODULES 05–06

05

Lessons & practice

- Event logs
- Updates
- Backups
- Recovery

HANDS-ON Review event logs and demonstrate recovery of a practice file.

06

Lessons & practice

- PowerShell administration
- Troubleshooting

HANDS-ON Use PowerShell to audit a setting and record a repeatable troubleshooting procedure.

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DIGITAL MARKETING

Digital Marketing

SEO & Google platforms • SMO & Meta Ads • Graphic & Video Editing



SUM OF LISTED MODULES

₹30,000

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Digital Marketing

Syllabus at a glance

01

SEO and Google platforms

02

Google Ads and measurement

03

Social media optimisation

04

Meta Ads

05

Graphic design for campaigns

06

Video editing for campaigns

PORTFOLIO PROJECT

Local Business Campaign

Plan a campaign using search and social channels and prepare a set of coordinated creative assets.

Digital Marketing

Core concepts

01

SEO and Google platforms

Research keywords, audit crawlability and optimise a sample page and local listing.

02

Google Ads and measurement

Plan Search, Display, YouTube and Shopping campaigns and review Performance Max. Connect GA4, Tag Manager and Search Console concepts.

03

Social media optimisation

Set goals, improve profiles, create a content calendar and plan organic posts.

TOOLS & TOPICS

SEO & Google platforms • SMO & Meta Ads • Graphic & Video Editing

Digital Marketing

Applied skills

04

Meta Ads

Build a sample campaign plan for Facebook and Instagram. Define creative, placement, budget and conversion events.

05

Graphic design for campaigns

Create a consistent set of static ads and social graphics from a visual brief.

06

Video editing for campaigns

Plan a short clip, edit the sequence, add captions and export channel-ready variants.

TOOLS & TOPICS

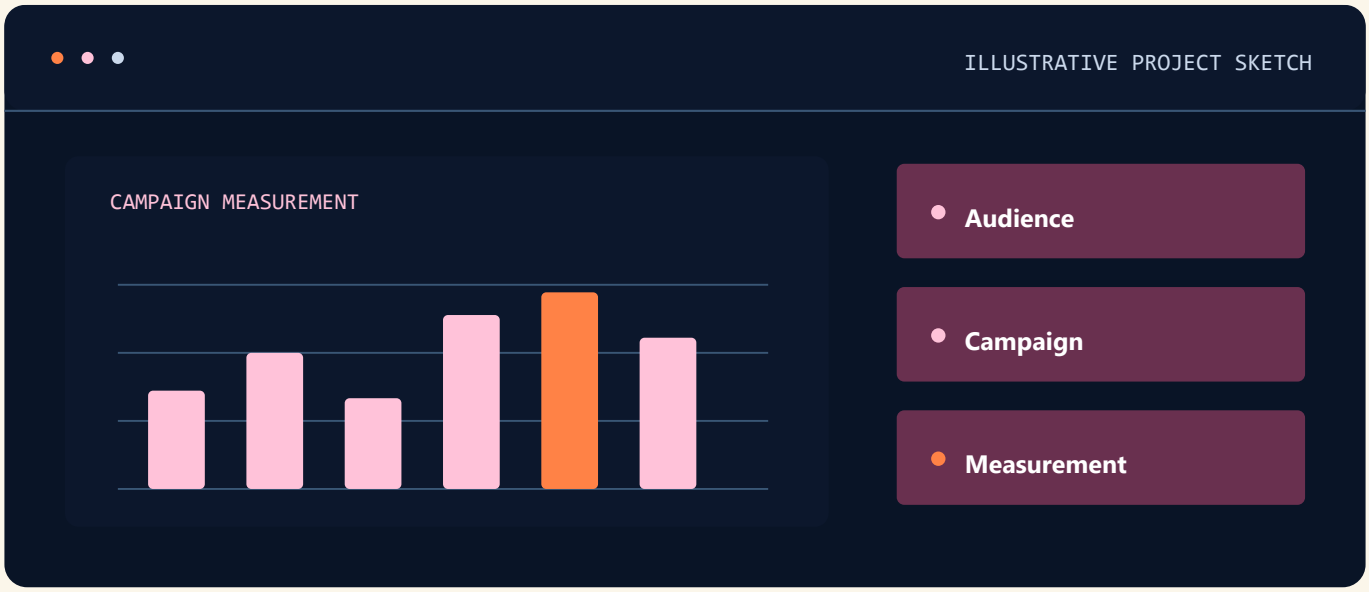
SEO & Google platforms • SMO & Meta Ads • Graphic & Video Editing

Digital Marketing

Portfolio project

Local Business Campaign

Plan a campaign using search and social channels and prepare a set of coordinated creative assets.



Set a goal

Choose an audience, one primary measure and a realistic sample budget.

Review the plan

Explain which result would justify a change to the campaign.

A campaign brief, sample assets, a budget plan and a measurement dashboard.

Digital Marketing

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Define the campaign

Write a goal and outline an audience, search keywords and social placements.

02

Build the creative set

Supply static and short-video drafts designed for the selected channels.

03

Plan measurement

Choose meaningful conversion, search and social metrics and explain how you would review results.

Digital Marketing

Course fees

SUM OF LISTED MODULES

₹30,000

MODULE	INR
SEO, Google Ads & Google Platforms	₹10,000
SMO & Meta Ads	₹10,000
Graphic & Video Editing	₹10,000

Each module can be priced individually.

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SCAN FOR MAP

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Digital Marketing

Course content

MODULES 01–02

01 SEO and Google platforms

Lessons & practice

- Search intent and keyword research
- Technical and on-page SEO
- Search Console and Business Profile

HANDS-ON Audit one website and prioritise three improvements.

02 Google Ads and measurement

Lessons & practice

- Google Ads Search, Display, Video and Shopping
- Performance Max overview
- GA4 and Tag Manager measurement

HANDS-ON Prepare campaign settings, keyword groups and a conversion check for a sample business.

Digital Marketing

Course content

MODULES 03–04

03 Social media optimisation

Lessons & practice

- Social profile optimisation
- Organic content themes and calendars
- Social engagement metrics

HANDS-ON Map a two-week calendar to audience needs and campaign goals.

04 Meta Ads

Lessons & practice

- Meta Ads campaign, ad set and ad structure
- Audiences and placements
- Conversion events and creative tests

HANDS-ON Plan two ad versions and explain how to compare results.

Digital Marketing

Course content

MODULES 05–06

05 Graphic design for campaigns

Lessons & practice

- Graphic hierarchy and composition
- Social and paid ad layouts
- Asset adaptation across placements

HANDS-ON Produce coordinated post and ad drafts in two formats.

06 Video editing for campaigns

Lessons & practice

- Shot selection and timeline editing
- Audio and captions
- Social export checks

HANDS-ON Edit a short clip and produce horizontal and vertical versions with legible captions.

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DIGITAL MARKETING

SEO, Google Ads & Google Platforms

SEO • Search Console • Google Business Profile • Google Ads • GA4 • Tag Manager



SEO & GOOGLE PLATFORMS MODULE

₹10,000

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SEO, Google Ads & Google Platforms

Syllabus at a glance

01

Keywords and SEO

02

Search Console & Business Profile

03

Google Ads search campaigns

04

Google campaign formats

05

Analytics and conversions

06

Reporting and optimisation

PORTFOLIO PROJECT

Search and Local Growth Plan

Audit a local website and build a Google Ads plan with measurable objectives.

SEO, Google Ads & Google Platforms

Core concepts

01

Keywords and SEO

Match search intent to pages and audit headings, links, crawlability and index coverage.

02

Search Console & Business Profile

Use search performance data and improve a sample local business profile and landing page.

03

Google Ads search campaigns

Group keywords, choose match types, write ad copy and map the journey to a landing page.

TOOLS & TOPICS

SEO • Search Console • Google Business Profile • Google Ads • GA4 • Tag Manager

SEO, Google Ads & Google Platforms

Applied skills

04

Google campaign formats

Compare Display, YouTube, Shopping and Performance Max. Explore how Merchant Center supports product ads.

05

Analytics and conversions

Define GA4 events, Google Tag Manager triggers and conversion checks for a sample site.

06

Reporting and optimisation

Review search terms, conversion performance and suggested improvements.

TOOLS & TOPICS

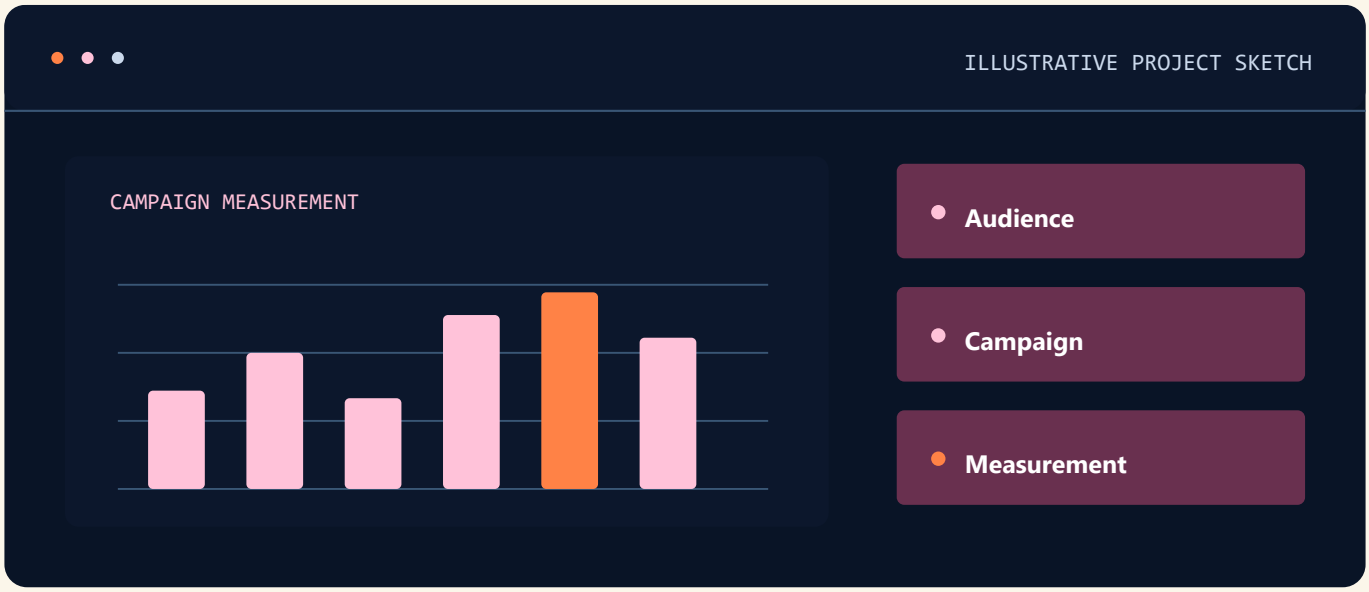
SEO • Search Console • Google Business Profile • Google Ads • GA4 • Tag Manager

SEO, Google Ads & Google Platforms

Portfolio project

Search and Local Growth Plan

Audit a local website and build a Google Ads plan with measurable objectives.



Set a goal

Choose an audience, one primary measure and a realistic sample budget.

Review the plan

Explain which result would justify a change to the campaign.

A campaign brief, sample assets, a budget plan and a measurement dashboard.

SEO, Google Ads & Google Platforms

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Audit the website

Prioritise findings from technical, content and local search reviews.

02

Plan paid search

Produce keyword groups, sample ad copy and a budget rationale.

03

Verify tracking

Map a conversion event and document how to check it before campaign launch.

SEO, Google Ads & Google Platforms

Course fees

SEO & GOOGLE PLATFORMS MODULE

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SCAN FOR MAP

View course details online

SEO, Google Ads & Google Platforms

Course content

MODULES 01–02

01 Keywords and SEO

Lessons & practice

- Search intent and keyword mapping
- On-page titles and internal links
- Crawlability and index coverage

HANDS-ON Match keywords to pages and explain which crawl or content issues to fix first.

02 Search Console & Business Profile

Lessons & practice

- Search Console search performance
- Google Business Profile
- Local landing pages

HANDS-ON Use a sample local profile and propose a measurable improvement.

SEO, Google Ads & Google Platforms

Course content

MODULES 03–04

03 Google Ads search campaigns

Lessons & practice

- Google Ads account and campaign structure
- Match types and exclusions
- Ad copy and landing-page alignment

HANDS-ON Write a sample search ad with relevant keyword groups.

04 Google campaign formats

Lessons & practice

- Display, YouTube, Shopping and Performance Max
- Merchant Center concepts
- Matching formats to goals

HANDS-ON Select formats for two goals and justify how budgets would differ.

SEO, Google Ads & Google Platforms

Course content

MODULES 05–06

05 Analytics and conversions

Lessons & practice

- GA4 events and conversions
- Google Tag Manager tags and triggers
- Test and debug steps

HANDS-ON Map a conversion from landing-page action through the reporting event.

06 Reporting and optimisation

Lessons & practice

- Search terms and optimisation
- Organic and paid metrics
- Reporting and prioritisation

HANDS-ON Create a monthly report with three decisions supported by the data.

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DIGITAL MARKETING

Google Ads

Search • Display • YouTube • Shopping • Performance Max



GOOGLE ADS TRAINING

Included in SEO & Google Platforms

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Google Ads

Syllabus at a glance

01

Goals and account structure

02

Search ads and keywords

03

Google campaign formats

04

Creative and targeting

05

Measurement and bidding

06

Campaign reviews

PORTFOLIO PROJECT

Search Campaign Plan

Prepare campaign groups, ads, conversion events and a measurement plan for a sample business.

Google Ads

Core concepts

01

Goals and account structure

Define campaign objectives, budgets and ad groups around audience needs.

02

Search ads and keywords

Practise match types, negative keywords and landing-page alignment.

03

Google campaign formats

Compare Search, Display, YouTube, Shopping and Performance Max.

TOOLS & TOPICS

Search • Display • YouTube • Shopping • Performance Max

Google Ads

Applied skills

04

Creative and targeting

Write ad assets and plan relevant audiences and placements.

05

Measurement and bidding

Plan conversion tracking and compare bidding and budget choices.

06

Campaign reviews

Use search terms and performance metrics to propose an optimisation.

TOOLS & TOPICS

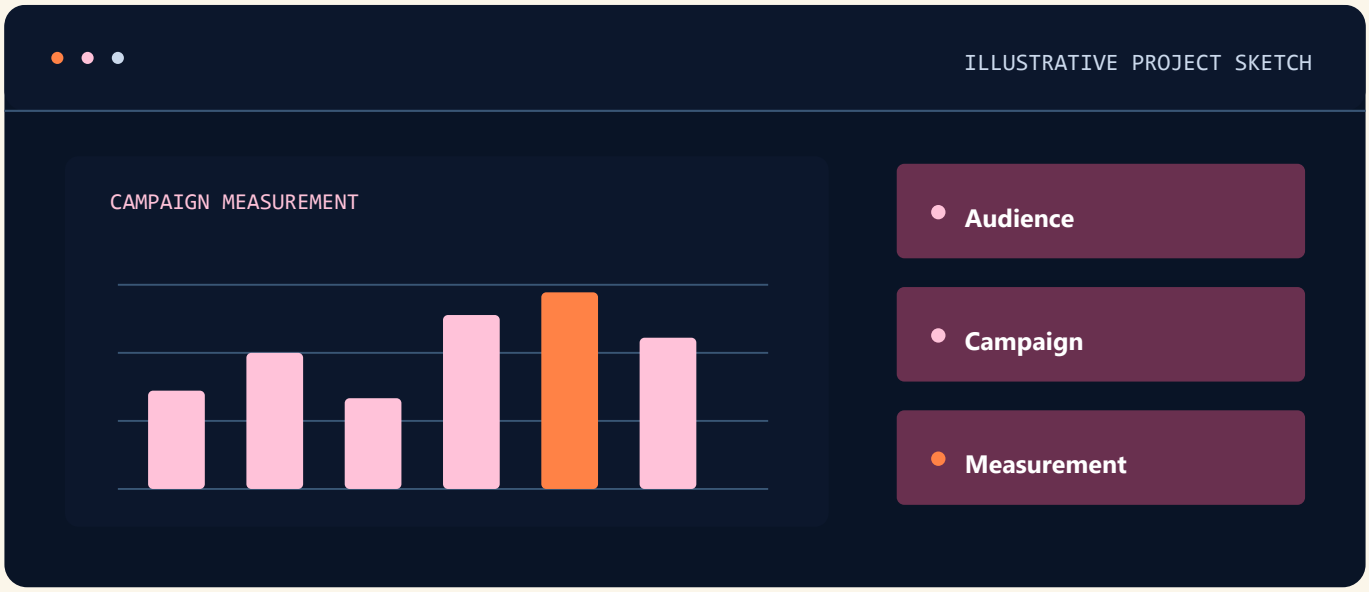
Search • Display • YouTube • Shopping • Performance Max

Google Ads

Portfolio project

Search Campaign Plan

Prepare campaign groups, ads, conversion events and a measurement plan for a sample business.



Set a goal

Choose an audience, one primary measure and a realistic sample budget.

Review the plan

Explain which result would justify a change to the campaign.

A campaign brief, sample assets, a budget plan and a measurement dashboard.

Google Ads

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Set the campaign objective

Select a measurable conversion and connect it to the landing page.

02

Build the draft campaign

Group keywords and write ad assets and exclusions.

03

Review the plan

Explain which results would trigger a change in targeting, creative or budget.

Google Ads

Course fees

RELATED TRAINING MODULE

Included in SEO & Google Platforms

MODULE	INR
SEO, Google Ads & Google Platforms	₹10,000

Google Ads is covered in the SEO and Google Platforms module.

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SCAN FOR MAP

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Google Ads

Course content

MODULES 01–02

01 Goals and account structure

Lessons & practice

- Objectives and campaign structure
- Budget and bidding choices
- Landing-page conversion goals

HANDS-ON Select one conversion goal and outline a draft campaign around it.

02 Search ads and keywords

Lessons & practice

- Search match types
- Negative keywords
- Ad copy and assets

HANDS-ON Group keywords and draft ads and exclusions for a sample business.

Google Ads

Course content

MODULES 03–04

03 Google campaign formats

Lessons & practice

- Search, Display, YouTube and Shopping
- Performance Max overview
- Choosing formats by objective

HANDS-ON Compare two formats for the same audience and explain their different goals.

04 Creative and targeting

Lessons & practice

- Audience and placement selection
- Creative angles
- Landing-page relevance

HANDS-ON Prepare two creative variations with a clear test hypothesis.

Google Ads

Course content

MODULES 05–06

05 Measurement and bidding

Lessons & practice

- Conversion actions
- Bidding fundamentals
- Measurement and reporting rules

HANDS-ON Trace a lead form to a conversion event and define budget review checks.

06 Campaign reviews

Lessons & practice

- Search terms and performance review
- Creative and budget experiments
- Reporting decisions

HANDS-ON Review a sample performance table and defend the next optimisation.

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DIGITAL MARKETING

SMO & Meta Ads

Facebook • Instagram • Content calendars • Meta Ads Manager



SMO & META ADS MODULE

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SMO & Meta Ads

Syllabus at a glance

01

Social strategy and profiles

02

Organic content planning

03

Facebook and Instagram creative

04

Meta Ads campaign structure

05

Measurement and conversion events

06

Optimisation and reporting

PORTFOLIO PROJECT

Four-Week Social Campaign

Build a four-week organic plan and a Meta Ads campaign brief for a sample brand.

SMO & Meta Ads

Core concepts

01

Social strategy and profiles

Define goals and audiences and optimise profile information and creative consistency.

02

Organic content planning

Plan content themes, formats, scheduling and community responses.

03

Facebook and Instagram creative

Draft posts, stories and short video concepts for each placement.

TOOLS & TOPICS

Facebook • Instagram • Content calendars • Meta Ads Manager

SMO & Meta Ads

Applied skills

04

Meta Ads campaign structure

Design a sample campaign with objectives, ad sets and creatives.

05

Measurement and conversion events

Choose conversion events and reporting metrics appropriate to each goal.

06

Optimisation and reporting

Review creative tests, summarise results and propose the next experiment.

TOOLS & TOPICS

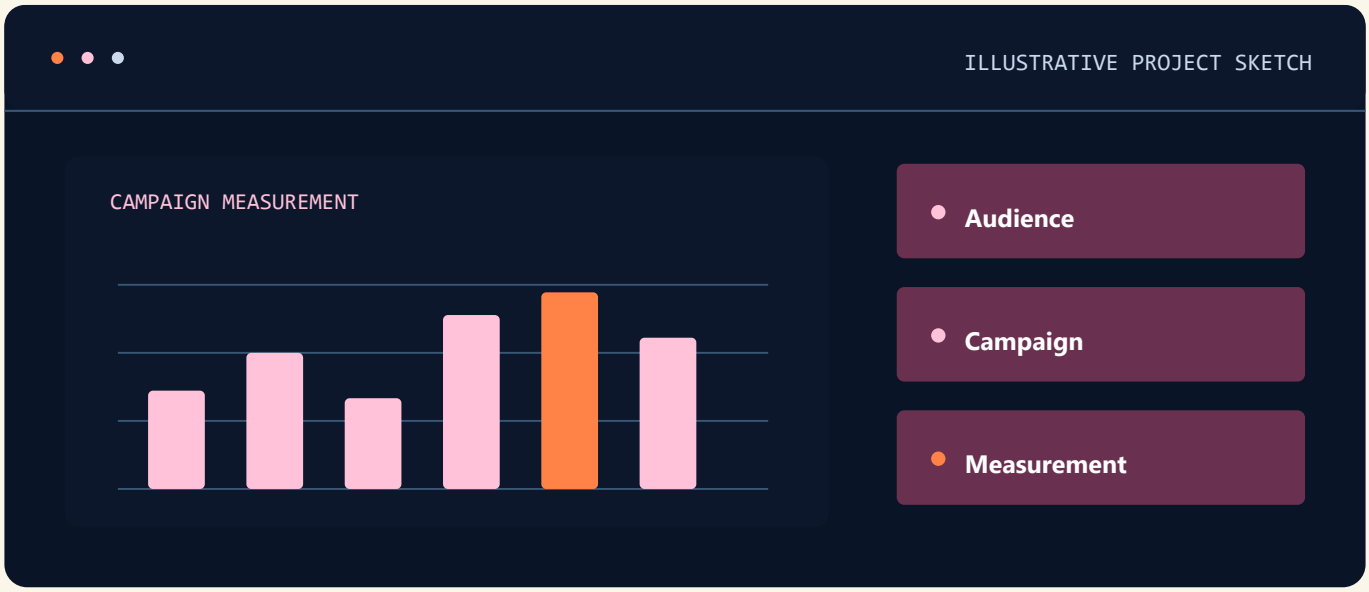
Facebook • Instagram • Content calendars • Meta Ads Manager

SMO & Meta Ads

Portfolio project

Four-Week Social Campaign

Build a four-week organic plan and a Meta Ads campaign brief for a sample brand.



Set a goal

Choose an audience, one primary measure and a realistic sample budget.

Review the plan

Explain which result would justify a change to the campaign.

A campaign brief, sample assets, a budget plan and a measurement dashboard.

SMO & Meta Ads

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Deliver an organic calendar

Match each content idea to a channel, format and measurable objective.

02

Build a paid campaign brief

Outline audience, ad placement, test creative and budget.

03

Review results

Explain the difference between engagement and business outcomes in your report.

SMO & Meta Ads

Course fees

SMO & META ADS MODULE

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SCAN FOR MAP

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SMO & Meta Ads

Course content

MODULES 01–02

01 Social strategy and profiles

Lessons & practice

- Audience and channel selection
- Profile optimisation
- Objectives and metrics

HANDS-ON Audit two profiles and align the profile information with a campaign goal.

02 Organic content planning

Lessons & practice

- Content pillars and formats
- Publishing calendars
- Community response planning

HANDS-ON Design a two-week content calendar with goals and formats.

SMO & Meta Ads

Course content

MODULES 03–04

03 Facebook and Instagram creative

Lessons & practice

- Facebook and Instagram placements
- Static, story and video concepts
- Creative adaptation

HANDS-ON Turn one campaign idea into drafts for two placements.

04 Meta Ads campaign structure

Lessons & practice

- Meta Ads campaign, ad set and ad
- Audience and budget planning
- Placement and creative selection

HANDS-ON Set up a campaign brief that compares two creatives.

SMO & Meta Ads

Course content

MODULES 05–06

05 Measurement and conversion events

Lessons & practice

- Conversion events and reporting
- Engagement versus business outcomes
- Tracking and data quality

HANDS-ON Match a metric to each stage and record how you would validate it.

06 Optimisation and reporting

Lessons & practice

- Creative comparisons
- Interpretation of results
- Reporting and next experiments

HANDS-ON Present a short report and explain which creative to test next.

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DIGITAL MARKETING

Content Marketing

SAMPLE PROJECT

Content Plan for an Enrolment Campaign



COURSE FEE

Fee on enquiry

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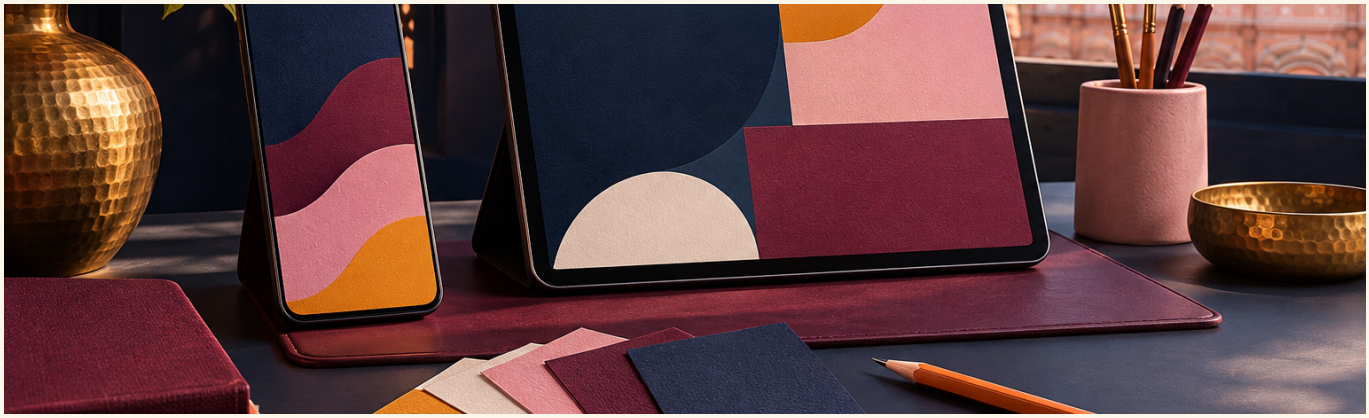
Content Marketing

Core concepts



01 Audience, persona and customer journey research

02 Content pillars and competitive review

03 Editorial calendars, briefs and messaging

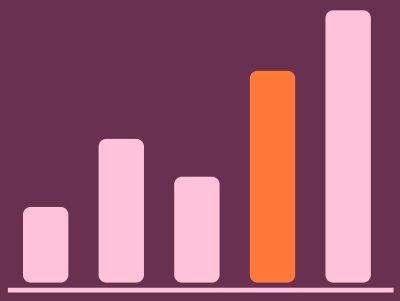
Set a goal

Choose an audience, one primary measure and a realistic sample budget.

