

Browser Automation Testing with Selenium with JUnit

Introduction:

Rainbow Software Pvt. Ltd. has assigned the role of Test Engineer to you, and you are tasked with performing unit testing for two prominent online platforms - Facebook and Google Search. The primary goal of this project is to conduct browser automation testing using JUnit for Facebook authentication and Google Search. Upon successful completion of this task, you will subsequently contribute to the unit testing of an application.

Background:

Rainbow Software Pvt. Ltd. recognizes the critical importance of rigorous testing to ensure the reliability and security of software applications. As part of their commitment to delivering high-quality products, they have engaged you to focus on browser automation testing for two widely used platforms: Facebook and Google.

Project Scope:

Facebook Authentication Testing:

- Verify the authentication process on Facebook.
- Ensure the secure and seamless login functionality.
- Test user authentication with valid and invalid credentials.
- Validate the recovery and error-handling mechanisms.

Google Search Engine Testing:

- Automate the Google Search process.
- Validate the accuracy of search results for various queries.
- Test different search parameters and scenarios.
- Ensure that the search engine handles edge cases gracefully.

Technologies and Tools:

- JUnit: Utilize JUnit, a popular Java testing framework, for the automation testing of both Facebook and Google functionalities. JUnit provides a robust and standardized way to write and execute unit tests, making it suitable for this project.
- Browser Automation Tools: Leverage browser automation tools or libraries, such as Selenium WebDriver, to simulate user interactions and automate the testing process.

Project Methodology:

Test Planning:

- Define the test scenarios and criteria for both Facebook and Google.
- Develop a comprehensive test plan outlining the testing approach, test cases, and expected outcomes.

Test Execution:

- Implement JUnit test cases for Facebook authentication and Google Search.
- Use automation scripts to simulate user actions and interactions with the respective platforms.
- Execute the tests systematically and monitor the results.

Results Analysis:

- Analyze test results to identify and report any deviations from expected behavior.
- Collaborate with developers to address and rectify identified issues.