

Automated Testing Framework for a Web Application

We will develop an automated testing suite using Selenium or a similar framework to test the functionality of a web application. Implement test cases for UI, functionality, and performance testing. Generate reports and analyze test results.

Requirement:

Develop functional test cases: Write detailed test cases to cover key functional workflows (e.g., user login, form submission, data processing).

Automated test scripts: Automate the execution of functional tests using Selenium.

Implement report generation: Integrate tools like TestNG or JUnit to generate detailed test reports with test results.

API test cases: Expand API testing in Postman by adding more endpoints and verifying data.

Test management integration: Integrate Jira for managing test cases and tracking issues found during testing.

Develop performance test cases: Write test cases for load and stress testing using tools like JMeter or Gatling.

Execute performance tests: Run performance tests on the web application to analyze response times, load handling, and scalability.

UI testing: Enhance UI test cases to cover more complex scenarios (e.g., responsive design, cross-browser compatibility).

Bug tracking: Log and track issues in Jira discovered during the execution of performance and UI tests.

Optimize test framework: Refactor the test framework to optimize performance and reusability (e.g., using page object models).

Execute full testing suite: Run the complete suite of tests (UI, functional, API, performance) on the web application.

Analyze test results: Review and analyze the results, identifying any remaining issues.

Generate final reports: Create detailed reports summarizing the results of all tests, including performance metrics.

Documentation: Write detailed documentation on the automated testing framework, how to use it, and how to add new test cases.

Deploy the framework: Make the testing framework ready for continuous integration and deployment (CI/CD) pipelines (e.g., integration with Jenkins).

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