Content Marketing

Applied skills

- **Audience**
- **Campaign**
- **Measurement**



04 SEO-informed article and landing page content

05 Distribution, repurposing and accessibility

06 Content metrics, review and improvement

PROJECT DELIVERABLES

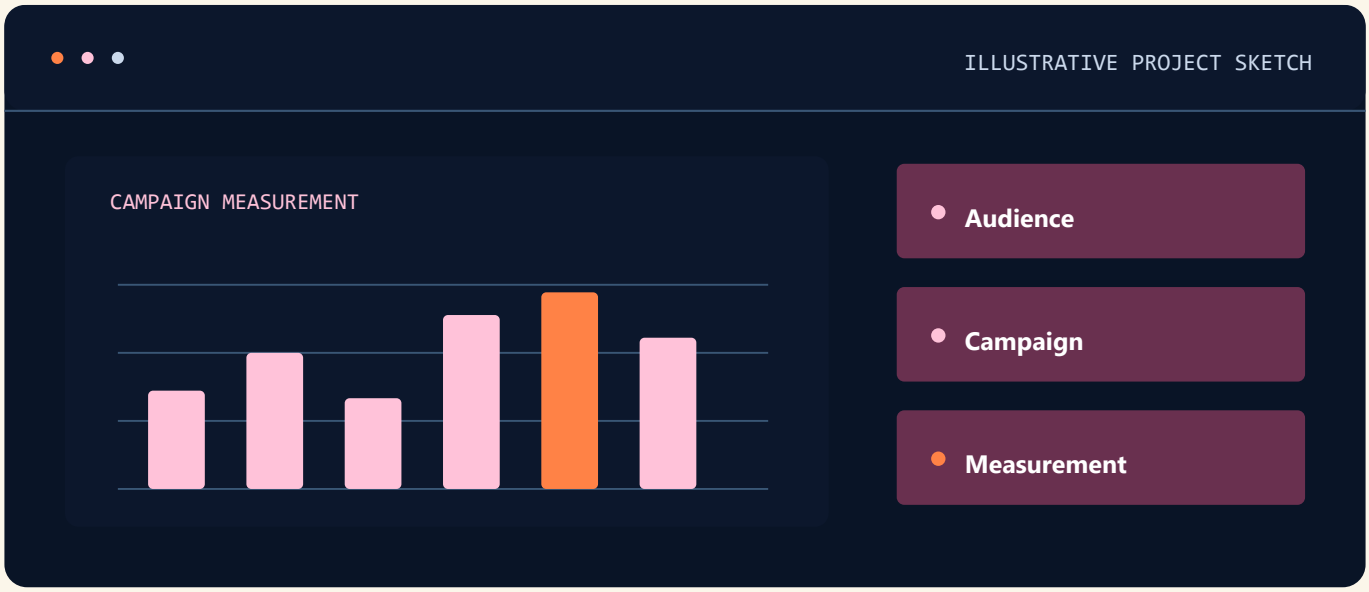
A campaign brief, sample assets, a budget plan and a measurement dashboard.

Content Marketing

Portfolio project

Content Plan for an Enrolment Campaign

Develop a theme, write a brief and produce sample content aligned with audience questions.



Set a goal

Choose an audience, one primary measure and a realistic sample budget.

Review the plan

Explain which result would justify a change to the campaign.

A campaign brief, sample assets, a budget plan and a measurement dashboard.

Content Marketing

Course fees

COURSE FEE

Fee on enquiry

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SCAN FOR MAP

Check course details

Content Marketing

Course content

MODULES 01–02

01

Lessons & practice

- Audience
- Persona
- Customer journey research

HANDS-ON

Interview a representative user or review a sample persona and map their questions.

02

Lessons & practice

- Content pillars
- Competitive review

HANDS-ON

Compare competitor messages and choose content pillars with clear audience goals.

Content Marketing

Course content

MODULES 03–04

03

Lessons & practice

- Editorial calendars
- Briefs
- Messaging

HANDS-ON Write an editorial brief and schedule specific pieces with owners.

04

Lessons & practice

- SEO-informed article
- Landing page content

HANDS-ON Draft a search-informed article and revise its linked landing-page copy.

Content Marketing

Course content

MODULES 05–06

05

Lessons & practice

- Distribution
- Repurposing
- Accessibility

HANDS-ON

Adapt a draft for a second channel and verify accessibility of headings and captions.

06

Lessons & practice

- Content metrics
- Review
- Improvement

HANDS-ON

Review content metrics and defend which topic to revise or retire.

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DIGITAL MARKETING

Email Marketing

SAMPLE PROJECT

Opt-In Welcome Sequence



COURSE FEE

Fee on enquiry

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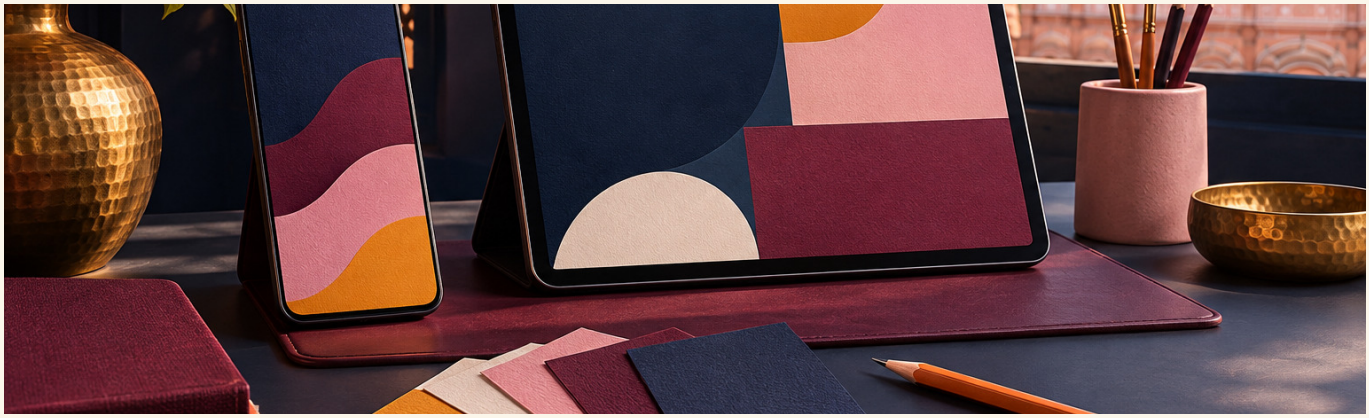
Email Marketing

Core concepts



01 Permission-based list building and segmentation

02 Subject lines, copy and accessible templates

03 Personalisation, automations and welcome flows

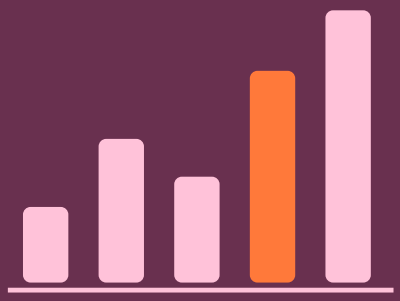
Set a goal

Choose an audience, one primary measure and a realistic sample budget.

Email Marketing

Applied skills

- **Audience**
- **Campaign**
- **Measurement**



04 Deliverability, unsubscribe and list hygiene

05 A/B tests, link tracking and conversion metrics

06 Campaign review and lifecycle planning

PROJECT DELIVERABLES

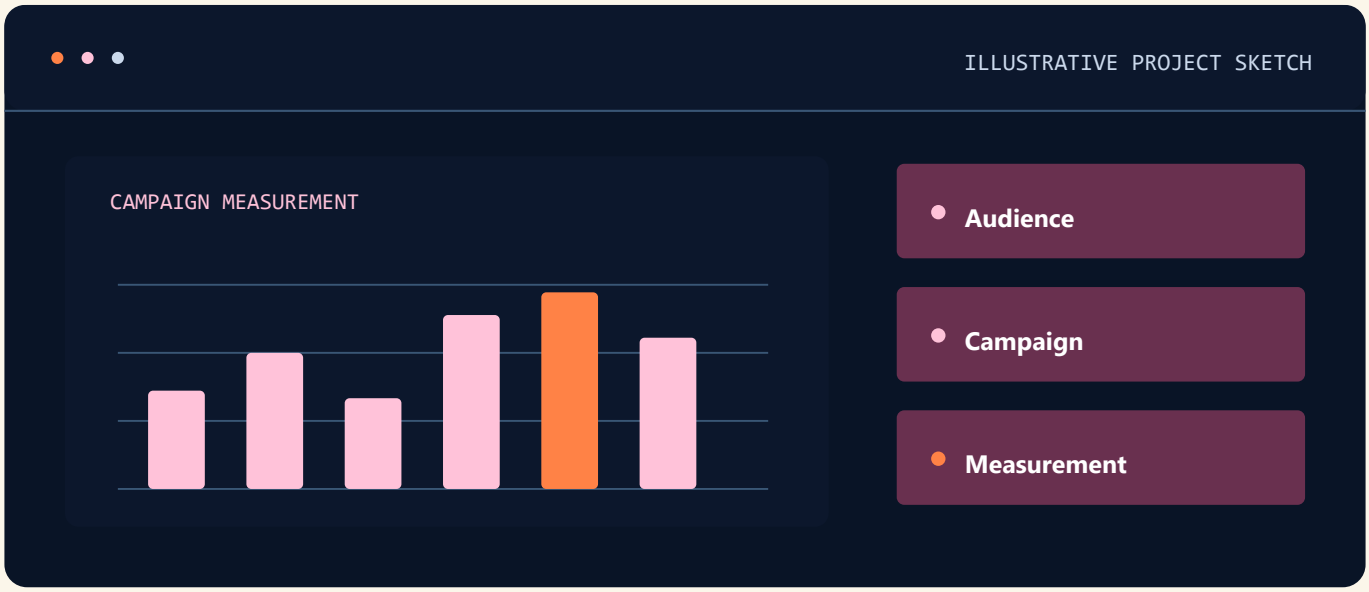
A campaign brief, sample assets, a budget plan and a measurement dashboard.

Email Marketing

Portfolio project

Opt-In Welcome Sequence

Write and map a three-message series for consenting subscribers and measure its engagement.



Set a goal

Choose an audience, one primary measure and a realistic sample budget.

Review the plan

Explain which result would justify a change to the campaign.

A campaign brief, sample assets, a budget plan and a measurement dashboard.

Email Marketing

Course fees

COURSE FEE

Fee on enquiry

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SCAN FOR MAP

Check course details

Email Marketing

Course content

MODULES 01–02

01

Lessons & practice

- Permission-based list building
- Segmentation

HANDS-ON

Build a consent-based segmentation plan and document the source of each segment.

02

Lessons & practice

- Subject lines
- Copy
- Accessible templates

HANDS-ON

Write two subject lines and create an accessible sample email template.

Email Marketing

Course content

MODULES 03–04

03

Lessons & practice

- Personalisation
- Automations
- Welcome flows

HANDS-ON Map a welcome series with branches for engaged and inactive subscribers.

04

Lessons & practice

- Deliverability
- Unsubscribe
- List hygiene

HANDS-ON Test unsubscribe behaviour and document list hygiene checks.

Email Marketing

Course content

MODULES 05–06

05

Lessons & practice

- A/B tests
- Link tracking
- Conversion metrics

HANDS-ON Plan an A/B test with link tracking and a success measure.

06

Lessons & practice

- Campaign review
- Lifecycle planning

HANDS-ON Review synthetic campaign results and propose the next lifecycle message.

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DIGITAL MARKETING

Digital Marketing with AI Automation

SEO • Google & Meta Ads • Campaign creative • AI-assisted workflows



COMPLETE PROGRAMME

₹50,000

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Digital Marketing with AI Automation

Syllabus at a glance

01

Digital marketing foundations

02

SEO, Google Ads and tracking

03

SMO, Meta Ads and creative

04

AI-assisted content and analysis

05

Workflow automation

06

Testing and operational handoff

PORTFOLIO PROJECT

Marketing Campaign Automation Pilot

Plan a campaign, create reviewed assets and connect intake, lead routing and reporting in a practice workflow.

Digital Marketing with AI Automation

Core concepts

01

Digital marketing foundations

Define the audience, goals, journey and metrics across search and social.

02

SEO, Google Ads and tracking

Plan organic and paid search, review Google campaign formats and define conversion events.

03

SMO, Meta Ads and creative

Plan social content and paid placements. Produce and check graphic and short-video campaign assets.

TOOLS & TOPICS

SEO • Google & Meta Ads • Campaign creative • AI-assisted workflows

Digital Marketing with AI Automation

Applied skills

04

AI-assisted content and analysis

Use structured prompts to draft briefs and summarise results. Verify output and keep human review.

05

Workflow automation

Map triggers, data fields and approvals for content review, enquiry intake and reporting.

06

Testing and operational handoff

Test duplicate records and failed steps. Define owners, review procedures and reporting.

TOOLS & TOPICS

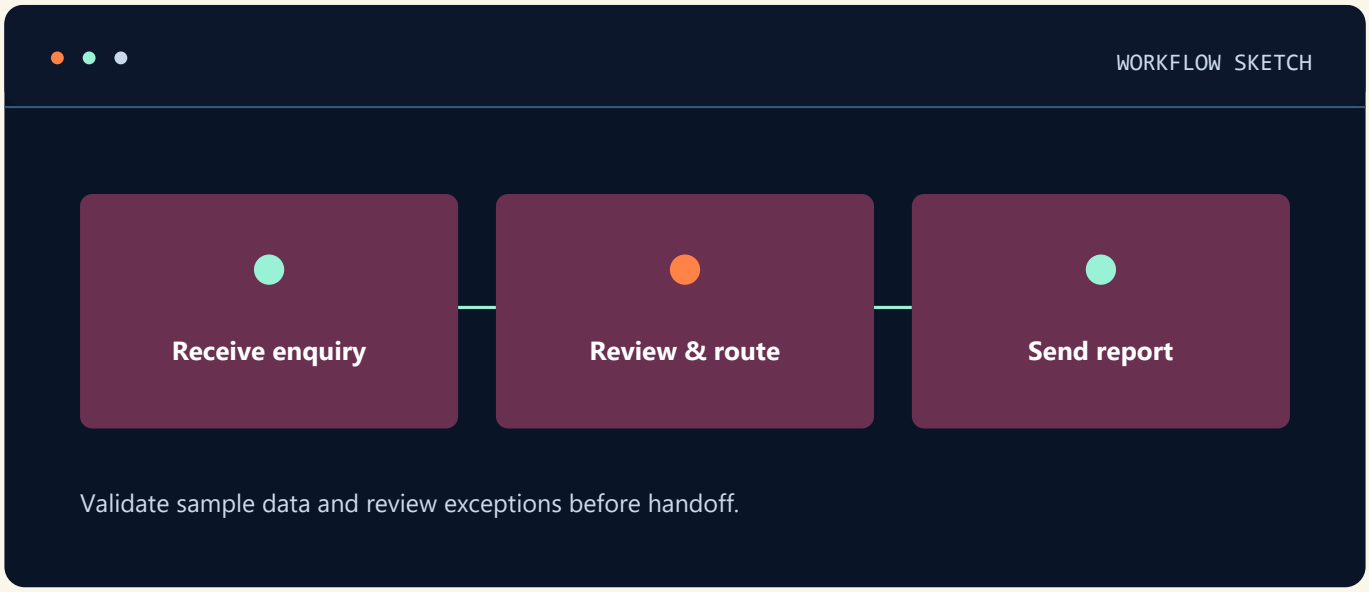
SEO • Google & Meta Ads • Campaign creative • AI-assisted workflows

Digital Marketing with AI Automation

Portfolio project

Marketing Campaign Automation Pilot

Plan a campaign, create reviewed assets and connect intake, lead routing and reporting in a practice workflow.



Set a goal

Choose an audience, one primary measure and a realistic sample budget.

Review the plan

Explain which result would justify a change to the campaign.

A campaign brief, sample assets, a budget plan and a measurement dashboard.

Digital Marketing with AI Automation

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Plan the campaign

Connect business goals to channel choices, review steps and measurable events.

02

Demonstrate the automation

Run sample inputs through lead routing, use a human approval gate and capture exceptions.

03

Review report quality

Reconcile a sample report and explain how the team would maintain the workflow.

Digital Marketing with AI Automation

Course fees

COMPLETE PROGRAMME

₹50,000

Contact admissions for current batches, class timings and enrolment details.

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SCAN FOR MAP

Contact admissions online

Digital Marketing with AI Automation

Course content

MODULES 01–02

01 Digital marketing foundations

Lessons & practice

- Audience and campaign objectives
- Channel selection
- Meaningful performance measures

HANDS-ON Link a local business goal to an audience and a short measurement plan.

02 SEO, Google Ads and tracking

Lessons & practice

- SEO and Google Ads planning
- Conversion tracking
- Campaign format selection

HANDS-ON Draft organic and paid search actions and a conversion verification check.

Digital Marketing with AI Automation

Course content

MODULES 03–04

03 SMO, Meta Ads and creative

Lessons & practice

- SMO and Meta Ads
- Graphic and short-video assets
- Creative testing

HANDS-ON Prepare two creative versions and specify a review step.

04 AI-assisted content and analysis

Lessons & practice

- Prompt structure and context
- Source-grounded summaries
- Human review and revisions

HANDS-ON Draft a content brief, check it against the source and document a correction.

Digital Marketing with AI Automation

Course content

MODULES 05–06

05 Workflow automation

Lessons & practice

- Triggers and data mapping
- Lead routing and approvals
- Scheduled reporting

HANDS-ON Route sample enquiries through a human approval step with clear owners.

06 Testing and operational handoff

Lessons & practice

- Duplicate and failed-step tests
- Reporting reconciliation
- Runbook and operational handoff

HANDS-ON Demonstrate a duplicate or failed input and record how the workflow recovers.

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DIGITAL MARKETING

Digital Marketing Workflow Automation

Workflow mapping • Triggers & actions • Approvals • Lead routing • Reporting

Prior digital marketing work experience or completion of a digital marketing course.



COURSE FEE

₹20,000

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Digital Marketing Workflow Automation

Syllabus at a glance

01

Process mapping

02

Triggers, actions and data mapping

03

Lead intake and routing

04

Approvals and AI-assisted steps

05

Campaign reporting

06

Reliability and handoff

PORTFOLIO PROJECT

Lead Routing and Reporting Workflow

Build a workflow that validates sample enquiries, assigns ownership and produces a scheduled report.

Digital Marketing Workflow Automation

Core concepts

01

Process mapping

Select an existing marketing process and identify triggers, decisions, owners and expected outputs.

02

Triggers, actions and data mapping

Use sample records to map fields, build conditions and connect workflow steps.

03

Lead intake and routing

Validate inbound data, handle duplicates and assign follow-up tasks.

TOOLS & TOPICS

Workflow mapping • Triggers & actions • Approvals • Lead routing • Reporting

Digital Marketing Workflow Automation

Applied skills

04

Approvals and AI-assisted steps

Insert review gates for generated content and confirm inputs and outputs meet the brief.

05

Campaign reporting

Plan a scheduled reporting workflow and reconcile source metrics with the output.

06

Reliability and handoff

Test failures and retries, keep an audit trail, and document manual recovery and ownership.

TOOLS & TOPICS

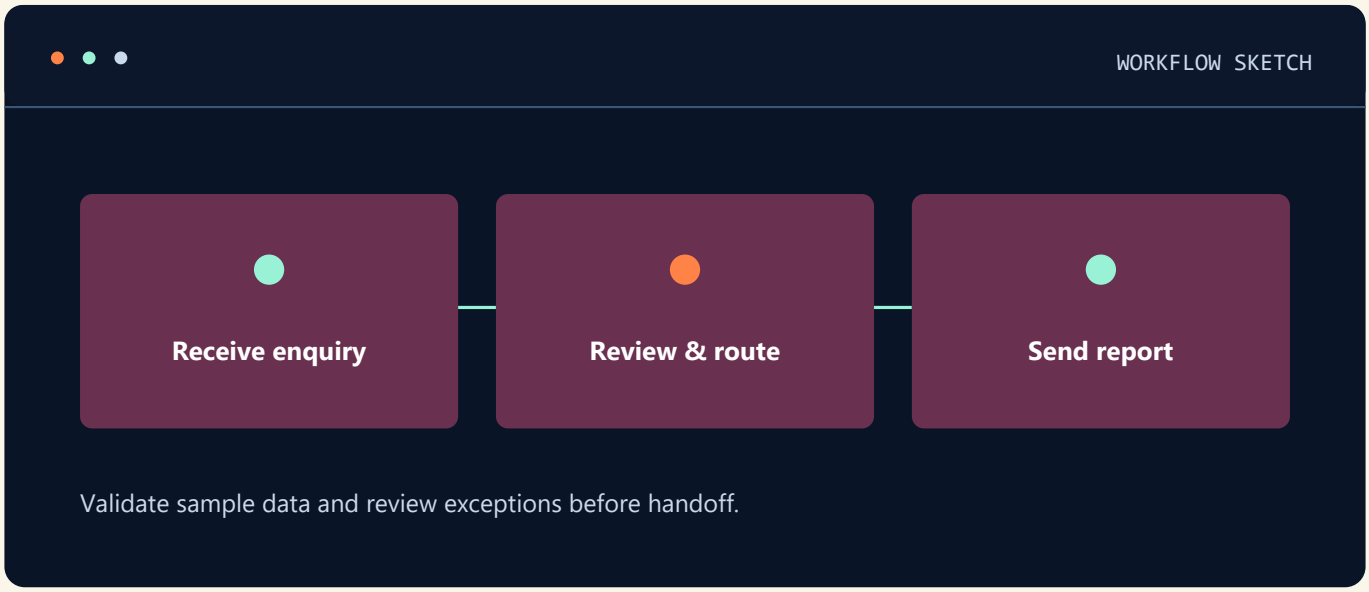
Workflow mapping • Triggers & actions • Approvals • Lead routing • Reporting

Digital Marketing Workflow Automation

Portfolio project

Lead Routing and Reporting Workflow

Build a workflow that validates sample enquiries, assigns ownership and produces a scheduled report.



Set a goal

Choose an audience, one primary measure and a realistic sample budget.

Review the plan

Explain which result would justify a change to the campaign.

A campaign brief, sample assets, a budget plan and a measurement dashboard.

Digital Marketing Workflow Automation

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Map an existing process

Show where the workflow starts, who approves outputs and what success looks like.

02

Run sample enquiries

Test the normal case, a duplicated record and an incomplete record.

03

Write the handoff

Document reporting, alerts, ownership and how to resolve a failure.

Digital Marketing Workflow Automation

Course fees

COURSE FEE

₹20,000

ENTRY REQUIREMENT

Prior digital marketing work experience or completion of a digital marketing course.

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Digital Marketing Workflow Automation

Course content

MODULES 01–02

01 Process mapping

Lessons & practice

- Existing process mapping
- Triggers and decisions
- Owners and expected outputs

HANDS-ON Map one current marketing task from intake to completion.

02 Triggers, actions and data mapping

Lessons & practice

- Trigger and action setup
- Field mapping and conditions
- Sample input validation

HANDS-ON Run a sample record through a conditional step and check the mapped output.

Digital Marketing Workflow Automation

Course content

MODULES 03–04

03 Lead intake and routing

Lessons & practice

- Lead intake and assignment
- Duplicate checks
- Routing and follow-up tasks

HANDS-ON Test a new lead, a duplicate and an incomplete input.

04 Approvals and AI-assisted steps

Lessons & practice

- Approval gates
- AI-assisted drafting
- Human checks for output quality

HANDS-ON Prepare a draft and verify the workflow waits for approval before release.

Digital Marketing Workflow Automation

Course content

MODULES 05–06

05 Campaign reporting

Lessons & practice

- Scheduled campaign reports
- Source metrics and time windows
- Reconciliation checks

HANDS-ON Generate a sample report and compare it against source figures.

06 Reliability and handoff

Lessons & practice

- Retries and failure handling
- Audit trail and alerts
- Manual recovery and ownership

HANDS-ON Force a failed practice run, document recovery and hand over the runbook.

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DESIGN

UI/UX Design

Figma • Research • Wireframes • Prototyping



COURSE FEE

₹10,000

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UI/UX Design

Syllabus at a glance

01

Research and problem framing

02

User journeys and information architecture

03

Wireframes and interface design

04

Figma components and prototypes

05

Accessibility and usability testing

06

Design systems and handoff

PORTFOLIO PROJECT

Course Enquiry Flow Redesign

Research an enrolment task, prototype an accessible enquiry flow and test it with representative users.

UI/UX Design

Core concepts

01

Research and problem framing

Plan interviews and document goals, pain points and success criteria.

02

User journeys and information architecture

Map tasks and organise content and navigation around user needs.

03

Wireframes and interface design

Build low-fidelity flows and apply typography, spacing, layout and visual hierarchy.

TOOLS & TOPICS

Figma • Research • Wireframes • Prototyping

UI/UX Design

Applied skills

04

Figma components and prototypes

Use auto layout, component variants and interactions to build a clickable prototype.

05

Accessibility and usability testing

Check contrast and input states. Observe task completion and revise the design.

06

Design systems and handoff

Document states, reusable components, responsive rules and assets.

TOOLS & TOPICS

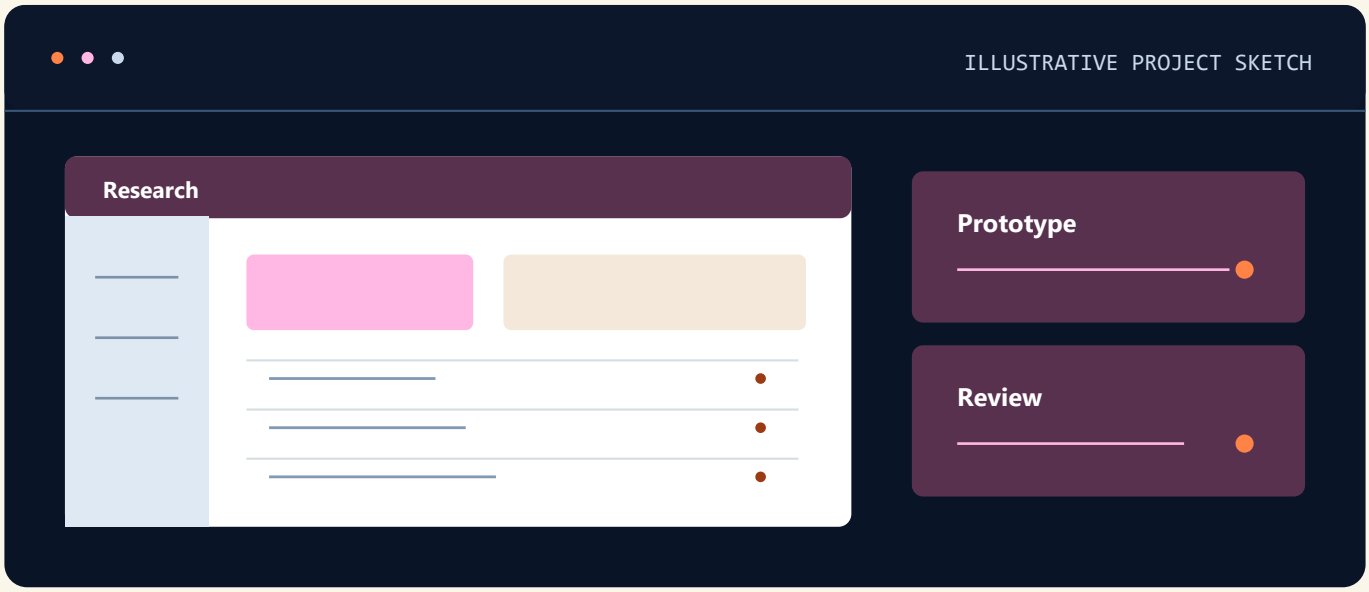
Figma • Research • Wireframes • Prototyping

UI/UX Design

Portfolio project

Course Enquiry Flow Redesign

Research an enrolment task, prototype an accessible enquiry flow and test it with representative users.



