

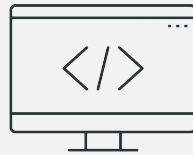
Software Development

Testing

Module 19



Welcome



Why Is Testing Important?



Testing

1

Testing is a crucial part of software development that must be incorporated throughout the entire process.

2

The earlier we can detect and remedy defects, the more efficient and effective the organization becomes.

3

Throughout this module, we will discuss different kinds of testing.



What is Vitest?



Vitest

1

Vitest is a testing framework that we can easily integrate with our JavaScript/TypeScript applications.

2

Vitest provides straightforward integration with Vite applications.

3

Vitest provides a framework that can be used throughout the entire development and testing process.



What is Test-Driven Development (TDD)?

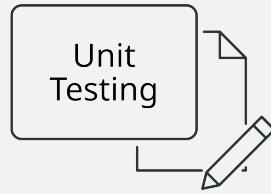


Test-Driven Development (TDD)

1 TDD is an iterative process by which testing drives the entire development process.

2 Test cases are created first, followed by the implementation code to satisfy them.

3 The net result of the process is a comprehensive test suite and robust code.



What is Unit Testing?



Unit Testing

1

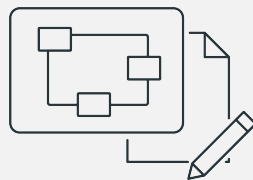
With Unit Testing, we can isolate and separately test individual "units" of code.

3

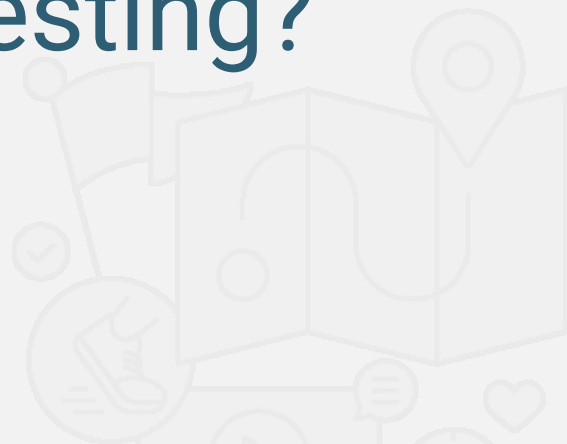
A "unit" is loosely defined as any isolated code, but typically relates to a class or specific functionality within a class.

2

Tests that cover more than one "unit" are known as integration tests.



What is Component Testing?



Component Testing

1

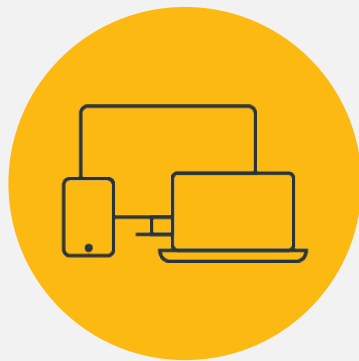
As with Unit Testing, the intention of Component Testing is to isolate and separately test individual components.

2

For example, we can isolate a React component and create test cases against it.

3

Vitest provides library support to test various types of components, including React.



Instructor **Demonstration**

Mini-Project



Questions?





The End