Advanced Playwright Automation Testing

Course ID #: 7000-1127-ZZ-Z

Hours: 35

Delivery Method: Group Internet Based

Course Content

Description:

Designed for experienced testers, this course focuses on advanced techniques that help automate web applications effectively. Participants will learn to implement cross-browser testing, create custom scripts, and manage test data efficiently. By the end of the course, you'll have a solid understanding of handling dynamic web elements and integrating Playwright with CI/CD pipelines, enhancing your testing capabilities. This hands-on training not only fosters practical skills but also empowers you to improve your team's testing processes, ensuring higher quality software delivery. Join us and elevate your automation testing skills today!

Objectives:

Upon successful completion of this course, students will:
- Master advanced Playwright features for robust web application testing.
- Develop and execute automated test scripts using Playwright.
- Implement test best practices for maintainability and scalability.
- Explore cross-browser testing capabilities with Playwright.
- Integrate Playwright with CI/CD pipelines for automated deployments.
- Utilize Playwright's powerful debugging tools for efficient troubleshooting.
- Write custom test automation frameworks using Playwright.
- Learn to handle dynamic web applications and complex user interactions.
- Gain insights into performance testing and monitoring with Playwright.
- Understand reporting and analysis of test results for continuous improvement.

Prerequisites:

To ensure a successful and enriching learning experience in the Advanced Playwright Automation Testing course, we recommend that participants have the following foundational knowledge:
- Automation Testing with Playwright course.
- Basic understanding of web development concepts, including HTML, CSS, and JavaScript.
- Familiarity with testing principles and methodologies, such as unit testing and integration testing.
- Prior experience with automation testing tools or frameworks (any level of experience is beneficial).
- Basic knowledge of programming concepts, which will aid in understanding Playwright's scripting capabilities.
- These prerequisites will help you make the most of the course and enable you to engage with the advanced topics more effectively. We look forward to welcoming you to the course!

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Target Audience:

Advanced Playwright Automation Testing equips learners with the skills to master end-to-end testing for web applications, enabling seamless user experiences through automated solutions.

- Software Testers
- Quality Assurance Engineers
- Automation Engineers
- Web Developers
- DevOps Engineers
- Technical Project Managers
- UI/UX Designers
- Software Developers in Test (SDET)

- IT Professionals seeking automation skills
- Software Development Managers
- Test Analysts
- Freelance Software Testers
- Continuous Integration/Continuous Deployment (CI/CD) specialists
- Students in software engineering or IT-related fields

Topics:

Lesson 1: Advanced JavaScript Concepts
- Closures, arrow functions, this context
- Callback vs Promise vs async/await
- Error handling & custom error classes
- ES6+ features (spread, destructuring, template literals)

Lesson 1 Labs:
- Implement complex JS functions using ES6+ patterns

Lesson 2: TypeScript Essentials for Automation
- Type aliases, enums, interfaces, generics
- Type guards and assertion functions
- Modularization using ES modules & namespaces
- Using tsconfig.json for project optimization

Lesson 2 Labs:
- Create TypeScript modules for automation utilities

Lesson 3: Playwright Project Initialization
- Install Playwright with TypeScript
- Customize playwright.config.ts
- Multi-project setup (dev, staging, prod)
- Organize test folders by domain/features

Lesson 3 Labs:
- Setup Playwright project with environment configs

Lesson 4: Writing Tests and Locators Mastery
- Test metadata: name, tags, retries
- Test structure: Describe blocks, test modifiers
- Locators: getByRole, getByTestId, shadow DOM, filter(), nth()

Lesson 4 Labs:
- Create modular test structure for login/registration

Lesson 5: Assertions, Waits & Custom Fixtures
- Conditional assertions (toHaveAttribute, toContainText)
- Built-in retries and expect.poll
- Test Hooks & Fixtures (scoped/shared)
- Injecting browser/page/test data

Lesson 5 Labs:
- Shared fixture for auth tokens and poll-based retry

Lesson 6: POM & Advanced UI Interactions
- Reusable Page Object Model (POM)
- Modals, iFrames, nested frames
- Dynamic elements, stale references
- Keyboard, mouse, drag-and-drop automation

Lesson 6 Labs:
- Build reusable POM and drag-drop in iframe

Lesson 7: Media Tools and Screenshots
- Conditional screenshots based on test state
- Full/step-wise video recording
- Attach videos to CI reports

Lesson 7 Labs:
- Capture screenshot/video only on failures

Lesson 8: API Integration and Auth
- Send HTTP requests using request.newContext
- Validate API + UI consistency
- Token-based auth, session storage
- Programmatic login and reuse of auth state

Lesson 8 Labs:
- Use API to login and validate UI with session

Lesson 9 Mocking, Network Control & CI Setup:
- Mocking via route.fulfill, route.abort, route.continue
- Blocking pixels and third-party APIs
- Parallel & distributed test execution (CI agents)

Lesson 9 Labs:
- Intercept API and mock data, run parallel tests

Lesson 10: JIRA, Xray Integration, and Reporting
- JIRA Fundamentals and Agile boards
- Creating and managing epics, bugs, tasks
- Xray plugin for manual/automated test cases
- Push test result to Xray via API
- Generate Allure/HTML reports
- CI integration (GitHub, Jenkins, Docker)

Lesson 10 Labs:
- Link automated Playwright test to Jira via Xray
- Create dashboard for test summary

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NASBA CPE details are provided on the following pages.

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NASBA Information

Level: Advanced
Advanced Preparation:
Attendance Requirement: To be awarded the full credit hours, you must sign in and attend the entire course.
Recommended Field(s) of Study: Computer Software & Applications
Recommended CPEs: 39.00

Policies: Course Registration, Cancellation, Refund, and Complaint Resolution
For more information regarding administrative policies such as complaint and program cancellation policies, please contact our offices at 800-639-3535 or visit us at: **www.tcworkshop.com**

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