Define the task

Describe who will use the design and what they need to accomplish.

Review a draft

Ask someone to try the prototype or assess the layout, then record a revision.

Source files, prototypes or exports, and notes explaining the design revisions.

UI/UX Design

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Record the problem

Explain the user task and the evidence behind your proposed changes.

02

Test the prototype

Observe how someone completes the enquiry and record one revision.

03

Package the design

Share the flow, reusable components and handoff notes with the portfolio case study.

UI/UX Design

Course fees

COURSE FEE

₹10,000

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SCAN FOR MAP

View course details online

UI/UX Design

Course content

MODULES 01–02

01 Research and problem framing

Lessons & practice

- Research questions and interviews
- User goals and pain points
- Measurable task success

HANDS-ON Draft research questions and summarise findings before designing.

02 User journeys and information architecture

Lessons & practice

- Personas and journey maps
- Information architecture
- Navigation and task flows

HANDS-ON Map an enquiry journey and reorganise navigation around key tasks.

UI/UX Design

Course content

MODULES 03–04

03 Wireframes and interface design

Lessons & practice

- Low-fidelity wireframes
- Layout, type and spacing
- Responsive component states

HANDS-ON Wireframe an enquiry flow at mobile and desktop widths.

04 Figma components and prototypes

Lessons & practice

- Figma auto layout and variants
- Shared styles
- Prototype interactions

HANDS-ON Build a clickable flow with error and success states.

UI/UX Design

Course content

MODULES 05–06

05 Accessibility and usability testing

Lessons & practice

- Contrast and keyboard considerations
- Usability-test tasks
- Observation and iteration

HANDS-ON Observe a user on a sample task, record a barrier and revise the screen.

06 Design systems and handoff

Lessons & practice

- Design systems and documentation
- Responsive rules
- Asset export and handoff

HANDS-ON Deliver a portfolio case study with component states and handoff notes.

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DESIGN

Figma

SAMPLE PROJECT

Reusable Booking Interface Kit



COURSE FEE

Fee on enquiry

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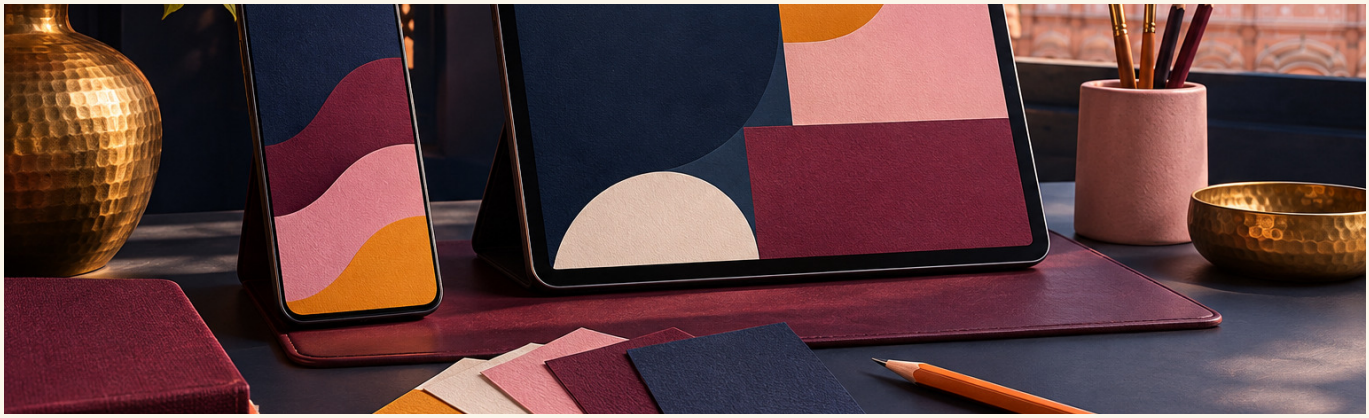
Figma

Core concepts



01

Figma editor, frames, grids and typography

02

Auto layout, constraints and responsive components

03

Styles, variables, components and variants

Define the task

Describe who will use the design and what they need to accomplish.

Figma

Applied skills

- **Research**
- **Prototype**
- **Review**



04 Prototyping, interactions and collaboration

05 Design systems and accessibility review

06 Dev handoff, annotation and asset export

PROJECT DELIVERABLES

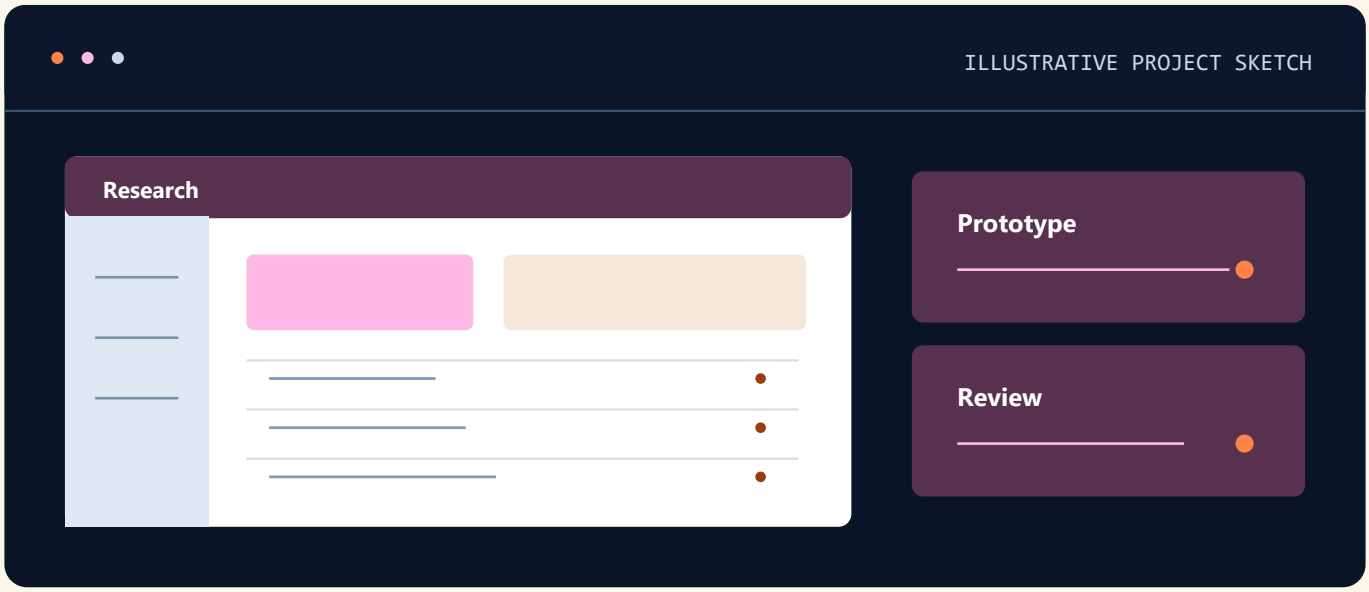
Source files, prototypes or exports, and notes explaining the design revisions.

Figma

Portfolio project

Reusable Booking Interface Kit

Build a Figma component library and a clickable mobile booking prototype with responsive layout rules.



Define the task

Describe who will use the design and what they need to accomplish.

Review a draft

Ask someone to try the prototype or assess the layout, then record a revision.

Source files, prototypes or exports, and notes explaining the design revisions.

Figma

Course fees

COURSE FEE

Fee on enquiry

Ask admissions for the course fee, available batches and enrolment details.

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SCAN FOR MAP

Check course details

Figma

Course content

MODULES 01–02

01

Lessons & practice

- Figma editor
- Frames
- Grids
- Typography

HANDS-ON Build responsive frames with a clear grid and type hierarchy.

02

Lessons & practice

- Auto layout
- Constraints
- Responsive components

HANDS-ON Use auto layout and constraints to preserve a form's layout at different widths.

Figma

Course content

MODULES 03–04

03

Lessons & practice

- Styles
- Variables
- Components
- Variants

HANDS-ON Create shared styles or variables and link component variants.

04

Lessons & practice

- Prototyping
- Interactions
- Collaboration

HANDS-ON Build and share a clickable prototype with useful interaction states.

Figma

Course content

MODULES 05–06

05

Lessons & practice

- Design systems
- Accessibility review

HANDS-ON Check contrast and consistency across the interface kit.

06

Lessons & practice

- Dev handoff
- Annotation
- Asset export

HANDS-ON Annotate the design and export assets with structure a developer can follow.

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DESIGN

Graphic Design

Typography • Colour • Layout • Print & digital



COURSE FEE

₹10,000

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Graphic Design

Syllabus at a glance

01

Design fundamentals

02

Typography and colour

03

Images and vector artwork

04

Brand and campaign design

05

Production for print and digital

06

Critique and portfolio

PORTFOLIO PROJECT

Local Brand Campaign Kit

Design a poster and coordinated graphics for a local brand with consistent typography and colour.

Graphic Design

Core concepts

01

Design fundamentals

Compare composition, visual hierarchy, spacing and grid systems.

02

Typography and colour

Choose accessible contrast and type styles suitable for the message and channel.

03

Images and vector artwork

Prepare raster images and use vector shapes for scalable artwork.

TOOLS & TOPICS

Typography • Colour • Layout • Print & digital

Graphic Design

Applied skills

04

Brand and campaign design

Build a simple visual system and use it across a poster and social assets.

05

Production for print and digital

Check sizes, bleed, resolution and export formats for each deliverable.

06

Critique and portfolio

Make revisions from feedback and present the rationale behind the final assets.

TOOLS & TOPICS

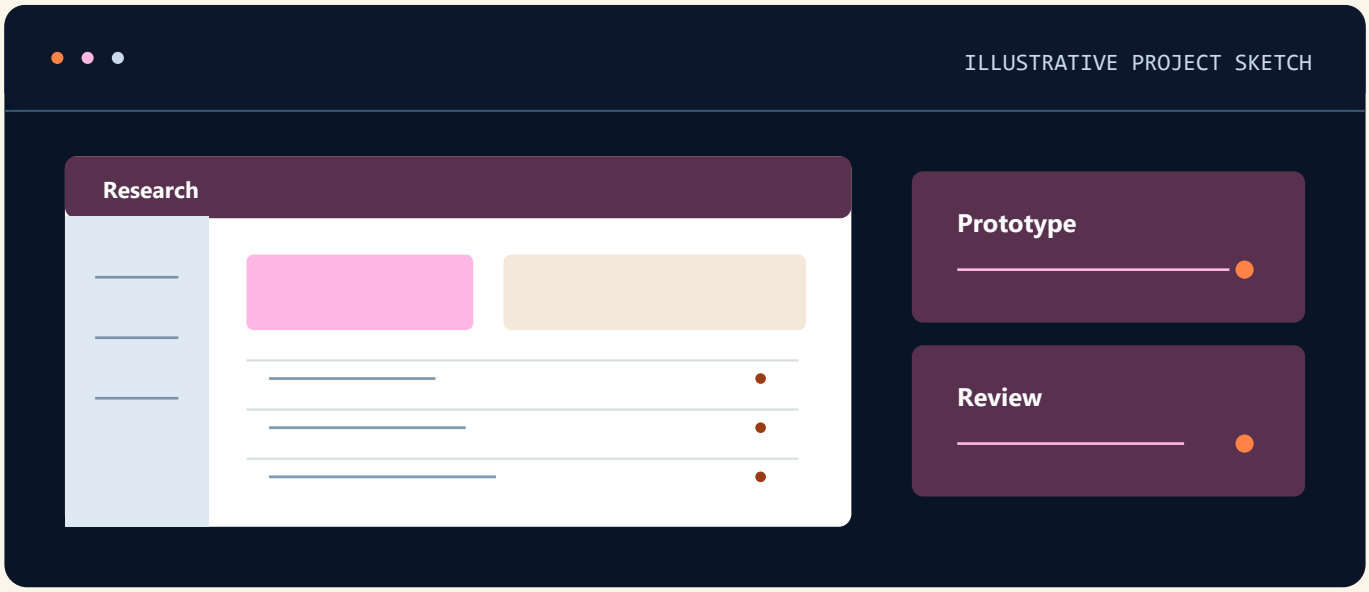
Typography • Colour • Layout • Print & digital

Graphic Design

Portfolio project

Local Brand Campaign Kit

Design a poster and coordinated graphics for a local brand with consistent typography and colour.



Define the task

Describe who will use the design and what they need to accomplish.

Review a draft

Ask someone to try the prototype or assess the layout, then record a revision.

Source files, prototypes or exports, and notes explaining the design revisions.

Graphic Design

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Set a visual direction

Provide a short brief, colour system and type hierarchy.

02

Adapt one concept

Use the design system across a poster and two social formats.

03

Check output files

Verify print bleed, digital dimensions and legibility at final size.

Graphic Design

Course fees

COURSE FEE

₹10,000

Contact admissions for current batches, class timings and enrolment details.

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SCAN FOR MAP

View course details online

Graphic Design

Course content

MODULES 01–02

01 Design fundamentals

Lessons & practice

- Composition and focal points
- Alignment, spacing and grids
- Visual hierarchy

HANDS-ON

Create two layout options and compare how quickly the key message can be read.

02 Typography and colour

Lessons & practice

- Typeface roles and pairing
- Colour palette and contrast
- Readability at output size

HANDS-ON

Build a small style sheet and read the poster at its final size.

Graphic Design

Course content

MODULES 03–04

03 Images and vector artwork

Lessons & practice

- Raster and vector formats
- Crop and resolution
- Scalable shapes

HANDS-ON Prepare a graphic that exports cleanly as both vector and raster artwork.

04 Brand and campaign design

Lessons & practice

- Brand consistency
- Campaign concepts
- Adaptation across formats

HANDS-ON Create a poster, social post and story graphic using one visual system.

Graphic Design

Course content

MODULES 05–06

05 Production for print and digital

Lessons & practice

- Bleed and safe margins
- Print resolution
- Digital dimensions and exports

HANDS-ON — Check bleed in the print file and correct sizes in the digital exports.

06 Critique and portfolio

Lessons & practice

- Feedback and iteration
- Source file organisation
- Portfolio presentation

HANDS-ON — Make a documented revision and hand over the final artwork and working files.

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DESIGN

Graphic & Video Editing

Campaign design • Social graphics • Short-form video • Captions



GRAPHIC & VIDEO EDITING MODULE

₹10,000

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Graphic & Video Editing

Syllabus at a glance

01

Creative brief and brand

02

Graphic design essentials

03

Social and advertising assets

04

Video assembly

05

Sound, captions and finishing

06

Export and handoff

PORTFOLIO PROJECT

Campaign Creative Kit

Design static social visuals and edit a short promotional video for the same campaign.

Graphic & Video Editing

Core concepts

01

Creative brief and brand

Set the message, visual style, audience and asset formats.

02

Graphic design essentials

Apply layout grids, typography, colour, hierarchy and contrast.

03

Social and advertising assets

Create campaign graphics sized for posts, stories and ad placements.

TOOLS & TOPICS

Campaign design • Social graphics • Short-form video • Captions

Graphic & Video Editing

Applied skills

04

Video assembly

Organise clips, plan a sequence and trim footage for clear pacing.

05

Sound, captions and finishing

Balance dialogue and music, add captions and check visuals at final size.

06

Export and handoff

Deliver stills and multiple video formats with organised source files.

TOOLS & TOPICS

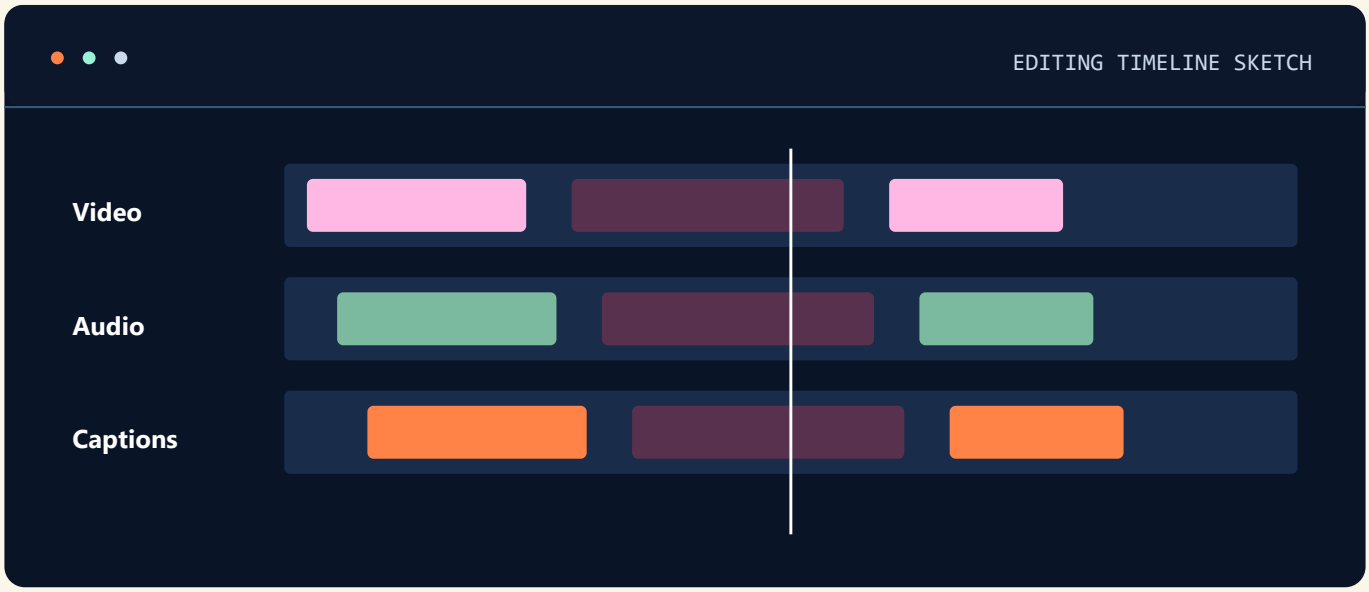
Campaign design • Social graphics • Short-form video • Captions

Graphic & Video Editing

Portfolio project

Campaign Creative Kit

Design static social visuals and edit a short promotional video for the same campaign.



Define the task

Describe who will use the design and what they need to accomplish.

Review a draft

Ask someone to try the prototype or assess the layout, then record a revision.

Source files, prototypes or exports, and notes explaining the design revisions.

Graphic & Video Editing

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Set a campaign style

Choose a type system, colour palette and format plan.

02

Build still and motion assets

Create matching social graphics and one edited promotional clip.

03

Check delivery

Review captions, audio and framing across horizontal and vertical exports.

Graphic & Video Editing

Course fees

GRAPHIC & VIDEO EDITING MODULE

₹10,000

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SCAN FOR MAP

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Graphic & Video Editing

Course content

MODULES 01–02

01 Creative brief and brand

Lessons & practice

- Creative briefs
- Brand voice and visual direction
- Format and audience requirements

HANDS-ON Turn a campaign brief into a palette, reference board and format list.

02 Graphic design essentials

Lessons & practice

- Layout grids and hierarchy
- Typography and spacing
- Colour and contrast

HANDS-ON Design a campaign layout with a clear call to action and readable text.

Graphic & Video Editing

Course content

MODULES 03–04

03 Social and advertising assets

Lessons & practice

- Social post and story formats
- Paid ad graphics
- Consistent visual assets

HANDS-ON Produce a coordinated static post, story and ad graphic.

04 Video assembly

Lessons & practice

- Shot selection and clip organisation
- Cutting and transitions
- Pacing and sequencing

HANDS-ON Assemble a short promotional edit with a visible beginning, middle and end.

Graphic & Video Editing

Course content

MODULES 05–06

05 Sound, captions and finishing

Lessons & practice

- Dialogue and music levels
- Caption timing and legibility
- Visual consistency

HANDS-ON Check intelligibility at typical playback volume and correct caption timing.

06 Export and handoff

Lessons & practice

- Aspect ratios and exports
- Final quality checks
- Organising editable files

HANDS-ON Deliver horizontal and vertical edits with matching social graphics.

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DESIGN

Video Editing with Adobe Premiere Pro

Premiere Pro • Timeline editing • Audio • Colour • Captions



COURSE FEE

₹25,000

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Video Editing with Adobe Premiere Pro

Syllabus at a glance

01

Workspace and media management

02

Timeline editing

03

Audio workflow

04

Colour correction and grading

05

Graphics and captions

06

Export and delivery

PORTFOLIO PROJECT

Promotional Video Edit

Edit a complete short promotional video and deliver both a horizontal master and a vertical social cut.

Video Editing with Adobe Premiere Pro

Core concepts

01

Workspace and media management

Import and label assets, plan sequences and use proxies for heavier media.

02

Timeline editing

Assemble a rough cut, trim precisely, use B-roll and refine pacing.

03

Audio workflow

Clean dialogue, balance music and sound effects, and check audio levels.

TOOLS & TOPICS

Premiere Pro • Timeline editing • Audio • Colour • Captions

Video Editing with Adobe Premiere Pro

Applied skills

04

Colour correction and grading

Use Lumetri and scopes to balance exposure, build a look and match shots.

05

Graphics and captions

Create simple titles and review the accuracy, timing and visibility of captions.

06

Export and delivery

Check framing and quality, select suitable formats and export platform-specific versions.

TOOLS & TOPICS

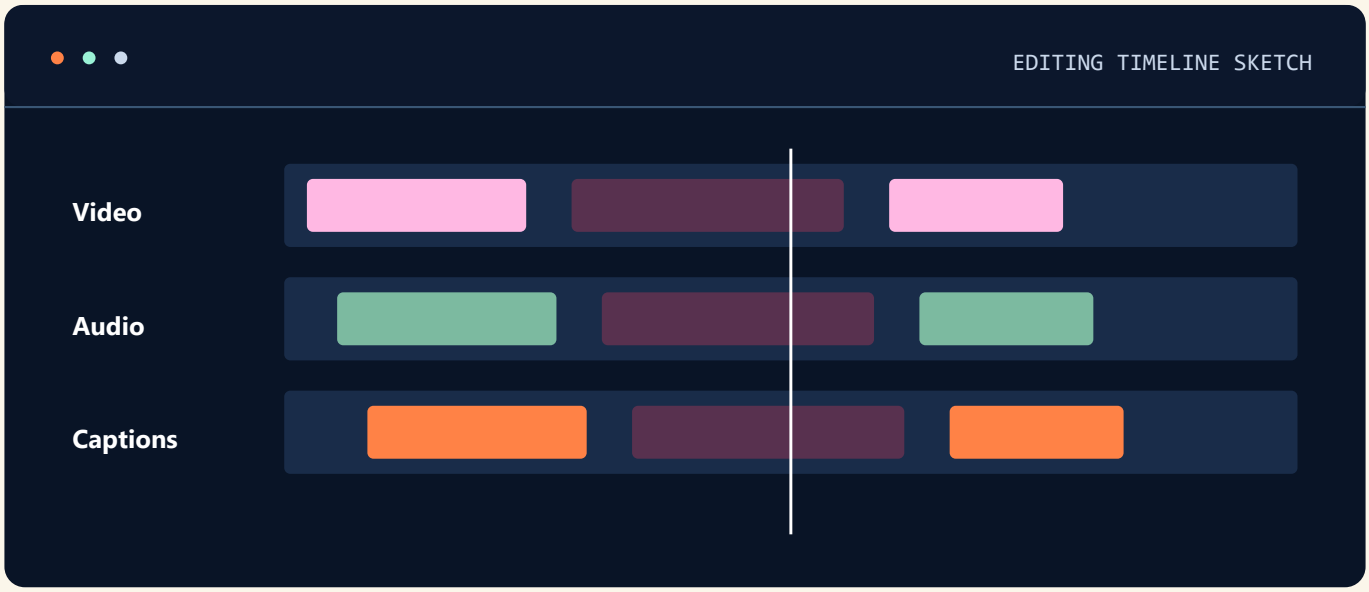
Premiere Pro • Timeline editing • Audio • Colour • Captions

Video Editing with Adobe Premiere Pro

Portfolio project

Promotional Video Edit

Edit a complete short promotional video and deliver both a horizontal master and a vertical social cut.



Define the task

Describe who will use the design and what they need to accomplish.

Review a draft

Ask someone to try the prototype or assess the layout, then record a revision.

Source files, prototypes or exports, and notes explaining the design revisions.

Video Editing with Adobe Premiere Pro

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Organise the project

Keep footage, audio, sequences and exports in a structure someone else can follow.

02

Compare edits

Explain a pacing choice, an audio adjustment and a colour correction.

03

Deliver two versions

Export the horizontal master and a vertical cut with checked captions and audio.

Video Editing with Adobe Premiere Pro

Course fees

COURSE FEE

₹25,000

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Video Editing with Adobe Premiere Pro

Course content

MODULES 01–02

01 Workspace and media management

Lessons & practice

- Media import and bins
- Sequence settings
- Proxy workflow

HANDS-ON Organise a sample footage set by scene and create a sequence.

02 Timeline editing

Lessons & practice

- Rough and fine cuts
- Trimming and B-roll
- Pacing and continuity

HANDS-ON Cut a rapid and a slower version of the same short sequence and compare them.

Video Editing with Adobe Premiere Pro

Course content

MODULES 03–04

03 Audio workflow

Lessons & practice

- Dialogue levels
- Music and sound effects
- Audio correction and mixing

HANDS-ON Make dialogue clear while keeping a consistent level across clips.

04 Colour correction and grading

Lessons & practice

- Lumetri and scopes
- Exposure and white balance
- Shot matching and look development

HANDS-ON Match two shots and show before-and-after comparisons.

Video Editing with Adobe Premiere Pro

Course content

MODULES 05–06

05 Graphics and captions

Lessons & practice

- Titles and graphics
- Caption timing and correction
- Safe placement and readability

HANDS-ON Add titles and caption a short sequence, checking timing throughout.

06 Export and delivery

Lessons & practice

- Export settings and formats
- Horizontal and vertical framing
- Quality review

HANDS-ON Deliver a horizontal master and a vertical social edit and verify both exports.

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MOBILE DEVELOPMENT

Mobile App Development

SAMPLE PROJECT

Campus Events App



COURSE FEE

Fee on enquiry

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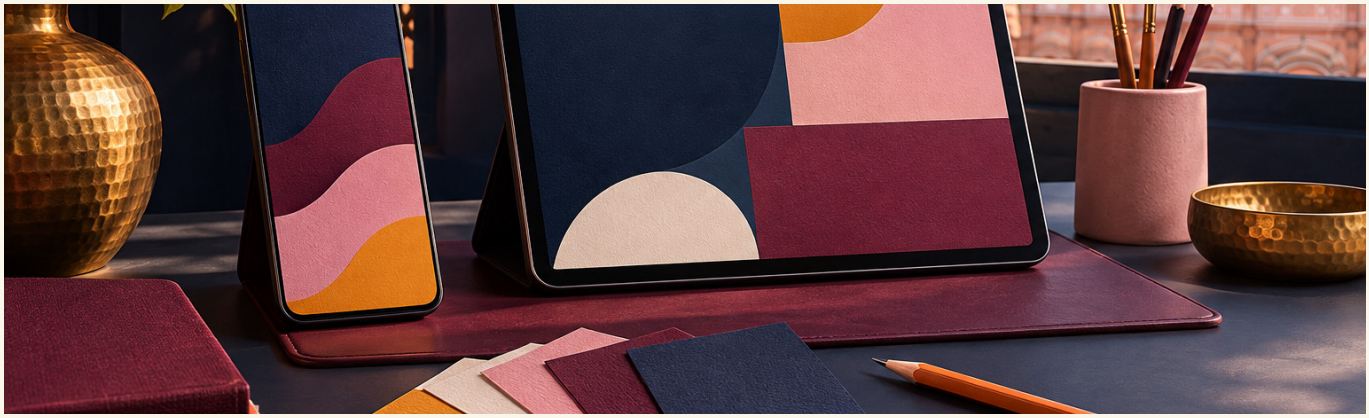
Mobile App Development

Core concepts



01 Mobile UX, lifecycle and platform choices

02 Navigation, screens, forms and app state

03 Native and cross-platform development approaches

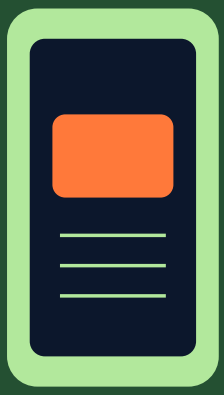
Map the screens

Outline the main interaction and the empty or offline state.

