

Playwright Test Automation Powered with AI Integration

Course Contents

1. INTRODUCTION TO PLAYWRIGHT

- What is playwright?
- Playwright vs selenium vs Cypress
- Advantages of Playwright

2. GETTING START WITH PLAYWRIGHT

- Installation and configurations
VSCode, NodeJs, npm
- Create and explore Project structure
- Adding Playwright Dependencies
- Create and run Playwright test

3. INTERACTING WITH BROWSER

- Launching Chrome, Firefox, Edge

4. LOCATORS IN PLAYWRIGHT

- CSS
- XPATH
- ID, Name, Class and other attributes
- Built-in playwright Selectors

5. EXPLORING WEB ELEMENTS

- Edit box
- Link
- Button
- Checkbox
- Radio Button
- Drop Down Box
- Capture Screenshots
- Handling Web tables
- Assertions (Hard & Soft)

6. HANDLING FRAMES, ALERTS, POPUP WINDOWS and SYNCHRONIZATION

- Handling iFrames
- Handling multiple tabs
- Handling pop ups
- Handling Alerts
- File upload and Download
- Handling Synchronization

7. HANDLING USER ACTIONS

- Handling Mouse Over Menu
- Handling Slider
- Handling Drag and Drop
- Handling Keyboard Event

- Capturing Screenshot
- Capturing Videos
- Capturing Trace Viewer
- How to save session storage using Playwright and inject into new Browser and do execution from previous session

8. SYNCHRONIZATION

- Auto wait
- Local Timeouts
- Test Spec Timeout
- Global Timeout Configuration
- Static Waits

9. DATA DRIVEN FRAMEWORK

- Interacting with Database
- Interacting with XML
- Interacting with Excel
- Interacting with JSON

10. TEST EXECUTION

- Configuration file setup for Execution
- Sequence Execution, Parallel Execution, Batch/Group Execution
- Mobile device view execution

11. REPORTING FRAMEWORK

- Allure Reporting
- HTML Reports

12. CUCUMBER FRAMEWORK

- Cucumber & Behavior Driven Development
- Gherkin- Business Driven Development
- Cucumber BDD For Testing
- Configure Cucumber with Playwright
- Gherkin Keywords
- Step Definitions
- Cucumber Options
- Parameterization in Cucumber
- Data Driven Testing
- Execution Order of Hooks
- Background Keyword

13. HOOKS & ANNOTATIONS

- Grouping Tests into Test Suites
- Skipping Tests
- Using Filter Tags, Hooks

14. PAGE OBJECT MODEL DESIGN PATTERN

- Why Page Object Model & When it will be effective
- POM Design Rules
- POM Implementation of Rules
- Implementation of test case using POM Framework

15. TYPESCRIPT PROGRAMMING

- Introduction to Typescript language
- Declaring Variables in Type Script
- Data types in Typescript
- Loops and Conditional Statements
- Logical Operators
- Arrays and Methods with Detailed Examples
- Functions in Type script
- Understanding Var , let, Const keywords in Type Script
- String and its related Functions with Examples
- OOPs Concepts , Class, Object

- Inheritance
- Access modifiers
- Export and imports classes
- Exception handling
- Debugging the code
- Understand the difference between JavaScript & Typescript

16. API TESTING

- API Calls(GET, PUT, POST Methods) using Playwright and grab response
- Parsing API Response
- Execution with mix of API and Browser Combination in Play Wright

17. AI INTEGRATION

- Integration with AI tools
- Write scripts using NLP language
- Integration with MCP servers