Capstone Project Details

Project URL: https://demo.nopcommerce.com/

Objective:

The objective of this capstone project is to develop a robust, end-to-end automated testing and continuous integration workflow for a web application. The project involves designing an automated testing framework using Selenium WebDriver and TestNG to validate key functionalities and ensure application stability.

The framework will be integrated into a CI/CD pipeline using Jenkins, enabling automatic execution of test cases on each code commit. Git will be used for version control and collaboration, ensuring efficient source code management.

Additionally, the project will incorporate JIRA for tracking requirements, test cases, bugs, and task management throughout the software development lifecycle. This integration ensures seamless collaboration between development and QA teams, enabling better visibility, traceability, and project tracking.

Project Team:

The project team is organized into 7 Groups, each comprising approximately 6 to 7(Max) members. Each Group is structured with defined roles, including a Product Owner, Scrum Master, Developers, and Testers.

Project Flow:

1. Project Setup:

• Create a GitHub repository.

• Clone the repository locally and set up the project structure.

2. Selenium Automation:

• Develop Selenium scripts to automate the critical functionalities

• Commit and push the scripts to GitHub.

3. Jira Integration:

• Create user stories and tasks in Jira.

4. Continuous Integration and Continuous Deployment:

• Configure a CI/CD pipeline using tools like Jenkins to automatically execute Selenium tests.

5. Reporting and Analysis:

• Produce and evaluate test execution reports.

• Refine and update test cases and scripts according to test outcomes.

consider suggestions

1. Add negative testing for loan rejection scenarios and edge cases.

2. Integrate API-level testing for backend processing areas

3. Automate cross-browser testing and mobile responsiveness.

4. Enhance reporting with detailed financial transaction logs and audit trails.

5. Can mention API testing for payment workflow and CI/CD implementation as optional