

Playwright: TypeScript, POM & Cross-Browser CI

Track -1 Manual Testers

10 Days

4 HOURS A DAY

5

MODULES

68

TOPICS

18

HANDS-ON LABS

COURSE OVERVIEW

This course covers JavaScript and TypeScript fundamentals before moving into Node.js, npm and Playwright CLI setup. It then addresses writing tests, locating elements, performing user actions and asserting element states, including handling dynamic elements and frames. Further modules cover the Page Object Model, screenshots, video capture, hooks, fixtures and test data management, followed by test organisation, form and popup handling, debugging techniques and authentication scenarios. The final module addresses cross-browser and parallel execution, CI/CD integration with tools such as GitHub Actions, Jenkins and Docker, and reporting with Allure TestOps.

WHO THIS COURSE IS FOR

Manual Testers

QA Engineers

Test Automation Engineers

SDETs

DevOps Engineers

LEARNING OBJECTIVES

- Explain core JavaScript and TypeScript concepts used in testing
- Configure a TypeScript-based Playwright project with Node.js and npm
- Apply locator strategies such as text, role and CSS/XPath selectors
- Implement user actions and assertions for element states
- Build a Page Object Model with reusable page classes and locators
- Implement hooks, fixtures and test data management
- Apply debugging techniques using logs, debug mode and trace viewer
- Configure CI/CD pipelines for cross-browser parallel execution

5 Modules, 68 Topics

01

3 Labs

JavaScript, TypeScript, and Playwright Setup

DAY 1 TOPICS

- Introduction to JavaScript for testers
- Variables, arrays, objects, and loops
- Conditional statements (if, switch)
- **Functions:** declaration, parameters, return types
- Introduction to async/await and Promises

DAY 2 TOPICS

- Introduction to TypeScript
- Static typing, enums, interfaces, type inference
- **TypeScript vs JavaScript:** key differences
- Introduction to Node.js & npm
- Installing Node.js
- npm init, package.json
- Installing dependencies
- Installing and configuring Playwright CLI
- Setting up VS Code for Playwright development

02

3 Labs

Writing Tests and Element Interactions

DAY 3 TOPICS

- Writing Basic Tests in Playwright
- Launching browser
- Navigating to URL
- **Locating elements using:** Text selectors
- **Locating elements using:** Role selectors
- **Locating elements using:** CSS/XPath selectors
- **Performing user actions:** Click
- **Performing user actions:** Fill input fields
- **Performing user actions:** Press keyboard keys
- **Performing user actions:** Select dropdown options

DAY 4 TOPICS

- Writing basic assertions
- `toBeVisible`, `toHaveText`, `toBeEnabled`
- Handling dynamic elements (waits, retries)
- Working with frames and iframes

03

4 Labs

Page Object Model, Screenshots, and Test Hooks

DAY 5 TOPICS

Implementing Page Object Model (POM) · Structuring project with POM pattern · Creating reusable classes for pages · Managing selectors using locators file · Capturing screenshots on test failure

DAY 6 TOPICS

Recording videos of test runs · Using Hooks and Fixtures · beforeEach, afterEach · Setup and teardown for tests · Test data management · Using JSON or static data files

04

3 Labs

Test Flows, Debugging, and Authentication

DAY 7 TOPICS

- Test Organization and Grouping
- Organizing tests by feature
- Using test tags, filenames, and folders
- Handling Forms, Popups, Alerts
- Interacting with modals, alerts, confirm boxes
- Uploading and downloading files

DAY 8 TOPICS

- Debugging Techniques
- Console logs and browser logs
- Debug mode and trace viewer
- Authentication Scenarios
- Login flows with and without UI
- Token/cookie-based authentication
- Preserving session state

05

5 Labs

Cross-Browser, Parallel Execution, Reporting, CI/CD

DAY 9 TOPICS

- CI/CD & Headless Execution
- GitHub Actions / Jenkins / Azure pipelines setup
- Containerized test execution (Dockerfile, Playwright Docker image)
- Run Playwright in Kubernetes or cloud agents
- Advanced Reporting & Automation Governance
- Allure Testops report with Jira, HTML report, CI test artifacts
- Creating dashboards using custom JSON output
- Code reviews, linting, pull request automation
- Branch strategy and test coverage integration

DAY 10 TOPICS

- CI/CD Integration Concepts
- Overview of GitHub Actions, GitLab CI, Jenkins
- Running Playwright tests in CI pipeline
- Reporting using Allure TestOps with Jira
- Automation Governance
- Folder structure, code reviews
- Naming conventions and documentation

Practise What You Learn

#	MODULE	ACTIVITY
01	JavaScript, TypeScript, and Playwright Setup	■ Write JS/TS functions using variables, arrays, loops ■ Set up a TypeScript-based Playwright test project ■ Install required dependencies and run the first test
02	Writing Tests and Element Interactions	■ Write tests for login or signup page ■ Automate clicking buttons and filling forms ■ Validate element visibility and state
03	Page Object Model, Screenshots, and Test Hooks	■ Create POM for a sample application (e.g., login page) ■ Implement tests using POM structure ■ Add screenshot and video capture logic ■ Setup hooks for repeated setup/cleanup
04	Test Flows, Debugging, and Authentication	■ Automate a complex form with validations ■ Use console and trace viewer to debug test ■ Implement authentication script with session storage
05	Cross-Browser, Parallel Execution, Reporting, CI/CD	■ Execute tests in different browsers ■ Run tests in parallel using CLI config ■ Generate and interpret HTML and trace reports ■ Simulate tests on mobile viewport ■ Review CI logs and test execution results (in sandbox/demo)

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.

FLEXIBLE DELIVERY

Learn the Way That Suits You

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Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

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1-on-1 Training

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