Mobile App Development

Applied skills

- Screens
- Device test
- App state



04 Networking, caching and local persistence

05 Device permissions, accessibility and testing

06 Release builds and app-store readiness

PROJECT DELIVERABLES

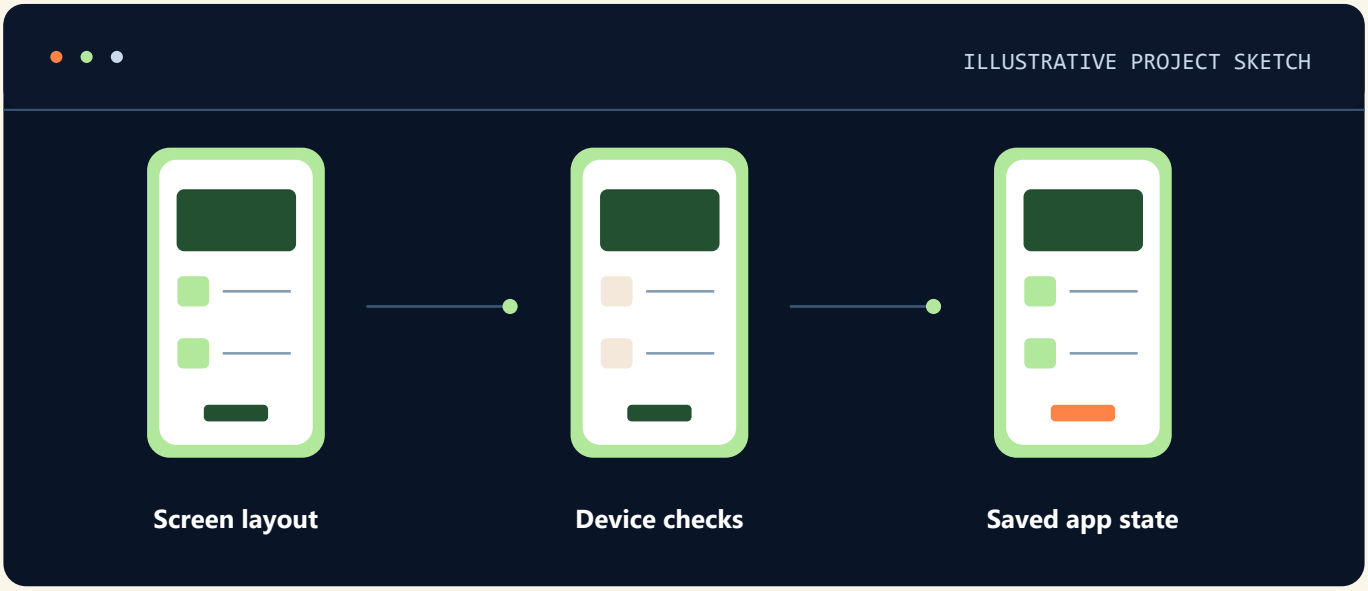
An installable demo or simulator run, screen states and device-testing notes.

Mobile App Development

Portfolio project

Campus Events App

Build an event list, details and reminder preferences for a mobile app and test failure states.



Map the screens

Outline the main interaction and the empty or offline state.

Test on a device

Check navigation, layout and data persistence across a restart.

An installable demo or simulator run, screen states and device-testing notes.

Mobile App Development

Course fees

COURSE FEE

Fee on enquiry

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SCAN FOR MAP

Check course details

Mobile App Development

Course content

MODULES 01–02

01

Lessons & practice

- Mobile UX
- Lifecycle
- Platform choices

HANDS-ON

Choose a mobile platform for a campus app and explain UX and lifecycle trade-offs.

02

Lessons & practice

- Navigation
- Screens
- Forms
- App state

HANDS-ON

Map list, detail and form screens and check how state survives navigation.

Mobile App Development

Course content

MODULES 03–04

03

Lessons & practice

- Native
- Cross-platform development approaches

HANDS-ON Compare a native and cross-platform implementation plan for one screen.

04

Lessons & practice

- Networking
- Caching
- Local persistence

HANDS-ON Load remote data and show what the app does during a failed connection.

Mobile App Development

Course content

MODULES 05–06

05

Lessons & practice

- Device permissions
- Accessibility
- Testing

HANDS-ON Check permissions, accessible labels and interactions on a device.

06

Lessons & practice

- Release builds
- App-store readiness

HANDS-ON Build and test a release candidate and document store preparation checks.

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MOBILE DEVELOPMENT

Android App Development with Kotlin & Java

Android Studio • Kotlin • Java • Jetpack Compose • Room



COURSE FEE

₹25,000

JAIPUR, RAJASTHAN

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Android App Development with Kotlin & Java

Syllabus at a glance

01

Android Studio and app lifecycle

02

Kotlin and Java for Android

03

Android UI and navigation

04

State and architecture

05

Local and remote data

06

Testing, builds and release

PORTFOLIO PROJECT

Android Expense Log

Build a device-tested expense log in Kotlin and practise reading or integrating Java-based Android code.

Android App Development with Kotlin & Java

Core concepts

01

Android Studio and app lifecycle

Set up Android Studio, the SDK and an emulator. Explore the structure of an Android application.

02

Kotlin and Java for Android

Practise classes, data handling and interoperability between Kotlin and Java.

03

Android UI and navigation

Build Kotlin screens with Jetpack Compose and review XML layouts and Java-based screen code.

TOOLS & TOPICS

Android Studio • Kotlin • Java • Jetpack Compose • Room

Android App Development with Kotlin & Java

Applied skills

04

State and architecture

Use ViewModel, state, navigation and asynchronous workflows.

05

Local and remote data

Store records with Room, consume APIs and handle relevant device permissions.

06

Testing, builds and release

Test on a device, check errors and layout, and prepare a signed release build.

TOOLS & TOPICS

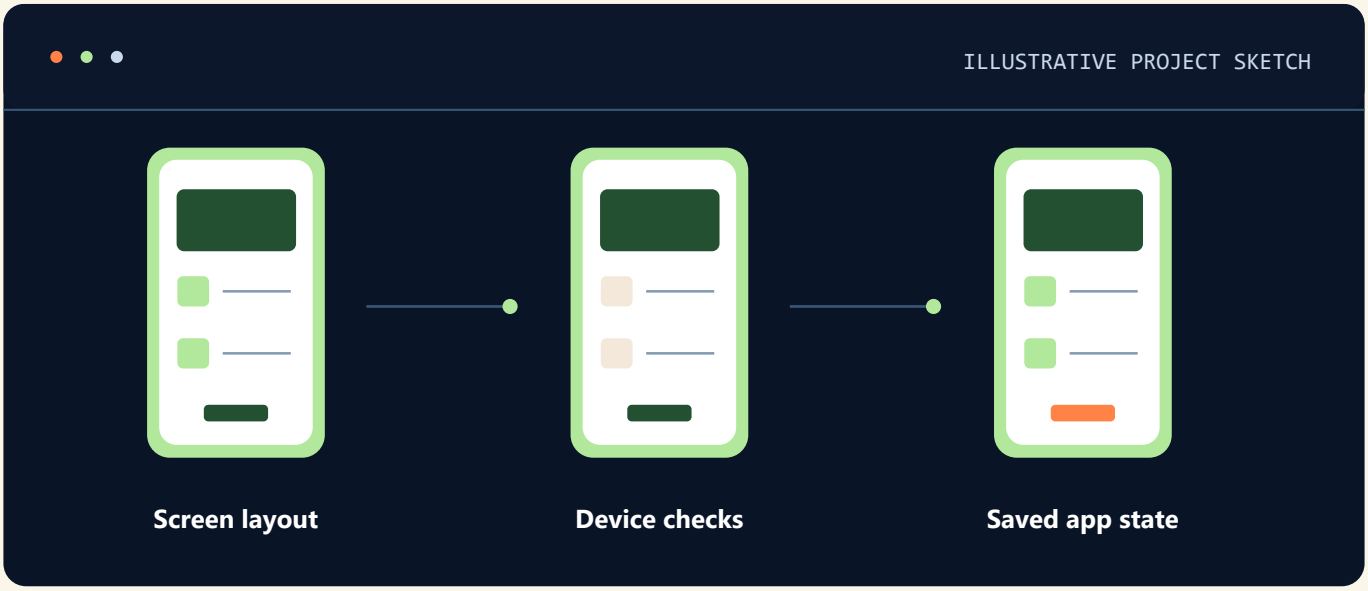
Android Studio • Kotlin • Java • Jetpack Compose • Room

Android App Development with Kotlin & Java

Portfolio project

Android Expense Log

Build a device-tested expense log in Kotlin and practise reading or integrating Java-based Android code.



Map the screens

Outline the main interaction and the empty or offline state.

Test on a device

Check navigation, layout and data persistence across a restart.

An installable demo or simulator run, screen states and device-testing notes.

Android App Development with Kotlin & Java

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Record an expense

Check input validation, categories and saving a local record.

02

Verify after restart

Show that records persist and that empty and error states appear correctly.

03

Connect Kotlin and Java

Demonstrate an interoperability exercise and explain how you tested it.

Android App Development with Kotlin & Java

Course fees

COURSE FEE

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SCAN FOR MAP

View course details online

Android App Development with Kotlin & Java

Course content

MODULES 01–02

01 Android Studio and app lifecycle

Lessons & practice

- Android Studio, SDK and emulator
- Project structure and lifecycle
- Debug builds and logs

HANDS-ON Run an app on an emulator and trace one lifecycle event.

02 Kotlin and Java for Android

Lessons & practice

- Kotlin types and classes
- Java classes and Android code
- Kotlin–Java interoperability

HANDS-ON Call a Java class from Kotlin and test the returned result.

Android App Development with Kotlin & Java

Course content

MODULES 03–04

03 Android UI and navigation

Lessons & practice

- Jetpack Compose screens in Kotlin
- XML layouts and Java screen code
- Navigation and accessible input

HANDS-ON

Compare a Compose screen and a Java/XML screen for the same data entry task.

04 State and architecture

Lessons & practice

- ViewModel and UI state
- Coroutines and asynchronous work
- Loading and error states

HANDS-ON

Keep form state readable while a request completes or fails.

Android App Development with Kotlin & Java

Course content

MODULES 05–06

05 Local and remote data

Lessons & practice

- Room entities and queries
- JSON API requests
- Device permissions and local persistence

HANDS-ON Save an expense, reload it after restart and display a failed network state.

06 Testing, builds and release

Lessons & practice

- Device and emulator testing
- Signing and release builds
- Performance and accessibility checks

HANDS-ON Run a device test, fix one issue and prepare a signed practice build.

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MOBILE DEVELOPMENT

Kotlin

SAMPLE PROJECT

Study Session Planner



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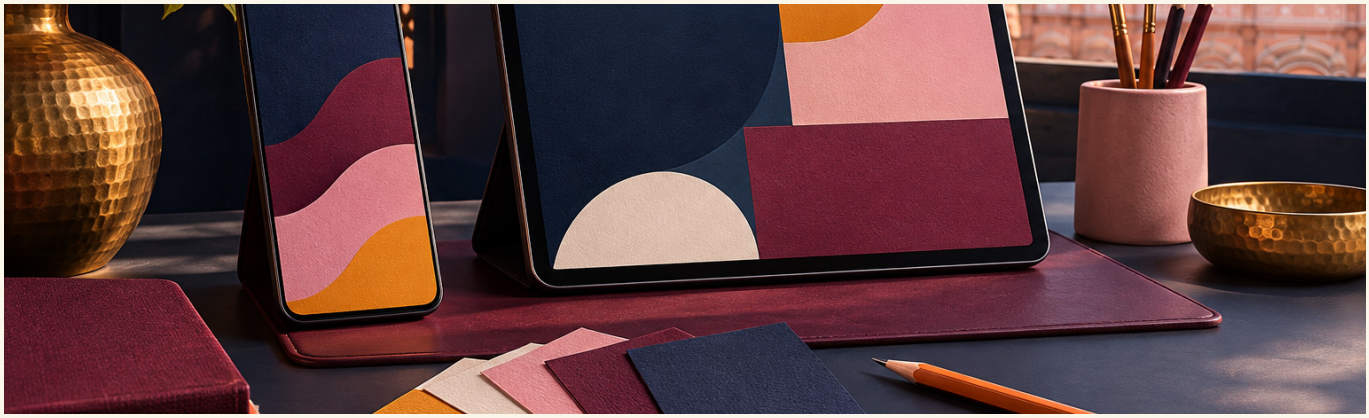
Kotlin

Core concepts



01	Types, null safety, control flow and functions
02	Classes, data classes, interfaces and sealed types
03	Collections, lambda expressions and extensions

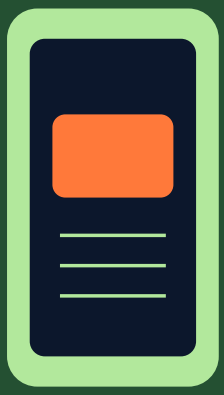
Map the screens

Outline the main interaction and the empty or offline state.

Kotlin

Applied skills

- **Screens**
- **Device test**
- **App state**



04 Generics and idiomatic error handling

05 Coroutines, structured concurrency and Flow basics

06 Unit tests and JVM or Android integration

PROJECT DELIVERABLES

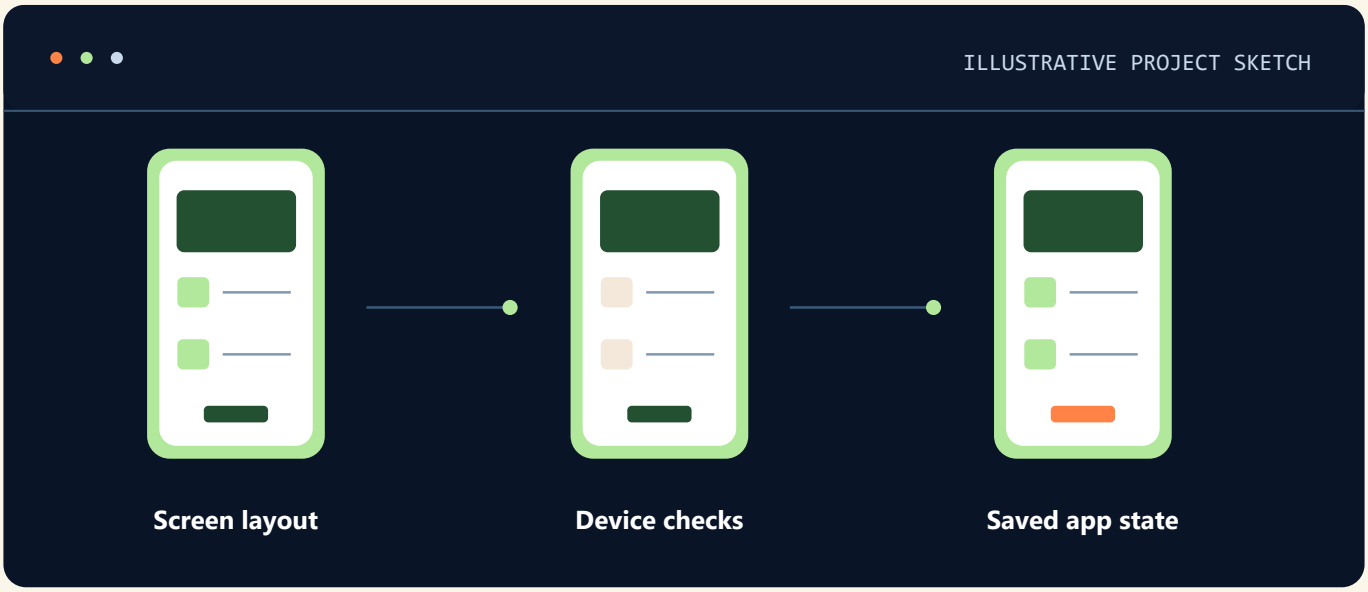
An installable demo or simulator run, screen states and device-testing notes.

Kotlin

Portfolio project

Study Session Planner

Use Kotlin collections, nullable types and coroutines to organise a small study planner.



Map the screens

Outline the main interaction and the empty or offline state.

Test on a device

Check navigation, layout and data persistence across a restart.

An installable demo or simulator run, screen states and device-testing notes.

Kotlin

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SCAN FOR MAP

Check course details

Kotlin

Course content

MODULES 01–02

01

Lessons & practice

- Types
- Null safety
- Control flow
- Functions

HANDS-ON

Use null safety and typed functions to validate a sample study plan.

02

Lessons & practice

- Classes
- Data classes
- Interfaces
- Sealed types

HANDS-ON

Model sessions with data classes and represent status with a sealed type.

Kotlin

Course content

MODULES 03–04

03

Lessons & practice

- Collections
- Lambda expressions
- Extensions

HANDS-ON Use a collection transform and extension to group sessions by day.

04

Lessons & practice

- Generics
- Idiomatic error handling

HANDS-ON Write a typed helper that returns a meaningful failure for invalid inputs.

Kotlin

Course content

MODULES 05–06

05

Lessons & practice

- Coroutines
- Structured concurrency
- Flow basics

HANDS-ON — Collect a Flow and test cancellation with structured coroutines.

06

Lessons & practice

- Unit tests
- JVM or Android integration

HANDS-ON — Run unit tests and demonstrate Kotlin integration in a JVM or Android example.

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MOBILE DEVELOPMENT

Flutter

SAMPLE PROJECT

Habit Tracker for Mobile



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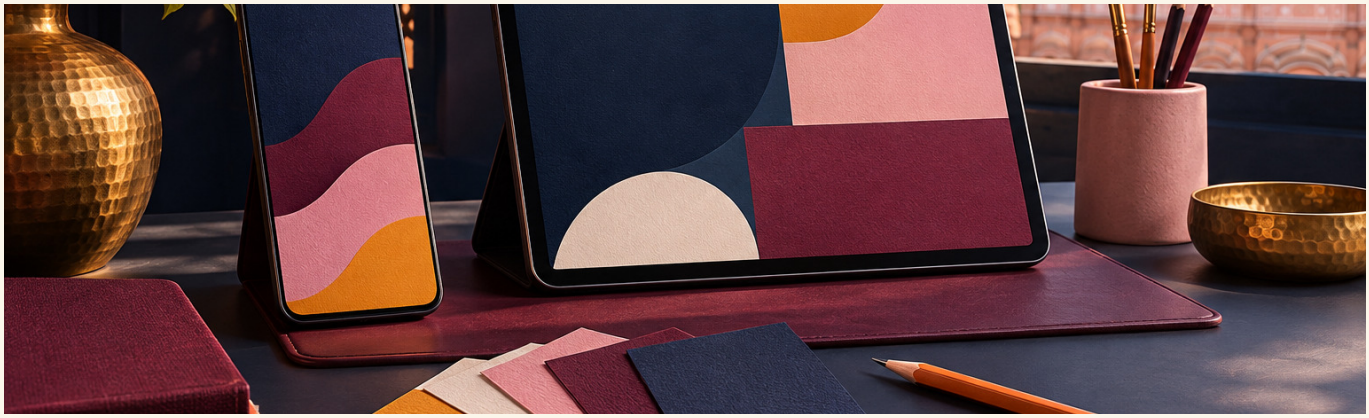
Flutter

Core concepts



01

Dart syntax, null safety and async code

02

Flutter widgets, layout and themes

03

Navigation, forms, state and validation

Map the screens

Outline the main interaction and the empty or offline state.

Flutter

Applied skills

- Screens
- Device test
- App state



04 REST integration, JSON and local storage

05 Widget tests, accessibility and performance basics

06 Android and iOS builds and release process

PROJECT DELIVERABLES

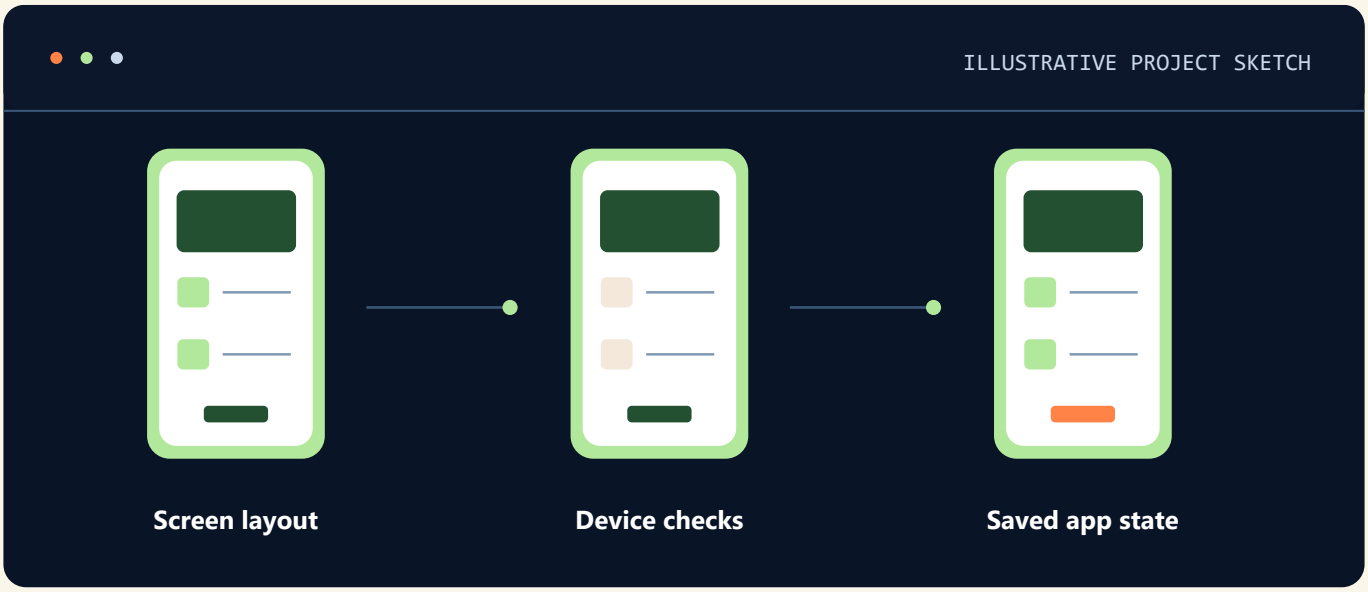
An installable demo or simulator run, screen states and device-testing notes.

Flutter

Portfolio project

Habit Tracker for Mobile

Build a cross-platform tracker with reusable widgets, local persistence and testable state.



Map the screens

Outline the main interaction and the empty or offline state.

Test on a device

Check navigation, layout and data persistence across a restart.

An installable demo or simulator run, screen states and device-testing notes.

Flutter

Course fees

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SCAN FOR MAP

Check course details

Flutter

Course content

MODULES 01–02

01

Lessons & practice

- Dart syntax
- Null safety
- Async code

HANDS-ON

Write Dart functions and handle nullable input and asynchronous failures.

02

Lessons & practice

- Flutter widgets
- Layout
- Themes

HANDS-ON

Build reusable widgets with responsive constraints and a shared theme.

Flutter

Course content

MODULES 03–04

03

Lessons & practice

- Navigation
- Forms
- State
- Validation

HANDS-ON Navigate between tracker screens and validate a form before saving state.

04

Lessons & practice

- REST integration
- JSON
- Local storage

HANDS-ON Parse sample JSON and keep records available after restart.

Flutter

Course content

MODULES 05–06

05

Lessons & practice

- Widget tests
- Accessibility
- Performance basics

HANDS-ON

Write a focused widget test and check text scaling and layout performance.

06

Lessons & practice

- Android
- IOS builds
- Release process

HANDS-ON

Prepare release builds and document configuration needed on Android and iOS.

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MOBILE APP DEVELOPMENT COURSE

React Native

Build apps for Android and iOS

COURSE FEE

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What you'll build

Develop a multi-screen mobile app, connect it to real data, and test it on a device.

LEARNING OUTCOMES

Build the interface

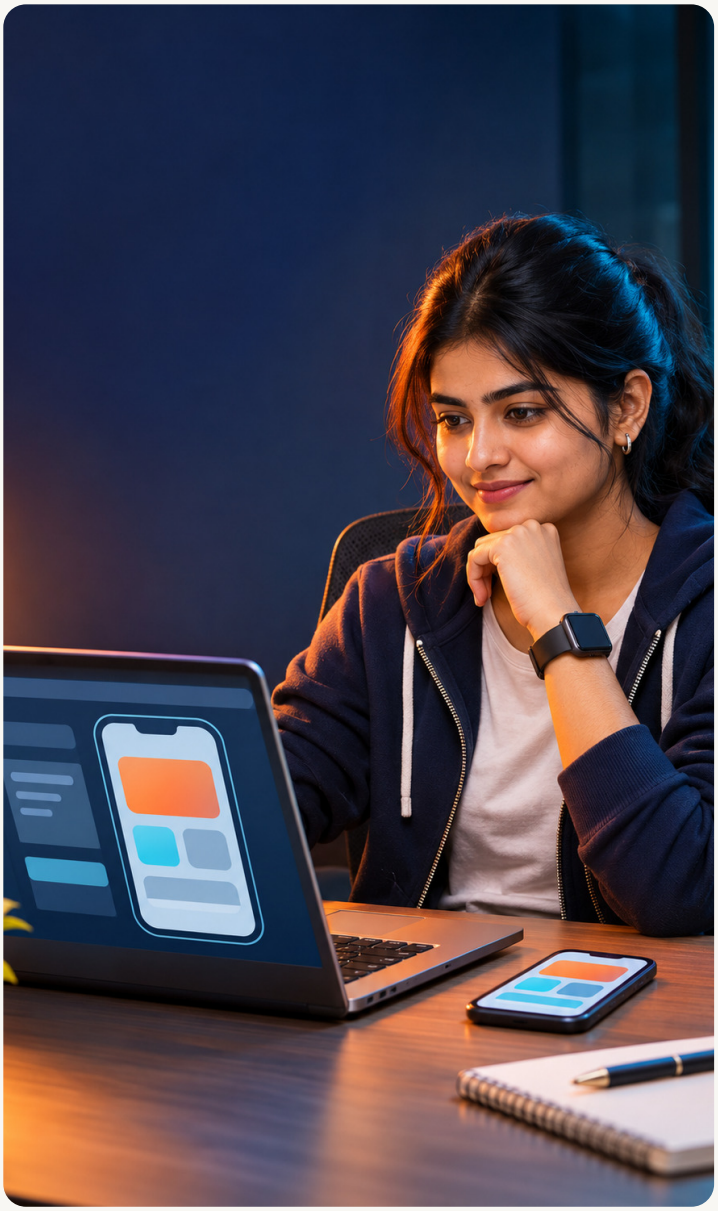
Design reusable screens with layouts that fit different phone sizes.

