

Chapter 13 - Time for the test

Theory:

- What are different types for testing?

Manual Testing: You test features manually (e.g., checking a search bar yourself).

Automatic Testing:

Unit Testing: Tests individual (isolated) components or functions.

Integration Testing: Tests how components work together (e.g., Menu + Cart).

End-to-End Testing: Simulates real user interactions from start to end (e.g., login to checkout).

- What is Enzyme?

Enzyme is a testing utility for React by Airbnb that lets you test React components. It allows shallow rendering and easier component manipulation.

- Enzyme vs React Testing Library

- **Enzyme** focuses on **implementation details** (testing internal logic).
- **React Testing Library (RTL)** focuses on **how users interact** with your UI (DOM-based testing).
- **RTL is preferred** now because it encourages better testing practices.

- What is Jest and why do we use it?

Jest is a testing framework by Facebook.

It is used to **run tests**, provide **assertion methods** like `expect()`, and handle **mocks**.

It powers testing in tools like **React Testing Library**.

Jest helps check whether our code behaves as expected and catches bugs automatically.

Coding:

- Setup React Testing Library
- Write Unit Tests for Header Component to test for Logo, Cart - 0 items and Online Status
- Write Integration Test case for search feature on the Homepage
- Write Integration Test case for Add to Cart flow