

Cypress, Mocha & Chai: E2E Testing with Sinon

Learn to build and organise end-to-end tests with Cypress, Mocha and Chai, and add mocks, stubs and spies with Sinon.

14

MODULES

59

TOPICS

COURSE OVERVIEW

This course covers setting up and writing tests with Cypress, including selectors, custom commands, assertions with Chai, debugging, functional versus end-to-end testing, and cross-browser testing. It then moves to Mocha, covering test structure, hooks, and advanced features such as nested suites, skipping tests, timeouts and parallel execution. It also covers Chai, from basic assertion styles through plugins, custom assertions and use with promises and async/await. The course closes with mocking and stubbing using Sinon.js and its integration with Mocha and Chai.

WHO THIS COURSE IS FOR

Test Automation Engineers

QA Engineers

Software Developers

Front-End Developers

SDETs

LEARNING OBJECTIVES

- Set up and configure a Cypress project
- Write and organise tests using suites and hooks
- Apply best practices for selecting elements with Cypress locators
- Use custom commands, aliases and assertions with Chai
- Debug failing tests and handle errors in Cypress
- Test API calls, intercept network requests and use fixtures
- Run tests across different browsers
- Implement mocking, stubbing and spies with Sinon.js

14 Modules, 59 Topics

01

Introduction to Cypress

TOPICS

- What is Cypress?
- Key Features and Benefits
- Cypress vs. Other Testing Tools (Selenium, Puppeteer)
- Setting Up Cypress
- Installing Node.js and npm
- Installing Cypress
- Initial Cypress Project Setup

02

Cypress Basics

TOPICS

Cypress Folder Structure · Writing Your First Test · Running Tests in Cypress Test Runner · Understanding Cypress Commands · Visiting URLs · Interacting with Elements (click, type, etc.)

03

Writing and Organizing Tests

TOPICS

- Test Structure and Best Practices
- Writing Readable and Maintainable Tests
- Using Hooks (before, after, beforeEach, afterEach)
- Organizing Tests (test cases, suites)

04

Selectors and Locators

TOPICS

Best Practices for Selecting Elements · Cypress Locators (get, find, contains) · Handling Dynamic Elements

05

Advanced Commands and Assertions

TOPICS

Custom Commands · Aliases and Variables · Advanced Assertions with Chai

06

Debugging and Error Handling

TOPICS

Debugging Tests with Cypress · Handling Failures and Errors · Cypress Dashboard

07

Functional vs. End-to-End Testing

TOPICS

- Test Isolation and State Management
- Mocking and Stubbing (using `cy.server()` and `cy.route()`)
- Handling External Systems
- Testing API Calls
- Intercepting Network Requests
- Working with Fixtures

08

Cross-browser Testing

TOPICS

Running Tests in Different Browsers · Handling Browser-specific Issues

01

Introduction to Mocha

TOPICS

What is Mocha? · Key Features and Benefits · Installing and Setting Up Mocha · Writing and Running Your First Test

02

Mocha Basics

TOPICS

- **Test Structure:** Describe and It
- Synchronous and Asynchronous Testing
- **Using Hooks:** before, after, beforeEach, afterEach

03

Introduction to Chai

TOPICS

- What is Chai?
- Key Features and Benefits
- Installing and Setting Up Chai
- Writing Basic Assertions

CHAI ASSERTIONS

- Assert Style
- Expect Style
- Should Style
- Deep Equality, Truthiness, and Other Assertions

04

Advanced Mocha Features

TOPICS

Nested Test Suites · Skipping and Only Tests · Timeouts and Retries · Running Tests in Parallel

05

Advanced Chai Techniques

TOPICS

- Chai Plugins (chai-as-promised, chai-http, etc.)
- Custom Assertions
- Using Chai with Promises and Async/Await

06

Mocking and Stubbing

TOPICS

Introduction to Sinon.js · Using Sinon for Mocks, Stubs, and Spies · Integrating Sinon with Mocha and Chai

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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