Connect the data

Fetch records from an API and handle loading, empty and error states.

Test and present your app

Run through the main user journeys and prepare a portfolio demo.



WHO IT'S FOR

Students and web developers moving into mobile. Basic JavaScript is helpful.

HOW YOU'LL PRACTISE

Follow trainer-led examples, complete topic-wise assignments and apply what you learn in a portfolio project.

Set up your first app

Get a React Native project running, then use JavaScript and React to build an interactive screen.

App.jsx

```jsx
import { Text, View } from 'react-native';

export default function App() {
  return <View><Text>My first app</Text></View>;
}
```

Tooling

Node.js and npm, Expo setup, Android Studio emulator and testing on a phone.

JavaScript

ES6+ syntax, arrays, objects, modules, promises and async/await.

React

JSX, props, state, events and hooks including useState and useEffect.

FIRST EXERCISE

Run a screen on a device or emulator, change its content and commit your work with Git.

Design reusable screens

Use React Native components to build layouts, lists and inputs that work across screen sizes.

Core components

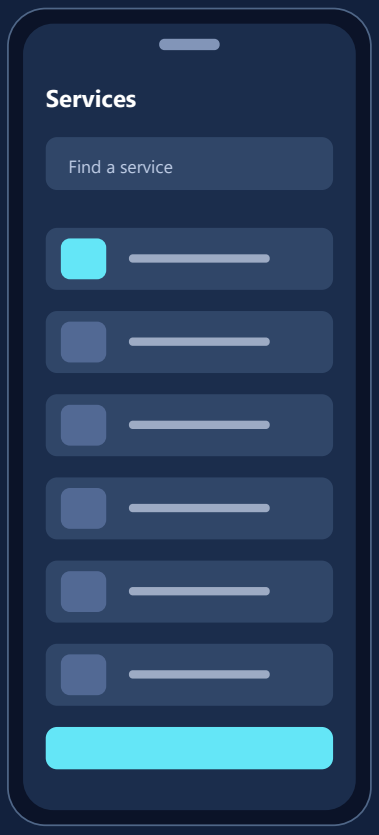
Combine View, Text, Image, Pressable and TextInput.

Styling and layout

Use StyleSheet, Flexbox, spacing and safe-area patterns.

Lists and interactions

Choose between ScrollView and FlatList. Handle taps and input changes.



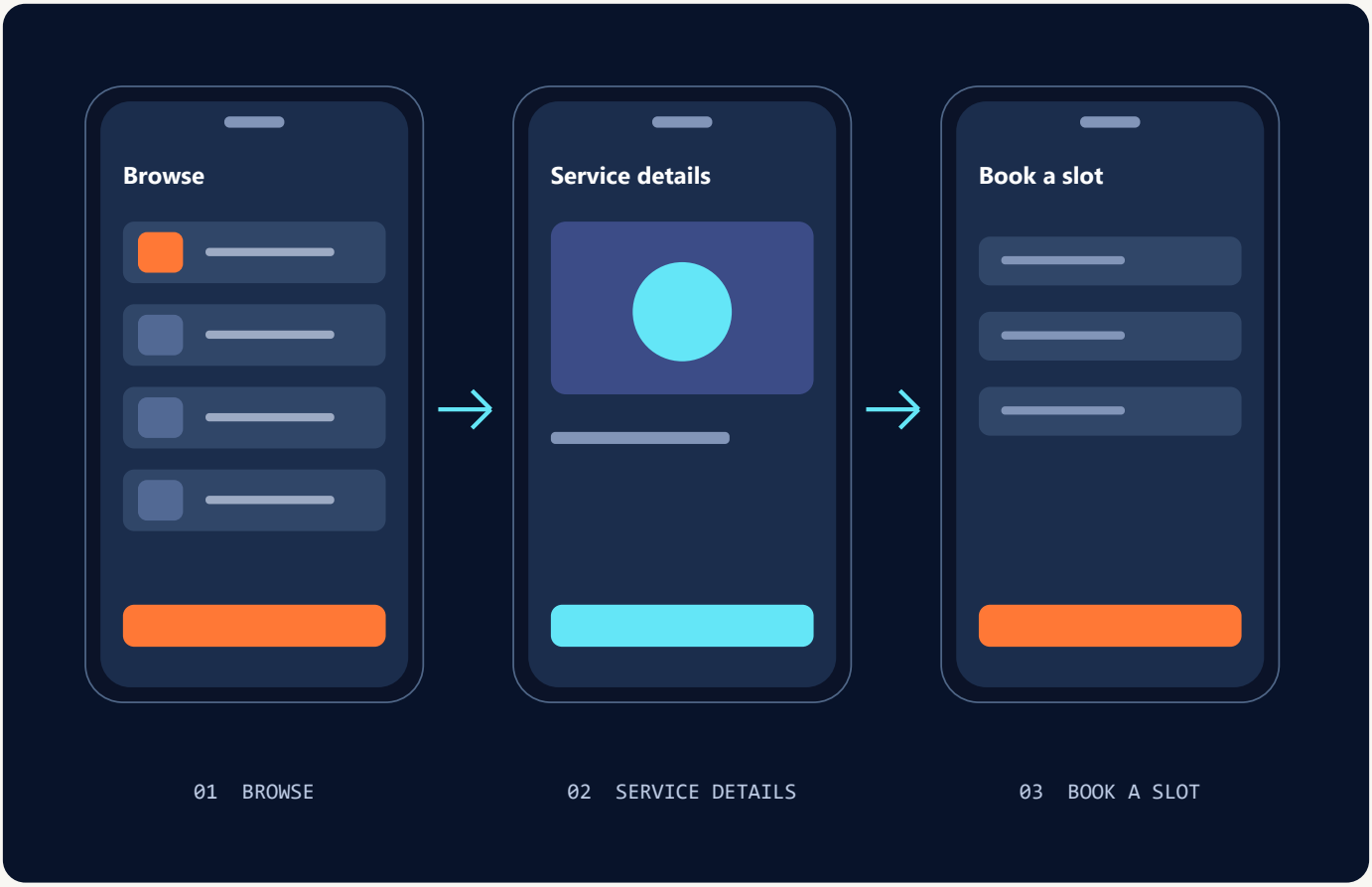
EXAMPLE / SERVICE LIST

UI EXERCISE

Build a service list with reusable cards, a search field and an empty state.

Connect your screens

Build the path from discovering a service to submitting a booking.



React Navigation

Set up stack and tab navigation, pass route parameters and sketch routes that require sign-in.

Forms and validation

Collect user input, show field errors and give users feedback when a booking is submitted.

NAVIGATION EXERCISE

Tap a service in the list, open its detail screen and submit a booking form.

Make the app data-driven

Connect a screen to a backend and control how it responds to network and session changes.

REST API requests

Fetch JSON data, submit forms and handle slow or failed requests.

Shared app state

Start with local React state. Explore Redux Toolkit for shared data and async updates.

Sign-in and sessions

Trace the sign-in flow, protected screens and sign-out. Compare a REST backend with Firebase as an example.



APP, API, AUTH & STORAGE

APP SCREEN → REQUEST → BACKEND → DISPLAY DATA

PRACTICE

Replace sample service listings with API data and show a useful retry message when a request fails.

Handle real-world conditions

Plan for weak connections, denied permissions and sensitive information.

01

Save user preferences

Use local persistence for settings and cached non-sensitive data. Discuss secure storage for session credentials.

TRY IT Save a setting and check that it survives an app restart.

02

Request device access

Use camera or location as examples. Explain the permission and give users a way to continue if they decline.

TRY IT Test the screen with permission granted and denied.

03

Keep lists responsive

Start with FlatList, size images for mobile and check for unnecessary renders while scrolling.

TRY IT Compare scrolling behaviour with sample data on a device.

Prepare a release build

Test the key user journeys and learn what goes into a store submission.

01

Test on devices

Check navigation, forms, network failures and different screen sizes on an emulator or phone.

02

Debug and fix

Use developer tools and logs to isolate problems and compare behaviour after a fix.

03

Package the app

Review preview builds, app signing, version numbers and the Android App Bundle (AAB).

04

Review submission

Prepare the icon, screenshots and a description. Review Google Play and App Store submission workflows.

RELEASE EXERCISE

Write a test checklist, record a resolved bug and list the assets needed for submission.

Build a service booking app

Use one project to practise screen design, navigation, API integration and testing.

Discover services

Browse a searchable list of available services.

Choose a time

View service details and select an available slot.

Confirm the booking

Validate user input and show a clear confirmation or retry state.



ILLUSTRATIVE PROJECT MOCKUP

OTHER PROJECT IDEAS

Expense tracker
Log expenses and filter by category.

Learning app
Browse lessons and track progress.

Product catalogue
Browse products and save favourites.

Portfolio materials include app screenshots, a short demo and a README that explains how to run your project.

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COURSE ENQUIRIES

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REACT NATIVE COURSE FEE

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SCAN FOR MAP

React Native

Course content

MODULES 01–02

01

Lessons & practice

- JavaScript
- React
- Expo setup

HANDS-ON Run a starter Expo project and inspect key JavaScript and React files.

02

Lessons & practice

- React Native components
- Flexbox
- Responsive styling

HANDS-ON Build components with Flexbox and check layouts at two screen sizes.

React Native

Course content

MODULES 03–04

03

Lessons & practice

- Stack
- Tab navigation
- Forms

HANDS-ON Connect tab and stack routes and validate a booking form.

04

Lessons & practice

- Hooks
- Shared state
- Async workflows

HANDS-ON Store a loading state and handle a failed asynchronous request.

React Native

Course content

MODULES 05–06

05

Lessons & practice

- REST APIs
- JSON
- Lists
- Local storage

HANDS-ON Load sample services from an API and cache a preference locally.

06

Lessons & practice

- Device testing
- Performance
- Release builds

HANDS-ON Test the booking flow on a device and document build and release checks.

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MOBILE DEVELOPMENT

iOS App Development with Swift

Swift • SwiftUI • Xcode • TestFlight



COURSE FEE

₹30,000

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iOS App Development with Swift

Syllabus at a glance

01

Swift foundations

02

Xcode and application structure

03

SwiftUI layouts and navigation

04

Data and concurrency

05

Persistence and testing

06

Signing and distribution

PORTFOLIO PROJECT

Travel Packing List

Build a SwiftUI packing list with persistent records and accessible editing and navigation.

iOS App Development with Swift

Core concepts

01

Swift foundations

Use Swift types, optionals, collections, structures, protocols and error handling.

02

Xcode and application structure

Run a project in the simulator and explore application state and the iOS lifecycle.

03

SwiftUI layouts and navigation

Build reusable views, lists, forms, state and accessible navigation.

TOOLS & TOPICS

Swift • SwiftUI • Xcode • TestFlight

iOS App Development with Swift

Applied skills

04

Data and concurrency

Use async/await with API requests, decode JSON and present failure states.

05

Persistence and testing

Save records and verify editing, accessibility and layout on simulator and device.

06

Signing and distribution

Review signing, build configuration, TestFlight and App Store submission.

TOOLS & TOPICS

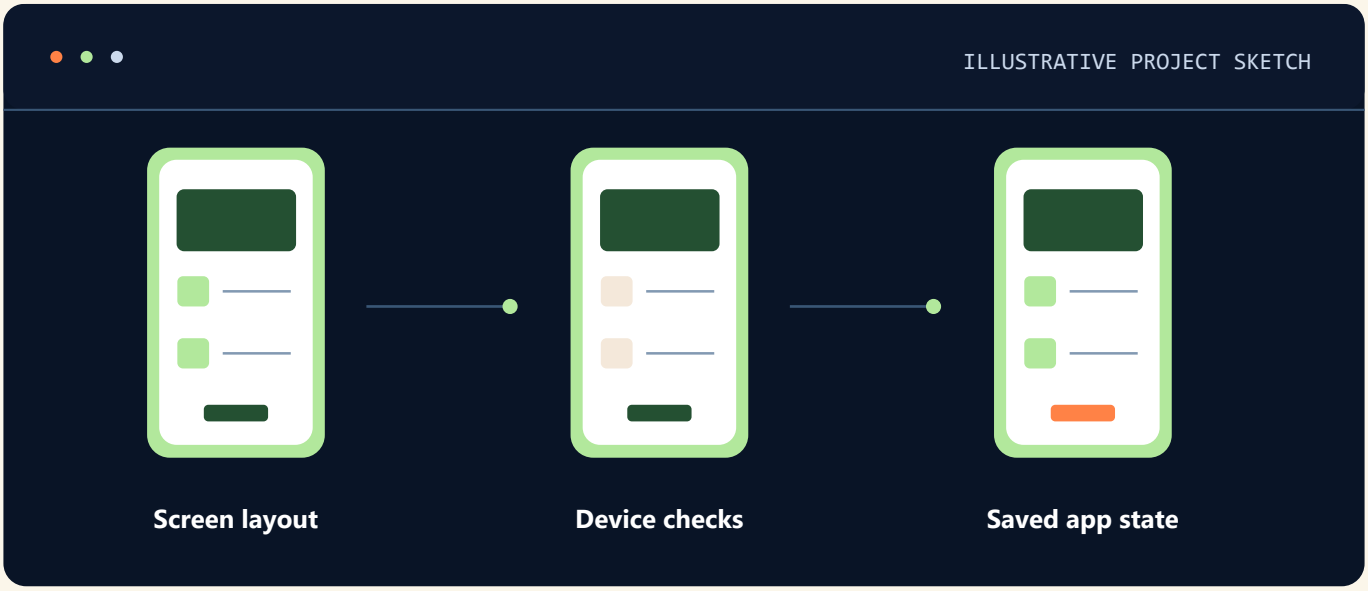
Swift • SwiftUI • Xcode • TestFlight

iOS App Development with Swift

Portfolio project

Travel Packing List

Build a SwiftUI packing list with persistent records and accessible editing and navigation.



Map the screens

Outline the main interaction and the empty or offline state.

Test on a device

Check navigation, layout and data persistence across a restart.

An installable demo or simulator run, screen states and device-testing notes.

iOS App Development with Swift

Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Add and edit a packing item

Demonstrate add, edit and completion workflows and check the empty state.

02

Verify persistence

Restart the app and confirm categories and items reload correctly.

03

Prepare a device demo

Test one workflow, capture screenshots and describe the build and release process.

iOS App Development with Swift

Course fees

COURSE FEE

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SCAN FOR MAP

View course details online

iOS App Development with Swift

Course content

MODULES 01–02

01 Swift foundations

Lessons & practice

- Swift types and optionals
- Collections, structs and protocols
- Error handling

HANDS-ON Validate packing-list data and handle a missing or blank value.

02 Xcode and application structure

Lessons & practice

- Xcode project and simulator
- Application state and lifecycle
- Debugging views and data

HANDS-ON Run the app in the simulator and diagnose a misplaced UI state.

iOS App Development with Swift

Course content

MODULES 03–04

03 SwiftUI layouts and navigation

Lessons & practice

- SwiftUI views and modifiers
- Lists, forms and navigation
- State and accessible controls

HANDS-ON Build add, edit and completed-item views with accessible labels.

04 Data and concurrency

Lessons & practice

- Async/await and API calls
- JSON decoding
- Loading and error feedback

HANDS-ON Fetch a sample list and show a clear error for an invalid response.

iOS App Development with Swift

Course content

MODULES 05–06

05 Persistence and testing

Lessons & practice

- Local persistence
- Device and simulator tests
- Accessibility and layout checks

HANDS-ON Restart the app and verify destination categories and checklist items persist.

06 Signing and distribution

Lessons & practice

- Signing and build configuration
- TestFlight
- App Store submission preparation

HANDS-ON Assemble a release checklist and a tested device demonstration.

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DIPLOMA PROGRAMS

Diploma Programs

SAMPLE PROJECT

Compare Diploma Study Tracks



COURSE FEE

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Diploma Programs

Core concepts



01 Full stack and software-development pathways

02 Python and Java programming options

03 Data Analytics and Data Science & AI

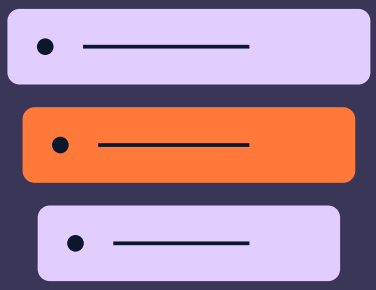
Scope the work

List the deliverables and identify which skills each one demonstrates.

Diploma Programs

Applied skills

- **Design**
- **Build**
- **Demonstrate**



04 Digital marketing track and campaign practice

05 Cloud computing and cybersecurity tracks

06 Portfolio expectations and programme selection

PROJECT DELIVERABLES

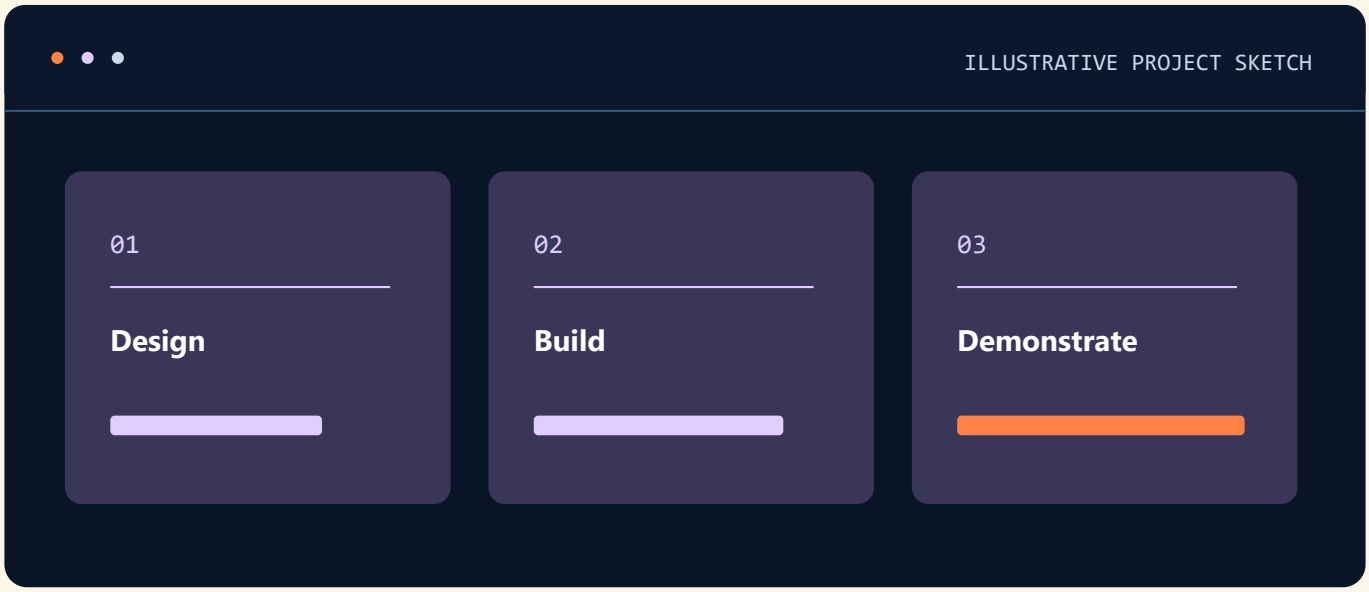
A portfolio brief, documented milestones and a demo or track-selection summary.

Diploma Programs

Portfolio project

Compare Diploma Study Tracks

Use a skills checklist and sample briefs to compare tracks and prepare questions for admissions.



Scope the work

List the deliverables and identify which skills each one demonstrates.

Review milestones

Record completed work, feedback and the changes made before the demonstration.

A portfolio brief, documented milestones and a demo or track-selection summary.

Diploma Programs

Course fees

COURSE FEE

Fee on enquiry

Ask admissions for the course fee, available batches and enrolment details.

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SCAN FOR MAP

Check course details

Diploma Programs

Course content

MODULES 01–02

01

Lessons & practice

- Full stack
- Software-development pathways

HANDS-ON

Compare example web and software capstones and record the skills each one develops.

02

Lessons & practice

- Python
- Java programming options

HANDS-ON

Try a short Python and Java exercise to compare the learning paths.

Diploma Programs

Course content

MODULES 03–04

03

Lessons & practice

- Data Analytics
- Data Science & AI

HANDS-ON

Review an analytics dashboard and an AI model demo to identify their different outcomes.

04

Lessons & practice

- Digital marketing track
- Campaign practice

HANDS-ON

Draft a small campaign brief and compare it with a programming project.

Diploma Programs

Course content

MODULES 05–06

05

Lessons & practice

- Cloud computing
- Cybersecurity tracks

HANDS-ON

Compare a cloud deployment brief with a security review brief and note prerequisites.

06

Lessons & practice

- Portfolio expectations
- Programme selection

HANDS-ON

Select a track and prepare questions about the learning path and portfolio.

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DIPLOMA PROGRAMS

Diploma in Full Stack Development

SAMPLE PROJECT

Multi-Role Booking Platform



COURSE FEE

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Diploma in Full Stack Development

Core concepts



01

Web design, JavaScript and Git foundations

02

Component-driven frontend, state and routing

03

Backend services, auth and REST design

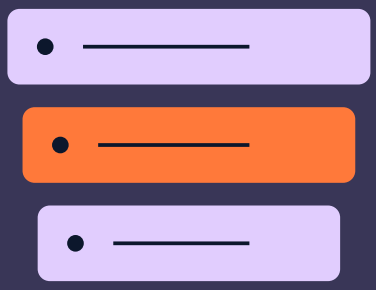
Scope the work

List the deliverables and identify which skills each one demonstrates.

Diploma in Full Stack Development

Applied skills

- **Design**
- **Build**
- **Demonstrate**



04 SQL and NoSQL data modelling

05 Test coverage, CI and application deployment

06 Integrated capstone and portfolio presentation

PROJECT DELIVERABLES

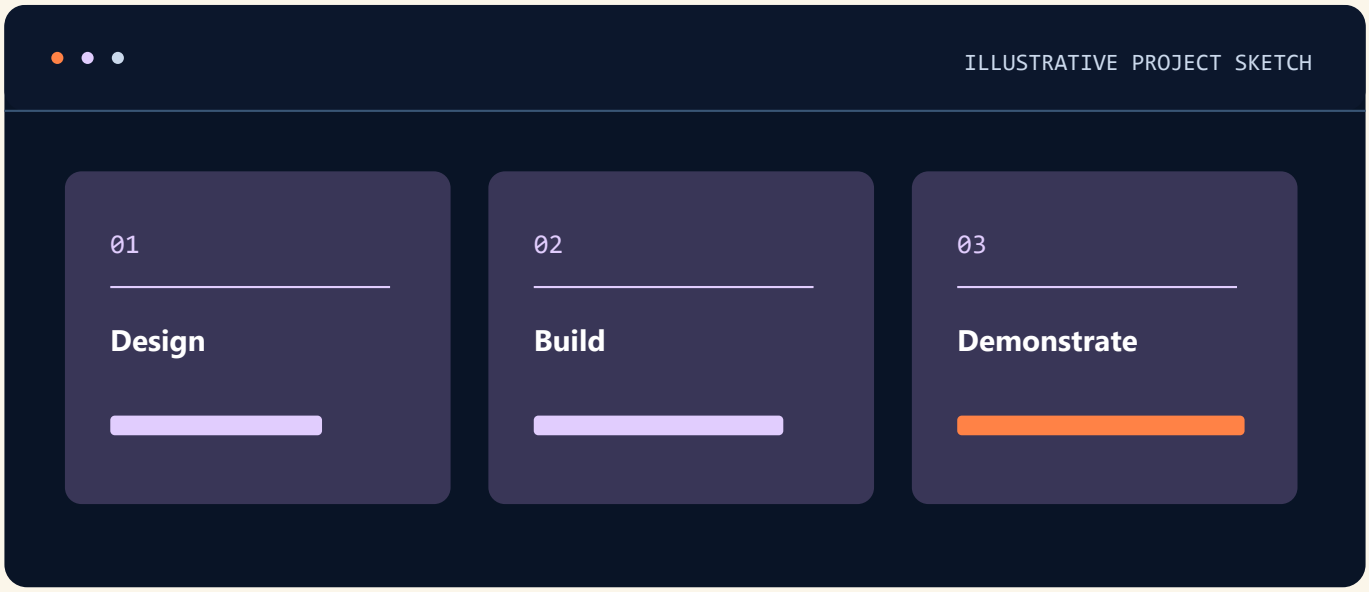
A portfolio brief, documented milestones and a demo or track-selection summary.

Diploma in Full Stack Development

Portfolio project

Multi-Role Booking Platform

Build a complete booking platform with independent user roles, database records, automated checks and deployment notes.



Scope the work

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SCAN FOR MAP

Check course details

Diploma in Full Stack Development

Course content

MODULES 01–02

01

Lessons & practice

- Web design
- JavaScript
- Git foundations

HANDS-ON Build a responsive page and document changes with Git.

02

Lessons & practice

- Component-driven frontend
- State
- Routing

HANDS-ON Connect reusable frontend components, routes and shared state.

Diploma in Full Stack Development

Course content

MODULES 03–04

03

Lessons & practice

- Backend services
- Auth
- REST design

HANDS-ON — Build validated REST endpoints and verify access rules.

04

Lessons & practice

- SQL
- NoSQL data modelling

HANDS-ON — Model related SQL records and compare them with a document representation.

Diploma in Full Stack Development

Course content

MODULES 05–06

05

Lessons & practice

- Test coverage
- CI
- Application deployment

HANDS-ON Automate key tests and build and deploy a practice release.

06

Lessons & practice

- Integrated capstone
- Portfolio presentation

HANDS-ON Demonstrate a complete booking flow with a README and test evidence.

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DIPLOMA PROGRAMS

Diploma in Data Science & AI

SAMPLE PROJECT

End-to-End Forecasting Study



COURSE FEE

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Diploma in Data Science & AI

Core concepts



01

Python, SQL, statistics and exploratory analysis

02

Data cleaning, feature engineering and visualisation

03

Regression, classification and clustering

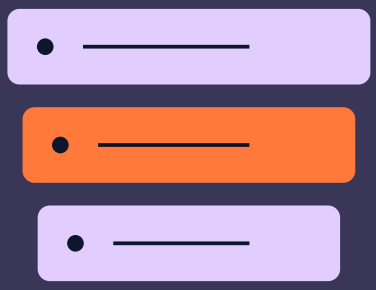
Scope the work

List the deliverables and identify which skills each one demonstrates.

