

Getting Started with Automated Testing with Selenium

Introduction

Test automation with Selenium allows reliable testing of web applications. This guide will provide an overview of Selenium and how to get started.

What is Selenium?

- Open source tool for web app testing across browsers.
- Supports many languages like Java, C#, Python, JS.
- Allows writing robust browser-based regression tests.

Setting Up Selenium

- Install language binding like selenium-webdriver for Python.
- Set up Selenium on local or remote web drivers.
- Configure browsers for testing like Chrome.

Locating Page Elements

- CSS selectors and XPath for reliable element identification.
- Use browser inspector to find ideal locators.
- Strategies for timing and waiting for elements.

Writing Test Scripts

- Annotate tests with framework like unittest or Junit.
- Script actions like opening pages, clicking elements.
- Assert outcomes like page titles, element texts.

Page Object Models

- Improve test maintenance by enclosing page interactions.
- Keeps tests less brittle as UIs change.
- Define reusable page objects to represent screens.

Continuous Integration

- Execute test suites on every code change.
- Integrate with CI/CD like Jenkins and GitHub Actions.
- Automate regression testing for confidence

Conclusion

Automating with Selenium provides confidence for web app changes and reduces regressions.