Diploma in Data Science & AI

Applied skills

- **Design**
- **Build**
- **Demonstrate**



04 Deep learning, natural language and responsible AI

05 Validation, interpretation and deployment concepts

06 Data portfolio and model evaluation capstone

PROJECT DELIVERABLES

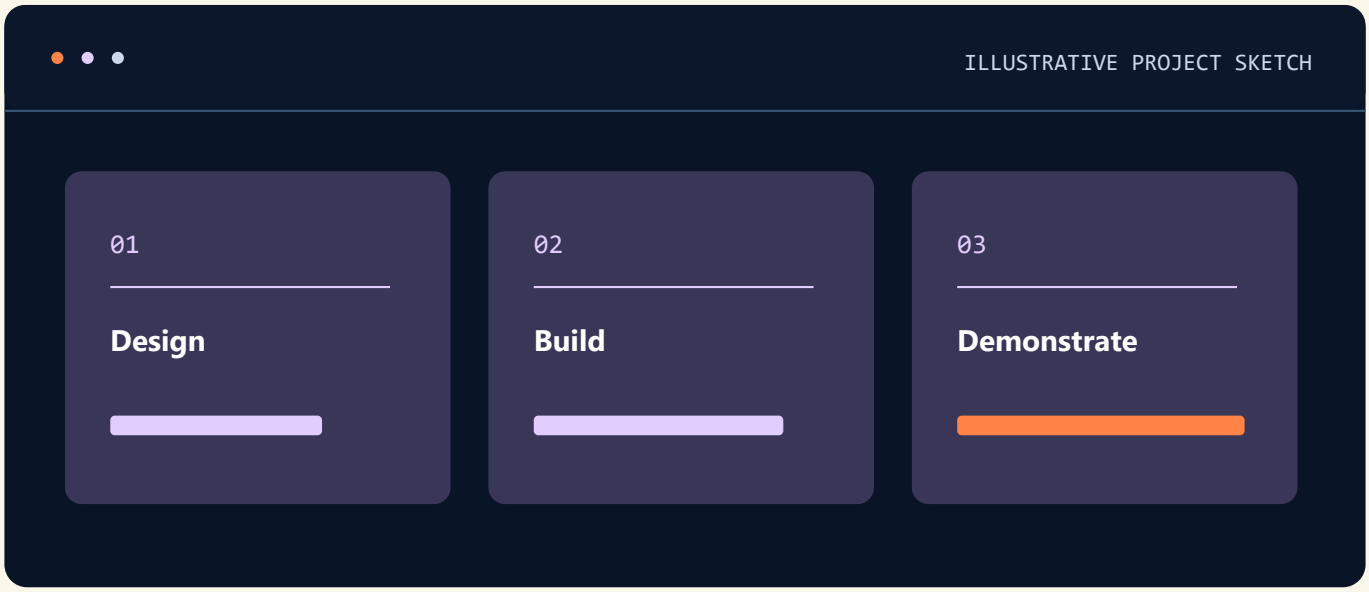
A portfolio brief, documented milestones and a demo or track-selection summary.

Diploma in Data Science & AI

Portfolio project

End-to-End Forecasting Study

Compare forecasting models on a dataset, evaluate future-period results and publish a reproducible analysis.



Scope the work

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Diploma in Data Science & AI

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SCAN FOR MAP

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Diploma in Data Science & AI

Course content

MODULES 01–02

01

Lessons & practice

- Python
- SQL
- Statistics
- Exploratory analysis

HANDS-ON Use Python and SQL to explore an initial question and report a baseline metric.

02

Lessons & practice

- Data cleaning
- Feature engineering
- Visualisation

HANDS-ON Clean records, construct features and compare visual summaries.

Diploma in Data Science & AI

Course content

MODULES 03–04

03

Lessons & practice

- Regression
- Classification
- Clustering

HANDS-ON

Train baseline regression or classification models and interpret a cluster grouping.

04

Lessons & practice

- Deep learning
- Natural language
- Responsible AI

HANDS-ON

Compare example neural and language-model tasks and identify responsible review steps.

Diploma in Data Science & AI

Course content

MODULES 05–06

05

Lessons & practice

- Validation
- Interpretation
- Deployment concepts

HANDS-ON

Evaluate models on held-out data and document limitations and deployment assumptions.

06

Lessons & practice

- Data portfolio
- Model evaluation capstone

HANDS-ON

Publish a reproducible case study with results and a practical recommendation.

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DIPLOMA PROGRAMS

Diploma in Python Programming

SAMPLE PROJECT

Document Processing Toolkit



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Diploma in Python Programming

Core concepts



01	Python fundamentals, functions and package environments
02	Collections, OOP, exceptions and debugging
03	Files, CSV, JSON, APIs and SQL basics

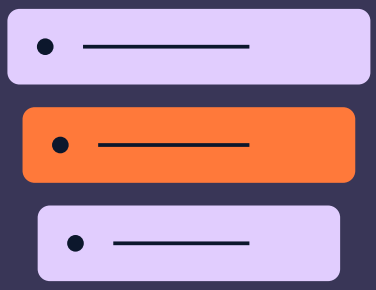
Scope the work

List the deliverables and identify which skills each one demonstrates.

Diploma in Python Programming

Applied skills

- **Design**
- **Build**
- **Demonstrate**



04 Type hints, testing and reusable module design

05 Automation, data workflows and web fundamentals

06 Capstone packaging and project documentation

PROJECT DELIVERABLES

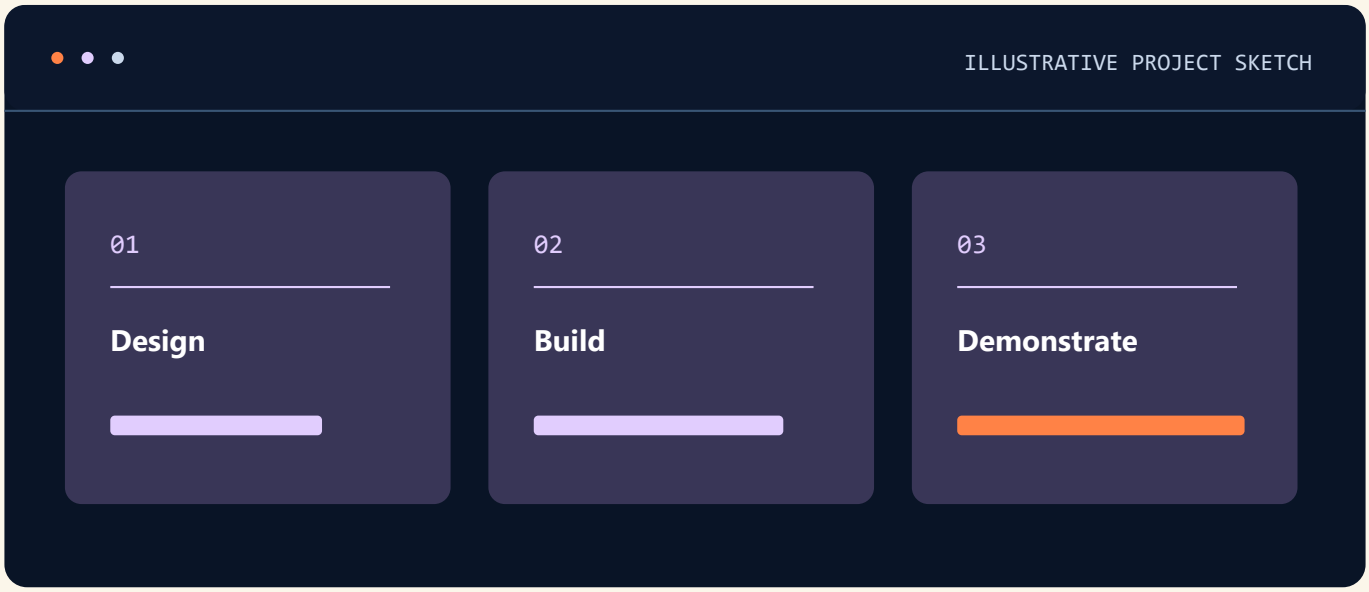
A portfolio brief, documented milestones and a demo or track-selection summary.

Diploma in Python Programming

Portfolio project

Document Processing Toolkit

Build a Python command-line tool that reads structured files, generates reports and handles invalid inputs.



Scope the work

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Diploma in Python Programming

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SCAN FOR MAP

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Diploma in Python Programming

Course content

MODULES 01–02

01

Lessons & practice

- Python fundamentals
- Functions
- Package environments

HANDS-ON

Build a Python script using reusable functions and an isolated environment.

02

Lessons & practice

- Collections
- OOP
- Exceptions
- Debugging

HANDS-ON

Model records with classes and handle a failed operation with useful feedback.

Diploma in Python Programming

Course content

MODULES 03–04

03

Lessons & practice

- Files
- CSV
- JSON
- APIs
- SQL basics

HANDS-ON Read CSV and JSON, query SQL and call a sample API.

04

Lessons & practice

- Type hints
- Testing
- Reusable module design

HANDS-ON Refactor code into tested modules and add useful type hints.

Diploma in Python Programming

Course content

MODULES 05–06

05

Lessons & practice

- Automation
- Data workflows
- Web fundamentals

HANDS-ON Automate a practice data task and expose its result in a simple web workflow.

06

Lessons & practice

- Capstone packaging
- Project documentation

HANDS-ON Package a documented tool, sample inputs and repeatable tests.

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DIPLOMA PROGRAMS

Diploma in Java Programming

SAMPLE PROJECT

Training Centre Administration System



COURSE FEE

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Diploma in Java Programming

Core concepts



01	Java language, object-oriented design and collections
02	Exceptions, streams, generics and file I/O
03	SQL, JDBC and transaction handling

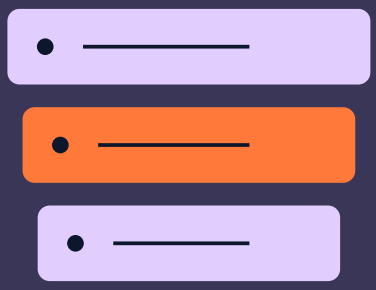
Scope the work

List the deliverables and identify which skills each one demonstrates.

Diploma in Java Programming

Applied skills

- **Design**
- **Build**
- **Demonstrate**



04	Java web foundations, Servlets and JSP
05	Spring Boot, REST APIs and JPA concepts
06	Unit testing, capstone and interview practice

PROJECT DELIVERABLES

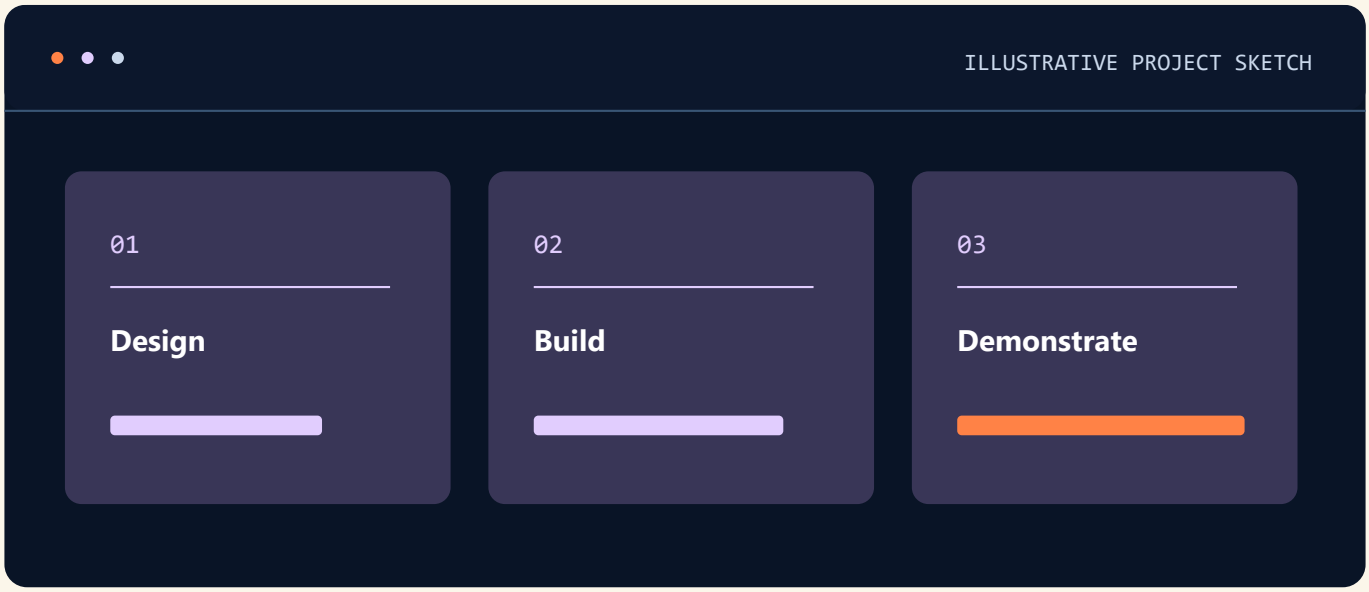
A portfolio brief, documented milestones and a demo or track-selection summary.

Diploma in Java Programming

Portfolio project

Training Centre Administration System

Build a Java training administration app with reusable business rules and reliable SQL-backed records.



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Diploma in Java Programming

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SCAN FOR MAP

Check course details

Diploma in Java Programming

Course content

MODULES 01–02

01

Lessons & practice

- Java language
- Object-oriented design
- Collections

HANDS-ON — Build a Java console module with classes, interfaces and collections.

02

Lessons & practice

- Exceptions
- Streams
- Generics
- File I/O

HANDS-ON — Process a file with streams and handle a malformed record.

Diploma in Java Programming

Course content

MODULES 03–04

03

Lessons & practice

- SQL
- JDBC
- Transaction handling

HANDS-ON Persist data through JDBC and demonstrate rollback on a failed update.

04

Lessons & practice

- Java web foundations
- Servlets
- JSP

HANDS-ON Create a Servlet/JSP form and trace it to the Java service.

Diploma in Java Programming

Course content

MODULES 05–06

05

Lessons & practice

- Spring Boot
- REST APIs
- JPA concepts

HANDS-ON Build a Spring Boot endpoint and map records using JPA.

06

Lessons & practice

- Unit testing
- Capstone
- Interview practice

HANDS-ON Run unit tests and present the application and data model in a mock interview.

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DIPLOMA PROGRAMS

Diploma in Digital Marketing

SAMPLE PROJECT

Multi-Channel Launch Campaign



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Diploma in Digital Marketing

Core concepts



01	Marketing strategy, audience and positioning
02	SEO, local search and content planning
03	Google Ads, social ads and campaign budgets

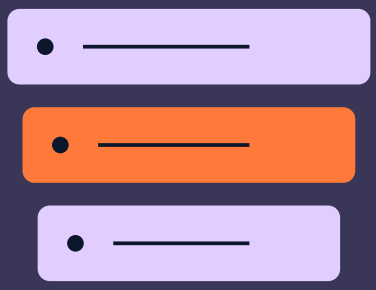
Scope the work

List the deliverables and identify which skills each one demonstrates.

Diploma in Digital Marketing

Applied skills

- **Design**
- **Build**
- **Demonstrate**



04 Email workflows, lifecycle and e-commerce

05 Tracking, attribution and campaign optimisation

06 Campaign portfolio and performance presentation

PROJECT DELIVERABLES

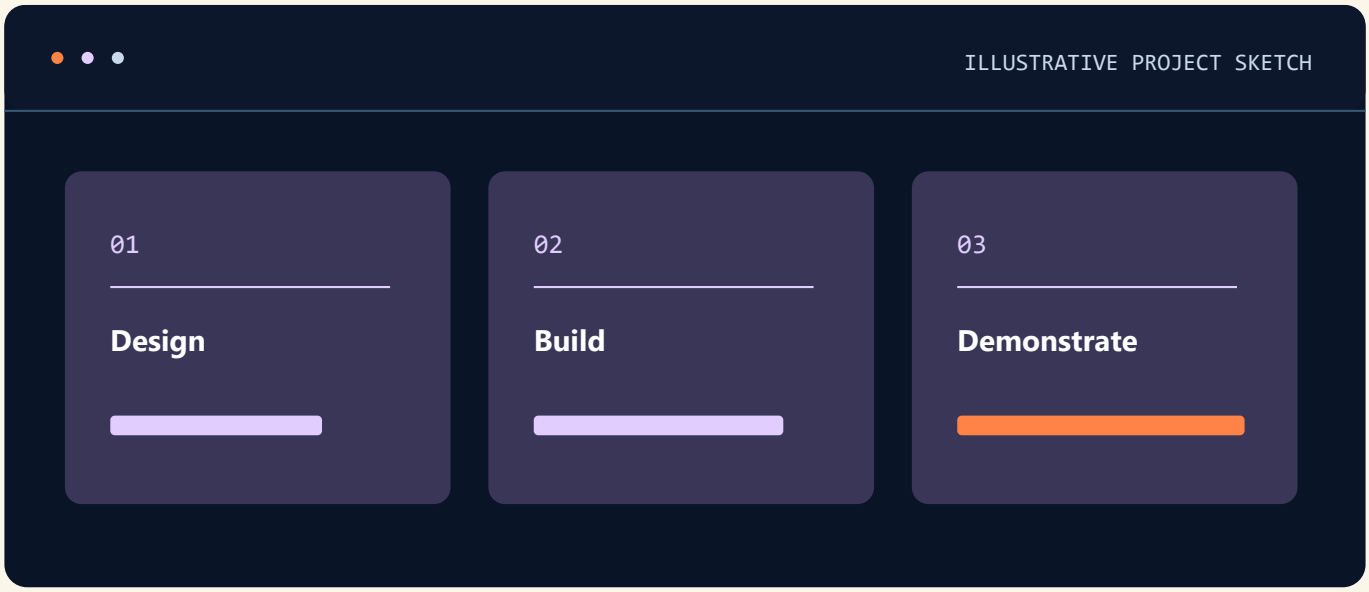
A portfolio brief, documented milestones and a demo or track-selection summary.

Diploma in Digital Marketing

Portfolio project

Multi-Channel Launch Campaign

Plan a complete launch with SEO, paid media, email and a results dashboard for a sample brand.



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Diploma in Digital Marketing

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SCAN FOR MAP

Check course details

Diploma in Digital Marketing

Course content

MODULES 01–02

01

Lessons & practice

- Marketing strategy
- Audience
- Positioning

HANDS-ON Define positioning, audiences and a measurable launch objective.

02

Lessons & practice

- SEO
- Local search
- Content planning

HANDS-ON Build a search and content plan for a local business.

Diploma in Digital Marketing

Course content

MODULES 03–04

03

Lessons & practice

- Google Ads
- Social ads
- Campaign budgets

HANDS-ON Compare search and social ads and justify a sample budget split.

04

Lessons & practice

- Email workflows
- Lifecycle
- E-commerce

HANDS-ON Write a consent-based email series and map it to an e-commerce journey.

Diploma in Digital Marketing

Course content

MODULES 05–06

05

Lessons & practice

- Tracking
- Attribution
- Campaign optimisation

HANDS-ON Track sample conversions and interpret campaign performance by channel.

06

Lessons & practice

- Campaign portfolio
- Performance presentation

HANDS-ON Present a launch portfolio with assets, budget and results review.

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DIPLOMA PROGRAMS

Diploma in Cyber Security

SAMPLE PROJECT

Security Operations Capstone



COURSE FEE

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Diploma in Cyber Security

Core concepts



01	Networking, operating systems and identity fundamentals
02	Security governance, risk and control mapping
03	Secure configuration and vulnerability management

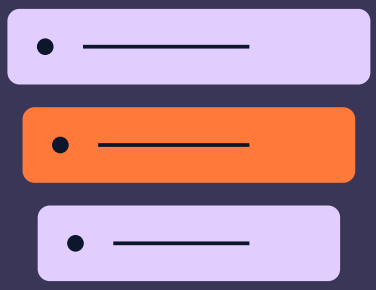
Scope the work

List the deliverables and identify which skills each one demonstrates.

Diploma in Cyber Security

Applied skills

- **Design**
- **Build**
- **Demonstrate**



04 Logging, monitoring and incident triage

05 Network defence and access-control verification

06 Recovery planning and security portfolio

PROJECT DELIVERABLES

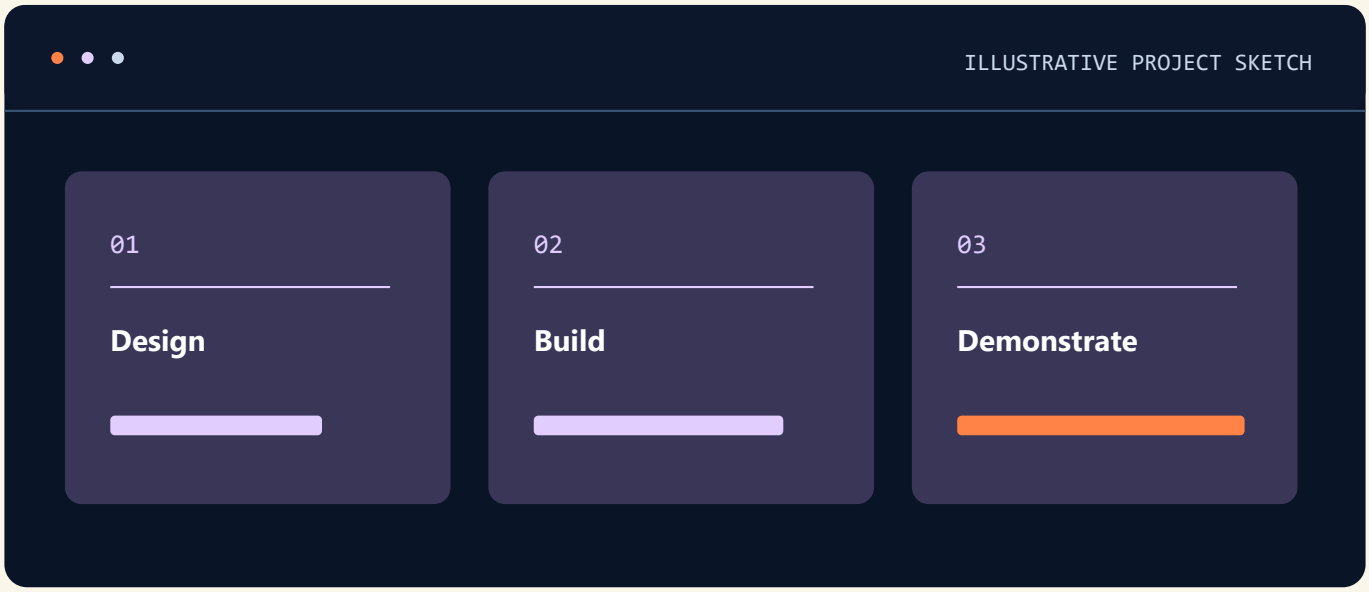
A portfolio brief, documented milestones and a demo or track-selection summary.

Diploma in Cyber Security

Portfolio project

Security Operations Capstone

Assess a synthetic organisation, build a hardening checklist and present an incident response tabletop exercise.



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SCAN FOR MAP

Check course details

Diploma in Cyber Security

Course content

MODULES 01–02

01

Lessons & practice

- Networking
- Operating systems
- Identity fundamentals

HANDS-ON Draw trust boundaries and identify important network and identity controls.

02

Lessons & practice

- Security governance
- Risk
- Control mapping

HANDS-ON Map common risks to security policies and assign control owners.

Diploma in Cyber Security

Course content

MODULES 03–04

03

Lessons & practice

- Secure configuration
- Vulnerability management

HANDS-ON Review supplied findings and create a patch and hardening plan.

04

Lessons & practice

- Logging
- Monitoring
- Incident triage

HANDS-ON Triage a synthetic alert and write an evidence-based incident timeline.

Diploma in Cyber Security

Course content

MODULES 05–06

05

Lessons & practice

- Network defence
- Access-control verification

HANDS-ON Verify segmentation and access policy against the expected behaviour.

06

Lessons & practice

- Recovery planning
- Security portfolio

HANDS-ON Run a recovery tabletop and present a security portfolio with validation evidence.

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DIPLOMA PROGRAMS

Diploma in Cloud Computing

SAMPLE PROJECT

Cloud-Native Service Delivery



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Diploma in Cloud Computing

Core concepts



01

Cloud architecture, Linux and network fundamentals

02

IAM, compute, storage and managed data services

03

Infrastructure as code and version control

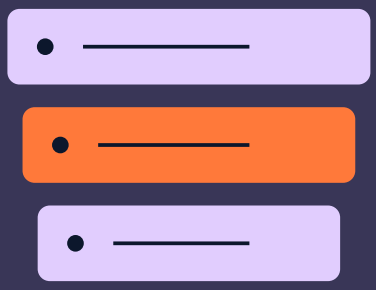
Scope the work

List the deliverables and identify which skills each one demonstrates.

Diploma in Cloud Computing

Applied skills

- **Design**
- **Build**
- **Demonstrate**



04 Docker, orchestration and CI/CD practices

05 Monitoring, cost controls and recovery

06 Deployment capstone and operational runbook

PROJECT DELIVERABLES

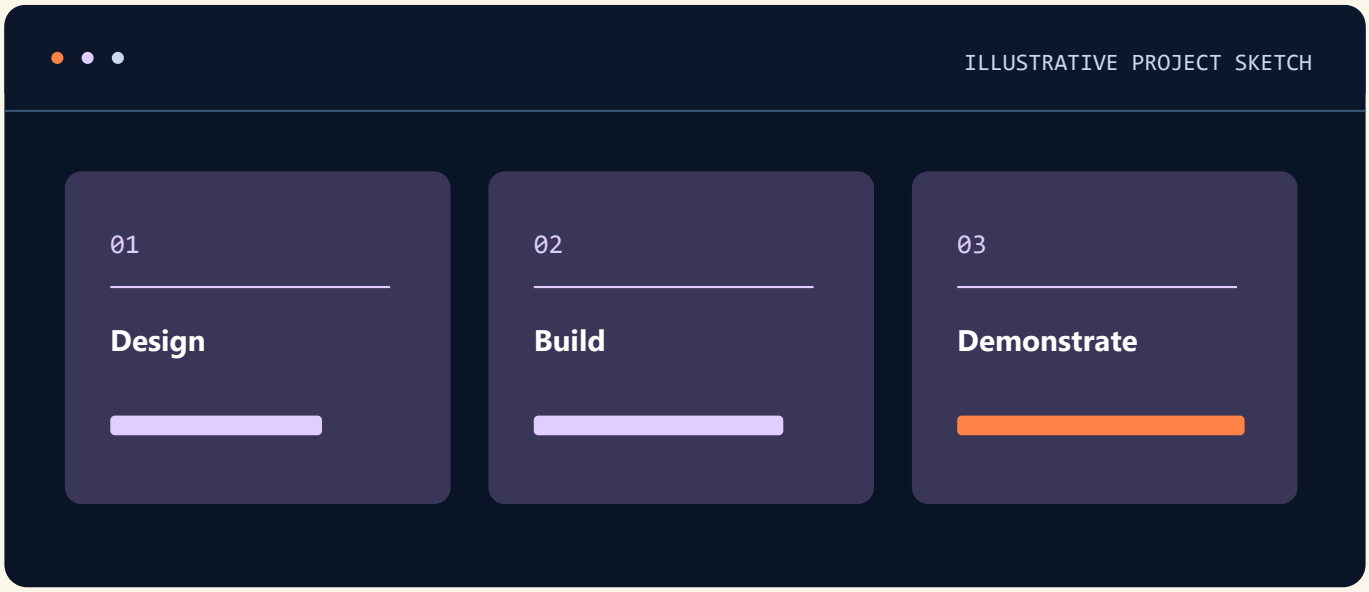
A portfolio brief, documented milestones and a demo or track-selection summary.

Diploma in Cloud Computing

Portfolio project

Cloud-Native Service Delivery

Build a deployable demo service with infrastructure descriptions, recovery exercises and cost visibility.



Scope the work

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SCAN FOR MAP

Check course details

Diploma in Cloud Computing

Course content

MODULES 01–02

01

Lessons & practice

- Cloud architecture
- Linux
- Network fundamentals

HANDS-ON Sketch a cloud workload and record its Linux and networking dependencies.

02

Lessons & practice

- IAM
- Compute
- Storage
- Managed data services

HANDS-ON Design access roles and choose compute, storage and data services.

Diploma in Cloud Computing

Course content

MODULES 03–04

03

Lessons & practice

- Infrastructure as code
- Version control

HANDS-ON Version infrastructure configuration and review a change before applying it.

04

Lessons & practice

- Docker
- Orchestration
- CI/CD practices

HANDS-ON Package a practice app and deploy it through a tested pipeline.

Diploma in Cloud Computing

Course content

MODULES 05–06

05

Lessons & practice

- Monitoring
- Cost controls
- Recovery

HANDS-ON Define a health check, a budget threshold and a recovery test.

06

Lessons & practice

- Deployment capstone
- Operational runbook

HANDS-ON Deliver an architecture diagram, deployment demo and operations runbook.

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DIPLOMA PROGRAMS

Diploma in Data Analytics

SAMPLE PROJECT

Retail Analytics Portfolio



COURSE FEE

Fee on enquiry

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Diploma in Data Analytics

Core concepts



01 Spreadsheet modelling, validation and PivotTables

02 SQL data extraction, joins and reporting models

03 Python, pandas and data quality checks

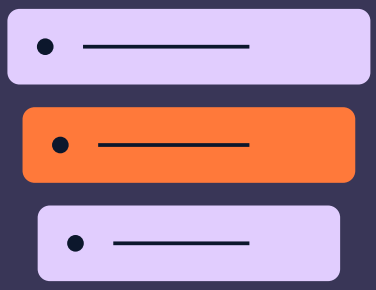
Scope the work

List the deliverables and identify which skills each one demonstrates.

Diploma in Data Analytics

Applied skills

- **Design**
- **Build**
- **Demonstrate**



04 Visualisation, statistics and exploratory analysis

05 Power Query, Power BI modelling and DAX

06 Business recommendations and portfolio delivery

PROJECT DELIVERABLES

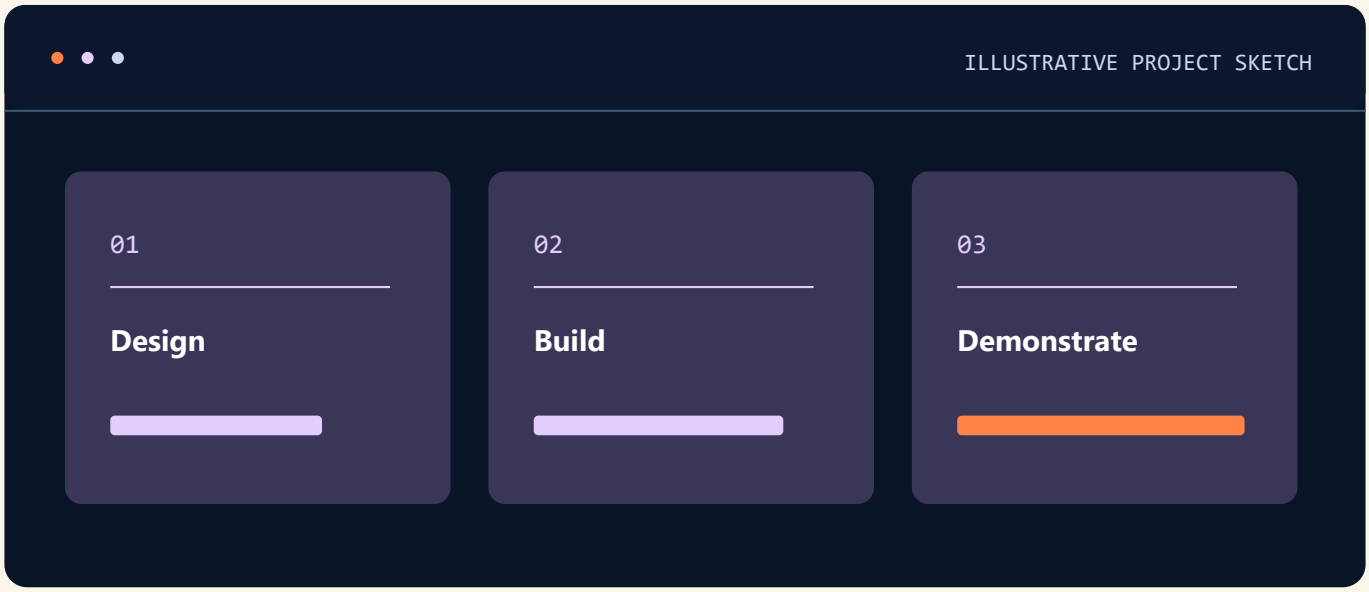
A portfolio brief, documented milestones and a demo or track-selection summary.

Diploma in Data Analytics

Portfolio project

Retail Analytics Portfolio

Combine a cleaned workbook, SQL reports, Python analysis and an interactive dashboard into a portfolio case.



Scope the work

List the deliverables and identify which skills each one demonstrates.

Review milestones

Record completed work, feedback and the changes made before the demonstration.

A portfolio brief, documented milestones and a demo or track-selection summary.

Diploma in Data Analytics

Course fees

COURSE FEE

Fee on enquiry

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SCAN FOR MAP

Check course details

Diploma in Data Analytics

Course content

MODULES 01–02

01

Lessons & practice

- Spreadsheet modelling
- Validation
- PivotTables

HANDS-ON

Create a validated workbook and a PivotTable summarising retail data.

02

Lessons & practice

- SQL data extraction
- Joins
- Reporting models

HANDS-ON

Build SQL joins and reporting tables and reconcile grouped totals.

Diploma in Data Analytics

Course content

MODULES 03–04

03

Lessons & practice

- Python
- Pandas
- Data quality checks

HANDS-ON Clean records with pandas and capture reusable data-quality checks.

04

Lessons & practice

- Visualisation
- Statistics
- Exploratory analysis

HANDS-ON Compare charts and report a distribution or trend that answers the question.

Diploma in Data Analytics

Course content

MODULES 05–06

05

Lessons & practice

- Power Query
- Power BI modelling
- DAX

HANDS-ON — Create Power BI measures and test filters against a trusted total.

06

Lessons & practice

- Business recommendations
- Portfolio delivery

HANDS-ON — Present a portfolio case with the report, verified KPIs and a business recommendation.

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DIPLOMA PROGRAMS

Software Engineering Diploma

SAMPLE PROJECT

Software Engineering Capstone



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Software Engineering Diploma

Core concepts



01	Programming, algorithms, OOP and computer science foundations
02	Responsive frontend interfaces, JavaScript and components
03	Backend APIs, authentication and SQL/NoSQL data modelling

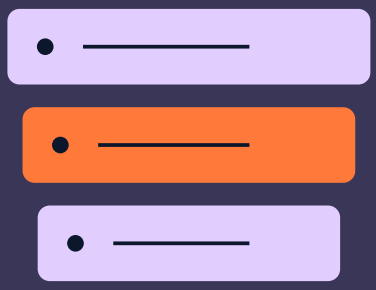
Scope the work

List the deliverables and identify which skills each one demonstrates.

Software Engineering Diploma

Applied skills

- **Design**
- **Build**
- **Demonstrate**



04	Git, development lifecycles, code review and quality assurance
05	AI-assisted development, cloud deployment, Docker and CI/CD
06	Capstone delivery, portfolio presentation and internship preparation

PROJECT DELIVERABLES

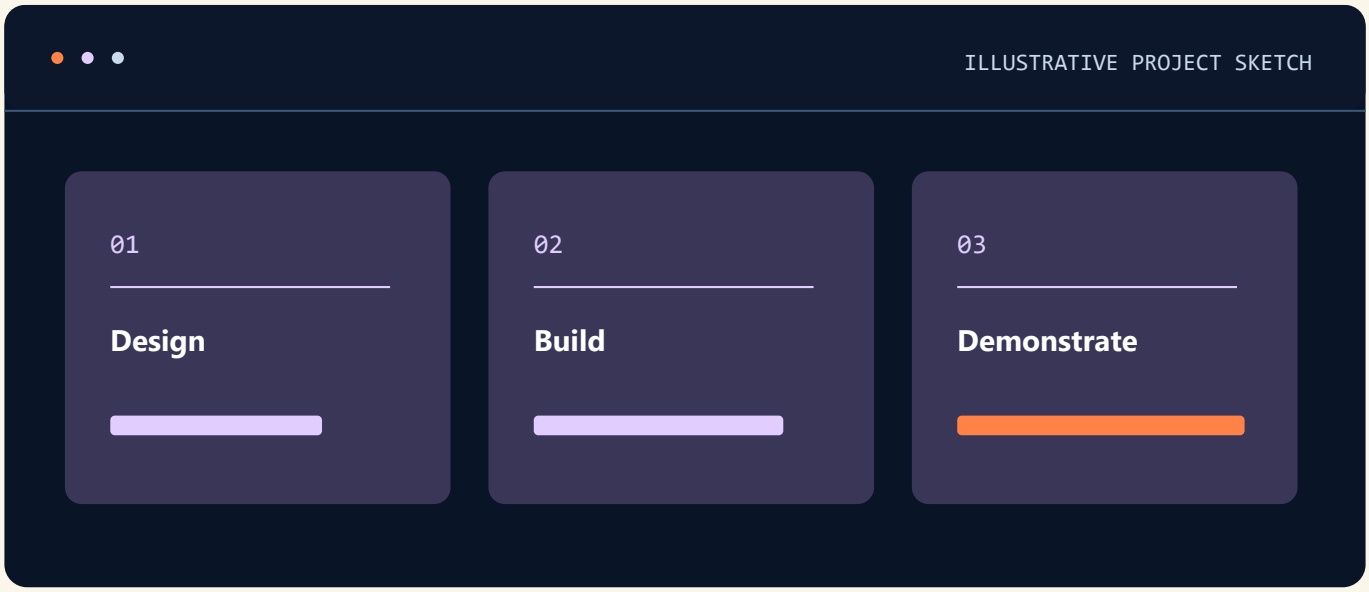
A portfolio brief, documented milestones and a demo or track-selection summary.

Software Engineering Diploma

Portfolio project

Software Engineering Capstone

Take a team application from requirements and data design through testing, deployment and a portfolio demonstration.



Scope the work

List the deliverables and identify which skills each one demonstrates.

Review milestones

Record completed work, feedback and the changes made before the demonstration.

A portfolio brief, documented milestones and a demo or track-selection summary.

Software Engineering Diploma

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SCAN FOR MAP

Check course details

Software Engineering Diploma

Course content

MODULES 01–02

01

Lessons & practice

- Programming
- Algorithms
- OOP
- Computer science foundations

HANDS-ON

Write and test a small application using algorithms and object-oriented design.

02

Lessons & practice

- Responsive frontend interfaces
- JavaScript
- Components

HANDS-ON

Build a reusable responsive frontend with state and accessible controls.

Software Engineering Diploma

Course content

MODULES 03–04

03

Lessons & practice

- Backend APIs
- Authentication
- SQL/NoSQL data modelling

HANDS-ON Connect backend data models and authenticated endpoints to the interface.

04

Lessons & practice

- Git
- Development lifecycles
- Code review
- Quality assurance

HANDS-ON Review a change in Git and apply automated quality checks.

Software Engineering Diploma

Course content

MODULES 05–06

05

Lessons & practice

- AI-assisted development
- Cloud deployment
- Docker
- CI/CD

HANDS-ON

Use human-reviewed AI assistance and practise container deployment through CI/CD.

06

Lessons & practice

- Capstone delivery
- Portfolio presentation
- Internship preparation

HANDS-ON

Demonstrate a capstone and hand over project documentation and portfolio evidence.

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TRAINING & INTERNSHIP

Internship Programs

SAMPLE PROJECT

Internship Project Portfolio



COURSE FEE

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Internship Programs

Core concepts



01

Track selection and project scoping

02

Tool setup, collaboration and version control

03

Guided exercises and milestone planning

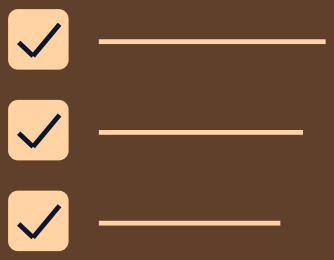
Set a milestone

Agree on a deliverable and define what a successful demonstration includes.

Internship Programs

Applied skills

- **Brief**
- **Review**
- **Handover**



04 Implementation and mentor feedback

05 Quality checks and documentation

06 Final demonstration and portfolio reflection

PROJECT DELIVERABLES

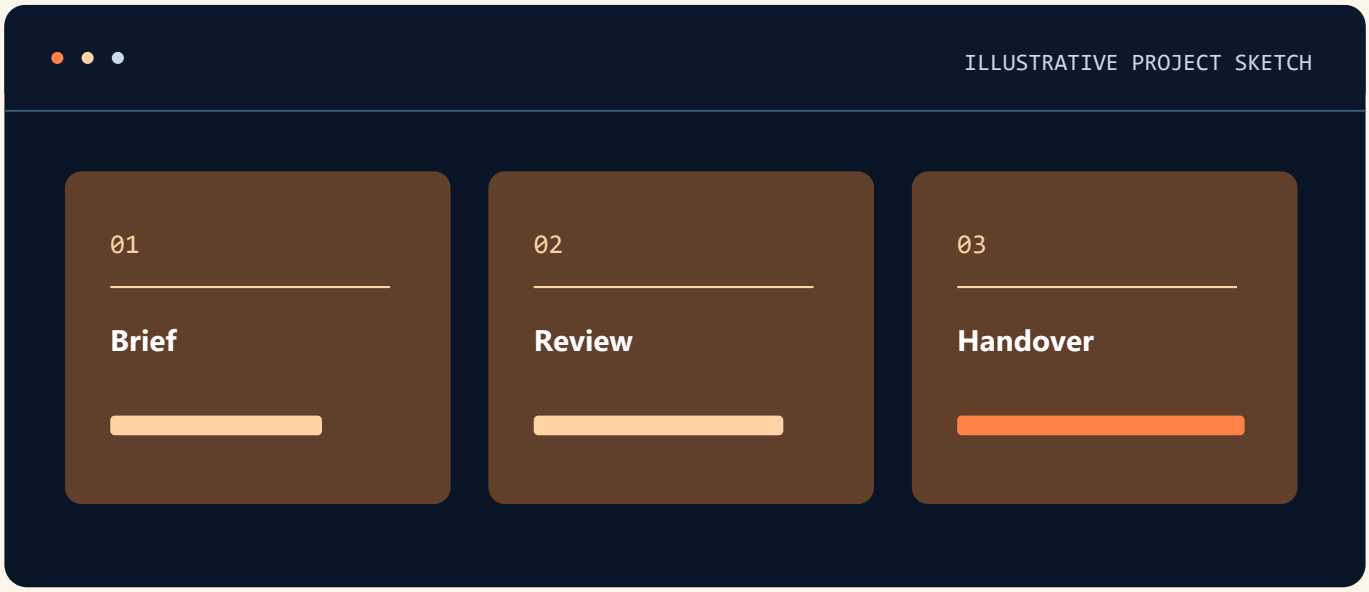
A project brief, milestone notes and a handover or demonstration.

Internship Programs

Portfolio project

Internship Project Portfolio

Choose a training track, document weekly progress and present a working project with a short retrospective.



Set a milestone

Agree on a deliverable and define what a successful demonstration includes.

Prepare handover

Record decisions, open issues and how someone else can continue the work.

A project brief, milestone notes and a handover or demonstration.

Internship Programs

Course fees

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SCAN FOR MAP

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Internship Programs

Course content

MODULES 01–02

01

Lessons & practice

- Track selection
- Project scoping

HANDS-ON

Choose a track and write a project brief with measurable goals.

02

Lessons & practice

- Tool setup
- Collaboration
- Version control

HANDS-ON

Set up tools and record early work in version control.

Internship Programs

Course content

MODULES 03–04

03

Lessons & practice

- Guided exercises
- Milestone planning

HANDS-ON Complete a starter exercise and schedule milestone deliverables.

04

Lessons & practice

- Implementation
- Mentor feedback

HANDS-ON Implement a small feature and act on specific feedback.

Internship Programs

Course content

MODULES 05–06

05

Lessons & practice

- Quality checks
- Documentation

HANDS-ON

Run checks and document how another learner can continue the project.

06

Lessons & practice

- Final demonstration
- Portfolio reflection

HANDS-ON

Present a demonstration and write a portfolio reflection supported by evidence.

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TRAINING & INTERNSHIP

Summer Internship

SAMPLE PROJECT

Summer Project Sprint



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Summer Internship

Core concepts



01

Orientation, track selection and project goals

02

Skill drills and development environment setup

03

Project planning and version-control basics

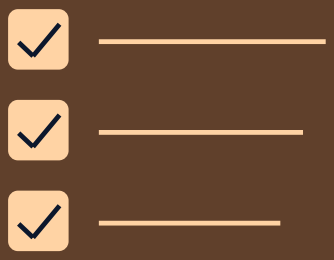
Set a milestone

Agree on a deliverable and define what a successful demonstration includes.

Summer Internship

Applied skills

- **Brief**
- **Review**
- **Handover**



04 Implementation sprints and review

05 Testing, debugging and feedback

06 Demo, README and portfolio summary

PROJECT DELIVERABLES

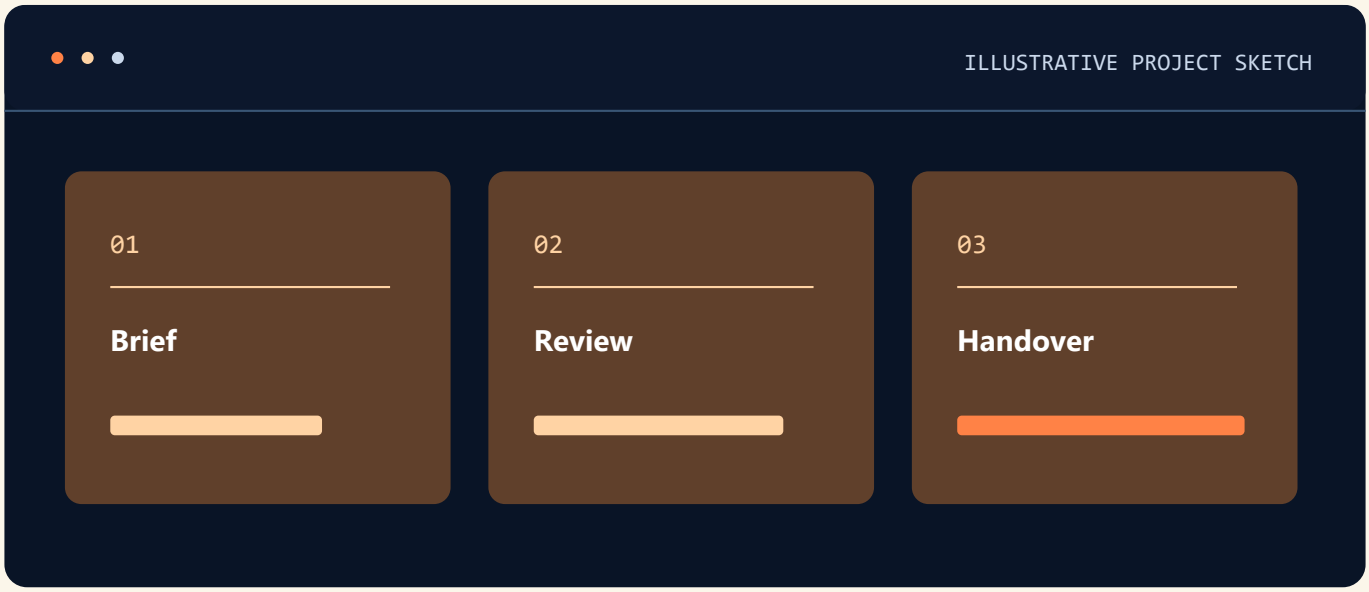
A project brief, milestone notes and a handover or demonstration.

Summer Internship

Portfolio project

Summer Project Sprint

Define a small deliverable, complete two practice milestones and present a working demo at the end.



Set a milestone

Agree on a deliverable and define what a successful demonstration includes.

Prepare handover

Record decisions, open issues and how someone else can continue the work.

A project brief, milestone notes and a handover or demonstration.

Summer Internship

Course fees

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Summer Internship

Course content

MODULES 01–02

01

Lessons & practice

- Orientation
- Track selection
- Project goals

HANDS-ON

Set a summer project goal and agree on the first deliverable.

02

Lessons & practice

- Skill drills
- Development environment setup

HANDS-ON

Complete a tool setup exercise and verify a runnable workflow.

Summer Internship

Course content

MODULES 03–04

03

Lessons & practice

- Project planning
- Version-control basics

HANDS-ON Break the brief into tasks and record changes in version control.

04

Lessons & practice

- Implementation sprints
- Review

HANDS-ON Demonstrate a working feature and respond to review feedback.

Summer Internship

Course content

MODULES 05–06

05

Lessons & practice

- Testing
- Debugging
- Feedback

HANDS-ON Test one success path and one edge case and fix a defect.

06

Lessons & practice

- Demo
- README
- Portfolio summary

HANDS-ON Present the project with a concise README and portfolio summary.

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TRAINING & INTERNSHIP

Winter Internship

SAMPLE PROJECT

Winter Project Case Study



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Winter Internship

Core concepts



01

Skills review and selection of a project track

02

Environment setup and worked examples

03

Feature planning and task breakdown

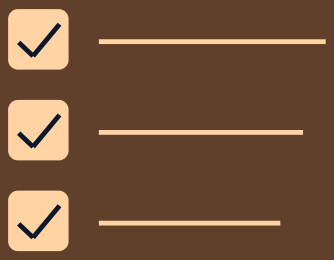
Set a milestone

Agree on a deliverable and define what a successful demonstration includes.

Winter Internship

Applied skills

- **Brief**
- **Review**
- **Handover**



04 Guided coding, analysis or design practice

05 Defect review and final refinements

06 Project demonstration and retrospective

PROJECT DELIVERABLES

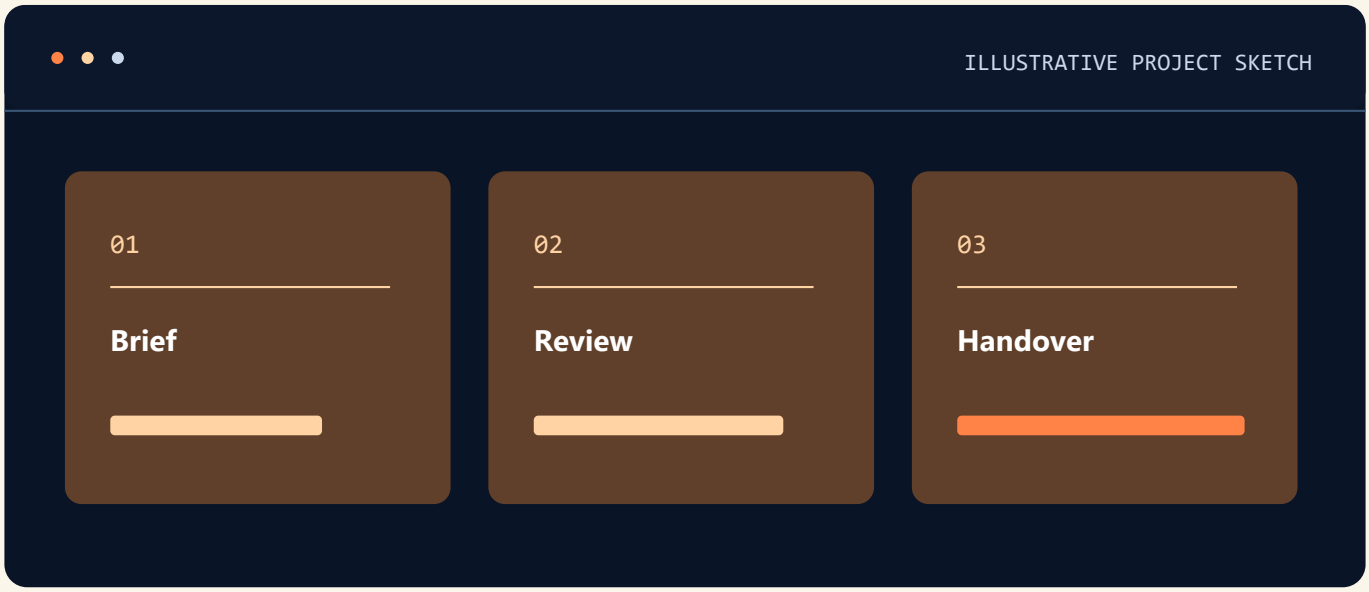
A project brief, milestone notes and a handover or demonstration.

Winter Internship

Portfolio project

Winter Project Case Study

Select a focused assignment, build a working prototype and document the decisions made during review.



Set a milestone

Agree on a deliverable and define what a successful demonstration includes.

Prepare handover

Record decisions, open issues and how someone else can continue the work.

A project brief, milestone notes and a handover or demonstration.

Winter Internship

Course fees

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SCAN FOR MAP

Check course details

Winter Internship

Course content

MODULES 01–02

01

Lessons & practice

- Skills review
- Selection of a project track

HANDS-ON List current skills and select a project track with a feasible scope.

02

Lessons & practice

- Environment setup
- Worked examples

HANDS-ON Set up the environment and reproduce a worked example.

Winter Internship

Course content

MODULES 03–04

03

Lessons & practice

- Feature planning
- Task breakdown

HANDS-ON Write acceptance criteria and break one feature into checkable tasks.

04

Lessons & practice

- Guided coding
- Analysis or design practice

HANDS-ON Complete a guided implementation or design exercise and capture evidence.

Winter Internship

Course content

MODULES 05–06

05

Lessons & practice

- Defect review
- Final refinements

HANDS-ON

Record a defect or usability issue and verify the improvement.

06

Lessons & practice

- Project demonstration
- Retrospective

HANDS-ON

Present the final prototype and write a retrospective with next steps.

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TRAINING & INTERNSHIP

Industrial Training

SAMPLE PROJECT

Industry Workflow Simulation



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Industrial Training

Core concepts



01

Requirement reading and acceptance criteria

02

Team workflow, version control and issue tracking

03

Implementation in the selected technical track

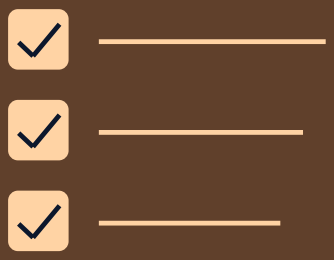
Set a milestone

Agree on a deliverable and define what a successful demonstration includes.

Industrial Training

Applied skills

- **Brief**
- **Review**
- **Handover**



04 Code or work review and change tracking

05 Quality checks, documentation and release preparation

06 Demonstration and professional communication

PROJECT DELIVERABLES

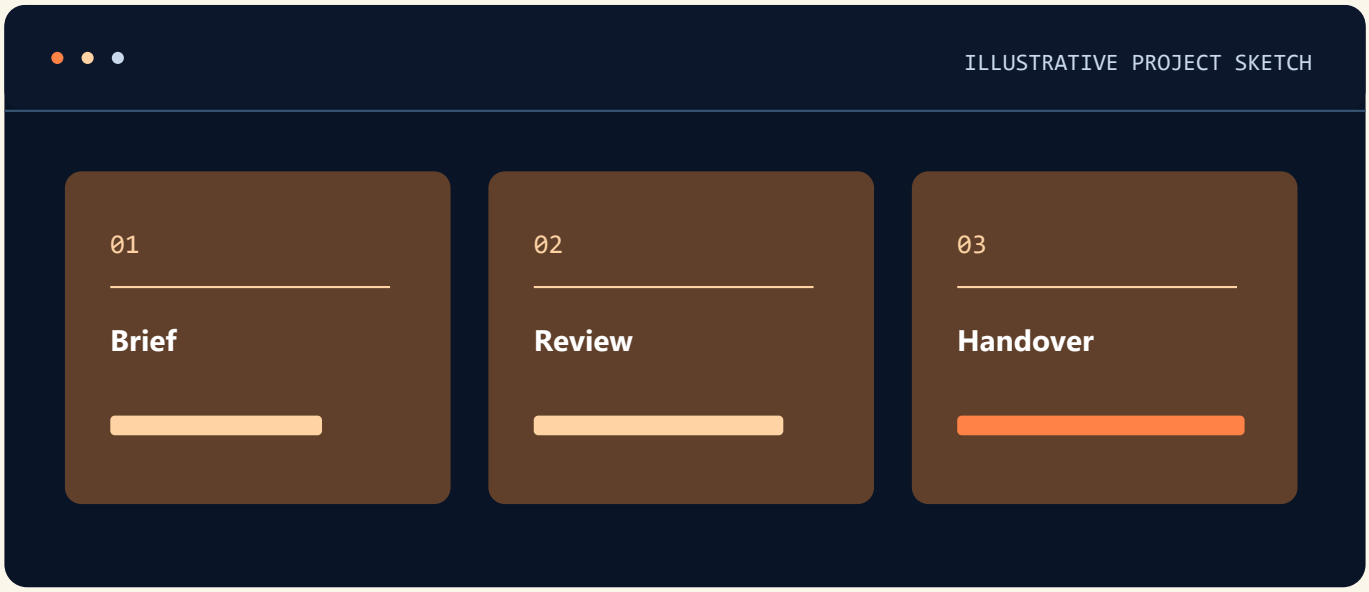
A project brief, milestone notes and a handover or demonstration.

Industrial Training

Portfolio project

Industry Workflow Simulation

Take a sample internal request through requirements, implementation, quality checks and a stakeholder handoff.



Set a milestone

Agree on a deliverable and define what a successful demonstration includes.

Prepare handover

Record decisions, open issues and how someone else can continue the work.

A project brief, milestone notes and a handover or demonstration.

Industrial Training

Course fees

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SCAN FOR MAP

Check course details

Industrial Training

Course content

MODULES 01–02

01

Lessons & practice

- Requirement reading
- Acceptance criteria

HANDS-ON Convert a sample internal request into measurable acceptance criteria.

02

Lessons & practice

- Team workflow
- Version control
- Issue tracking

HANDS-ON Use an issue board and version control to coordinate work.

Industrial Training

Course content

MODULES 03–04

03 Implementation in the selected technical track

Lessons & practice

HANDS-ON Implement a scoped feature following the selected track's tools.

04

Lessons & practice

- Code or work review
- Change tracking

HANDS-ON Review work, document decisions and track revisions.

Industrial Training

Course content

MODULES 05–06

05

Lessons & practice

- Quality checks
- Documentation
- Release preparation

HANDS-ON Run agreed quality checks and prepare a release or handoff note.

06

Lessons & practice

- Demonstration
- Professional communication

HANDS-ON Demonstrate the deliverable to a stakeholder and explain outstanding work.

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TRAINING & INTERNSHIP

Live Project Training

SAMPLE PROJECT

Client-Style Project Delivery



COURSE FEE

Fee on enquiry

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Live Project Training

Core concepts



01

Problem discovery and project brief review

02

Estimate tasks and define working milestones

03

Collaborative design and implementation

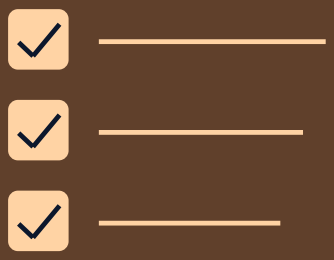
Set a milestone

Agree on a deliverable and define what a successful demonstration includes.

Live Project Training

Applied skills

- **Brief**
- **Review**
- **Handover**



04 Progress reviews, revisions and testing

05 Technical documentation and handover

06 Final demonstration and project explanation

PROJECT DELIVERABLES

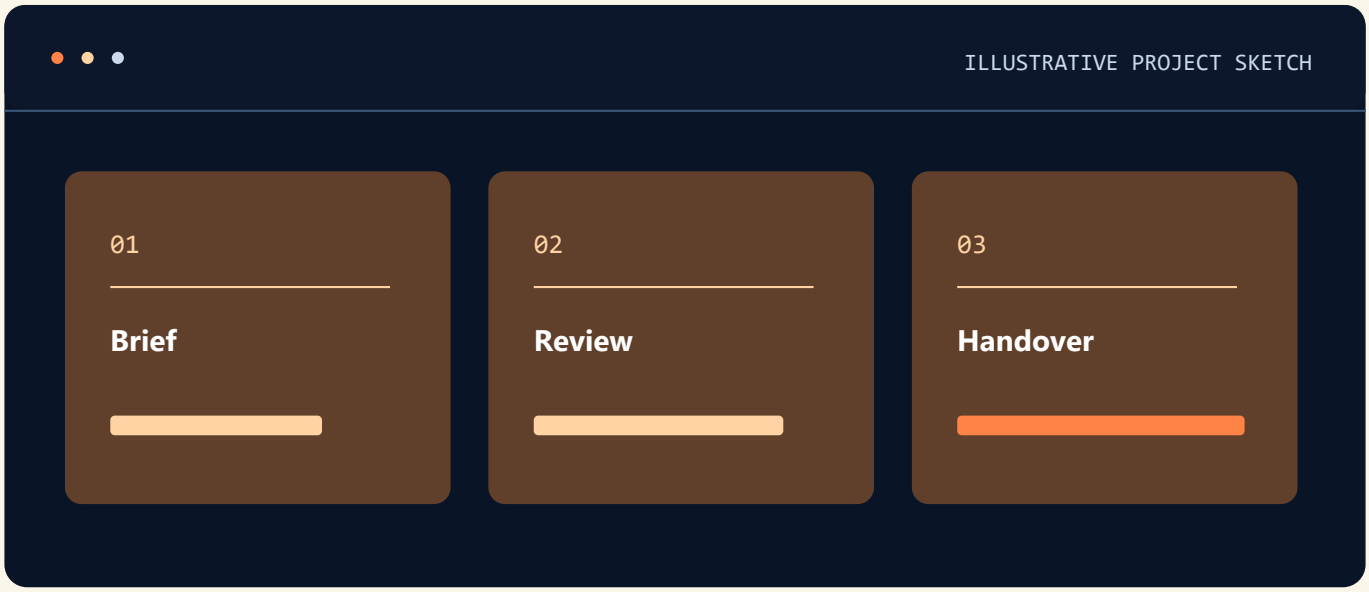
A project brief, milestone notes and a handover or demonstration.

Live Project Training

Portfolio project

Client-Style Project Delivery

Deliver a scoped feature from a sample brief, record issues and present evidence that it meets acceptance criteria.



Set a milestone

Agree on a deliverable and define what a successful demonstration includes.

Prepare handover

Record decisions, open issues and how someone else can continue the work.

A project brief, milestone notes and a handover or demonstration.

Live Project Training

Course fees

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SCAN FOR MAP

Check course details

Live Project Training

Course content

MODULES 01–02

01

Lessons & practice

- Problem discovery
- Project brief review

HANDS-ON

Extract the problem, audience and acceptance criteria from a sample client brief.

02

Lessons & practice

- Estimate tasks
- Define working milestones

HANDS-ON

Estimate tasks, track risks and agree on working milestones.

Live Project Training

Course content

MODULES 03–04

03

Lessons & practice

- Collaborative design
- Implementation

HANDS-ON Design and implement a small feature with peer review.

04

Lessons & practice

- Progress reviews
- Revisions
- Testing

HANDS-ON Show progress and verify a revision after feedback.

Live Project Training

Course content

MODULES 05–06

05

Lessons & practice

- Technical documentation
- Handover

HANDS-ON

Record configuration, ownership and instructions for handover.

06

Lessons & practice

- Final demonstration
- Project explanation

HANDS-ON

Demonstrate the completed workflow and answer questions about decisions.

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TRAINING & INTERNSHIP

Final Year Projects

SAMPLE PROJECT

Final-Year Project Portfolio



COURSE FEE

Fee on enquiry

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Final Year Projects

Core concepts



01 Topic selection and problem framing

02 Scope, research and feasibility checks

03 System, data or interface design

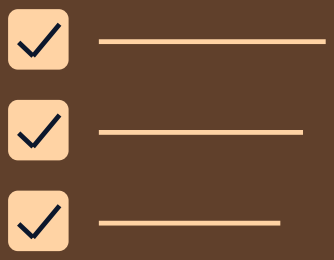
Set a milestone

Agree on a deliverable and define what a successful demonstration includes.

Final Year Projects

Applied skills

- **Brief**
- **Review**
- **Handover**



04 Prototype implementation and milestone reviews

05 Evaluation, testing and report writing

06 Presentation, viva preparation and demo rehearsals

PROJECT DELIVERABLES

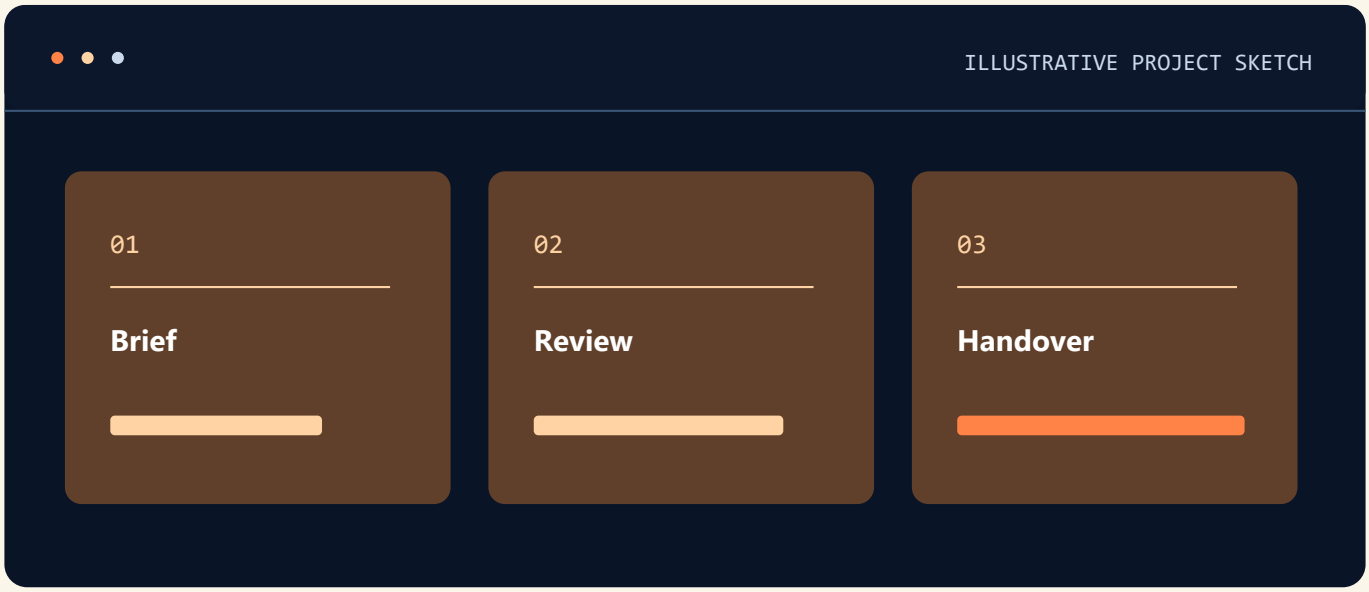
A project brief, milestone notes and a handover or demonstration.

Final Year Projects

Portfolio project

Final-Year Project Portfolio

Define a feasible capstone, create a validated prototype and prepare a report and demonstration for evaluation.



Set a milestone

Agree on a deliverable and define what a successful demonstration includes.

Prepare handover

Record decisions, open issues and how someone else can continue the work.

A project brief, milestone notes and a handover or demonstration.

Final Year Projects

Course fees

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SCAN FOR MAP

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Final Year Projects

Course content

MODULES 01–02

01

Lessons & practice

- Topic selection
- Problem framing

HANDS-ON

Write a project problem statement and define the audience and evaluation goal.

02

Lessons & practice

- Scope
- Research
- Feasibility checks

HANDS-ON

Review source material and set a feasible scope and timeline.

Final Year Projects

Course content

MODULES 03–04

03

Lessons & practice

- System
- Data or interface design

HANDS-ON Sketch the system, data model or interface and explain design decisions.

04

Lessons & practice

- Prototype implementation
- Milestone reviews

HANDS-ON Build a prototype and collect evidence at each milestone.

Final Year Projects

Course content

MODULES 05–06

05

Lessons & practice

- Evaluation
- Testing
- Report writing

HANDS-ON

Evaluate the result with repeatable tests and document findings and limitations.

06

Lessons & practice

- Presentation
- Viva preparation
- Demo rehearsals

HANDS-ON

Rehearse a viva and present a working demonstration with a final report.

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TRAINING & INTERNSHIP

Corporate Training

SAMPLE PROJECT

Team Upskilling Pilot



COURSE FEE

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Corporate Training

Core concepts



01

Skills assessment and learning objectives

02

Custom learning path and tool selection

03

Workshops with role-relevant exercises

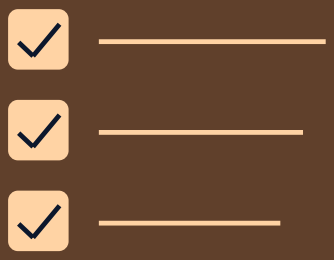
Set a milestone

Agree on a deliverable and define what a successful demonstration includes.

Corporate Training

Applied skills

- **Brief**
- **Review**
- **Handover**



04 Coached practice using representative scenarios

05 Progress review and practical assessment

06 Handover materials and next-stage training needs

PROJECT DELIVERABLES

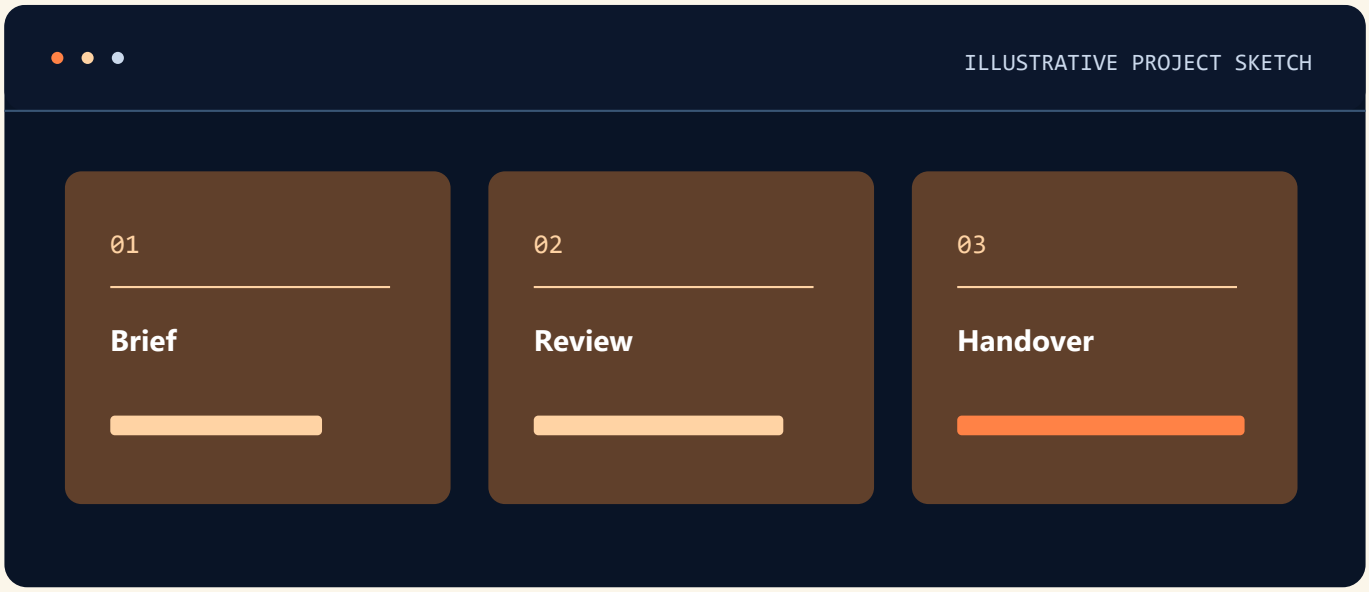
A project brief, milestone notes and a handover or demonstration.

Corporate Training

Portfolio project

Team Upskilling Pilot

Scope a training pilot around a real workflow, define success measures and review a sample deliverable.



Set a milestone

Agree on a deliverable and define what a successful demonstration includes.

Prepare handover

Record decisions, open issues and how someone else can continue the work.

A project brief, milestone notes and a handover or demonstration.

Corporate Training

Course fees

COURSE FEE

Fee on enquiry

Ask admissions for the course fee, available batches and enrolment details.

ADMISSIONS

+91 70146 92039

info@jaipurengineers.com

122/228, Indra Path, Thadi Market

Mansarovar, Jaipur, Rajasthan 302020

SCAN FOR MAP

Check course details

Corporate Training

Course content

MODULES 01–02

01

Lessons & practice

- Skills assessment
- Learning objectives

HANDS-ON

Map a representative team skill gap to measurable learning outcomes.

02

Lessons & practice

- Custom learning path
- Tool selection

HANDS-ON

Select a targeted learning route and role-relevant exercises.

Corporate Training

Course content

MODULES 03–04

03 Workshops with role-relevant exercises

Lessons & practice

HANDS-ON Run a coached workshop task that reflects day-to-day work.

04 Coached practice using representative scenarios

Lessons & practice

HANDS-ON Practise a team workflow and collect feedback on the deliverable.

Corporate Training

Course content

MODULES 05–06

05

Lessons & practice

- Progress review
- Practical assessment

HANDS-ON

Use a short assessment to measure progress against the agreed outcomes.

06

Lessons & practice

- Handover materials
- Next-stage training needs

HANDS-ON

Deliver reusable practice materials and specify follow-up training needs.

Jaipur Engineers
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CAREER SKILLS

Personality Development

SAMPLE PROJECT

Interview and Presentation Portfolio



COURSE FEE

Fee on enquiry

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Personality Development

Core concepts



01

Self-assessment and communication goals

02

Listening, spoken clarity and professional etiquette

03

Body language and presentation structure

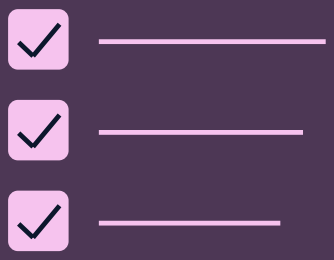
Prepare an example

Choose a project or work situation and describe your role and results.

Personality Development

Applied skills

- **Prepare**
- **Rehearse**
- **Reflect**



04 Teamwork, feedback and workplace scenarios

05 Interview answers and group discussion practice

06 Personal development plan and review

PROJECT DELIVERABLES

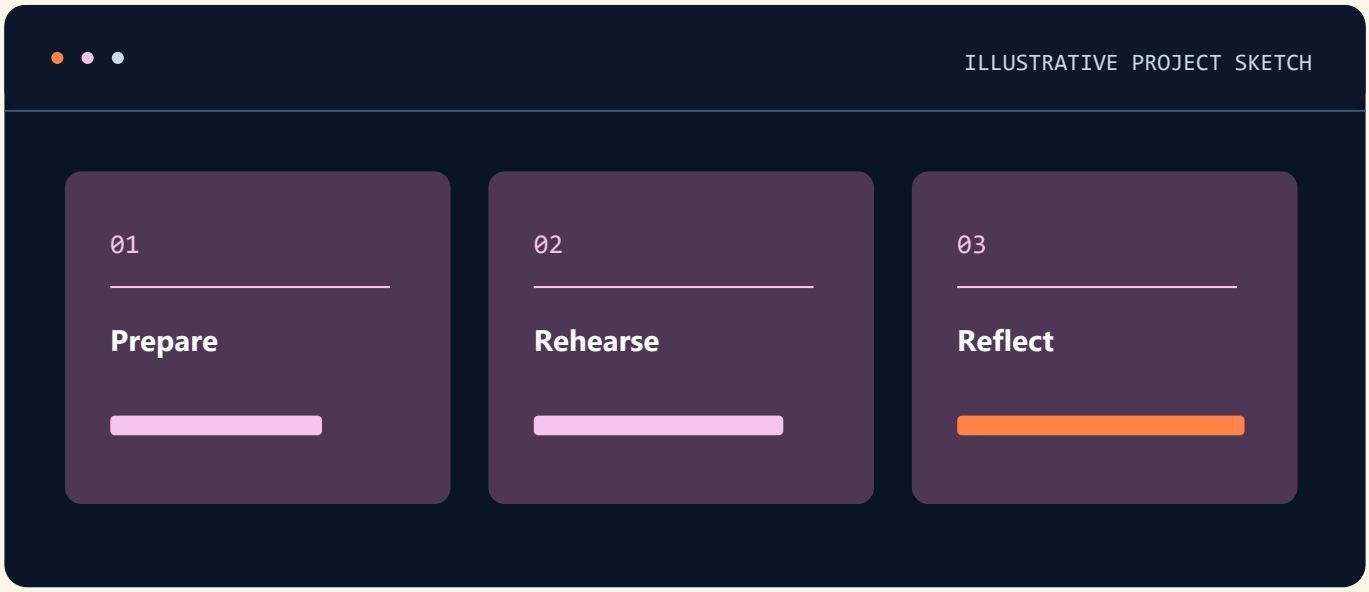
A presentation outline, interview practice notes and a personal development plan.

Personality Development

Portfolio project

Interview and Presentation Portfolio

Prepare a short self-introduction, present a project clearly and practise responding to interview feedback.



Prepare an example

Choose a project or work situation and describe your role and results.

Rehearse delivery

Practise a short presentation and improve it using specific feedback.

A presentation outline, interview practice notes and a personal development plan.

Personality Development

Course fees

COURSE FEE

Fee on enquiry

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SCAN FOR MAP

Check course details

Personality Development

Course content

MODULES 01–02

01

Lessons & practice

- Self-assessment
- Communication goals

HANDS-ON Set one communication goal and note how you will measure improvement.

02

Lessons & practice

- Listening
- Spoken clarity
- Professional etiquette

HANDS-ON Practise an active listening exchange and summarise the other person's point.

Personality Development

Course content

MODULES 03–04

03

Lessons & practice

- Body language
- Presentation structure

HANDS-ON Record a short presentation and review structure, posture and delivery.

04

Lessons & practice

- Teamwork
- Feedback
- Workplace scenarios

HANDS-ON Role-play a team feedback conversation and write a constructive response.

Personality Development

Course content

MODULES 05–06

05

Lessons & practice

- Interview answers
- Group discussion practice

HANDS-ON

Prepare interview answers and practise contributing to a group discussion.

06

Lessons & practice

- Personal development plan
- Review

HANDS-ON

Create a short development plan with a review date and evidence of improvement.

Jaipur Engineers
Your One-Stop IT & Staffing Ecosystem

IT COURSES

Other IT Courses

SAMPLE PROJECT

IT Skills Learning Plan



COURSE FEE

Fee on enquiry

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Other IT Courses

Core concepts



01	Compare Excel, SQL and practical AI tools
02	Clean and summarise tabular information
03	Query simple related tables

Pick a task

Define a familiar workspace or academic task and choose the tools to use.

Other IT Courses

Applied skills

- **Task**
- **Workflow**
- **Result**



04 Prepare routine documents with reviewed AI assistance

05 Develop workplace communication basics

06 Select a course based on skills and goals

PROJECT DELIVERABLES

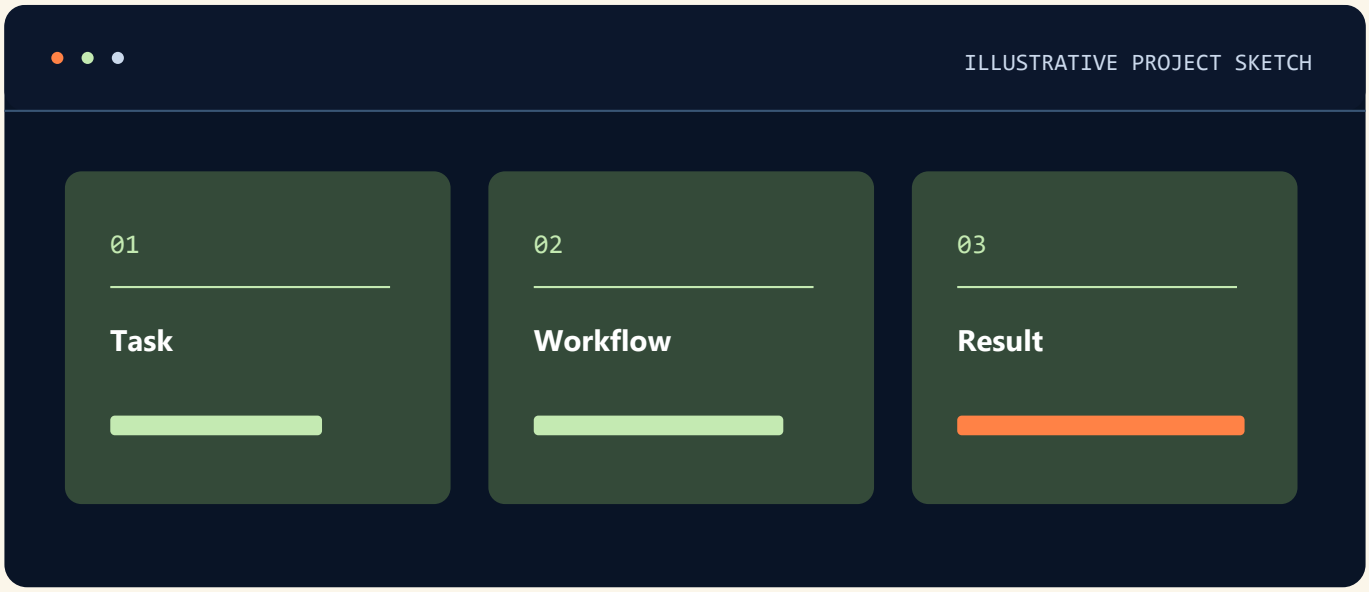
A completed practice task and a learning plan tied to a workplace or academic goal.

Other IT Courses

Portfolio project

IT Skills Learning Plan

Choose a route based on a small spreadsheet, SQL or AI productivity exercise and document the next learning goal.



Pick a task

Define a familiar workspace or academic task and choose the tools to use.

Check the result

Review the output against your initial goal and document the next skill to build.

A completed practice task and a learning plan tied to a workplace or academic goal.

Other IT Courses

Course fees

COURSE FEE

Fee on enquiry

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SCAN FOR MAP

Check course details

Other IT Courses

Course content

MODULES 01–02

01

Lessons & practice

- Compare Excel
- SQL
- Practical AI tools

HANDS-ON Compare Excel, SQL and AI tasks against a real workplace or academic need.

02

Lessons & practice

- Clean
- Summarise tabular information

HANDS-ON Clean a small table and explain a short summary with verified totals.

Other IT Courses

Course content

MODULES 03–04

03 Query simple related tables

Lessons & practice

HANDS-ON Query related practice tables and compare the result with the spreadsheet view.

04 Prepare routine documents with reviewed AI assistance

Lessons & practice

HANDS-ON Draft a routine document with AI and check its claims against source material.

Other IT Courses

Course content

MODULES 05–06

05 Develop workplace communication basics

Lessons & practice

HANDS-ON Write a concise work update and practise explaining the result aloud.

06

Lessons & practice

- Select a course based on skills
- Goals

HANDS-ON Select a next course and justify it with the evidence from your practice tasks.