

# Project Proposal: Automated Testing Framework for a Web Application

**Group Code:** ALX2\_SWD6\_G2 (NHA)

**Job Profile:** Software Tester

**Technical Instructor:** Mohammed AlShafeiy

**GitHub Repository:** [https://github.com/omar1215/ALX2\\_SWD6\\_G2\\_G4](https://github.com/omar1215/ALX2_SWD6_G2_G4)

---

## 1. Project Name

Automated Testing Framework for a Web Application

---

## 2. Team Members

Student Name	Email	Phone
Omar Saeed Mohammed	<a href="mailto:os9823601@gmail.com">os9823601@gmail.com</a>	01207572578
Alhassan Hamdy Ameen	<a href="mailto:Alhassanhamdy@gmail.com">Alhassanhamdy@gmail.com</a>	01271319292
Alhussein Hamdy Ameen	<a href="mailto:Alhusseinhamdy@gmail.com">Alhusseinhamdy@gmail.com</a>	01270370492
Omar Mahmoud Ahmed	<a href="mailto:omaarrcrunshy@gmail.com">omaarrcrunshy@gmail.com</a>	01287507518
		01128442419
Ahmed Mohamed Antar	<a href="mailto:aelzohary535@gmail.com">aelzohary535@gmail.com</a>	01280947324
Amr Ahmed Allam	<a href="mailto:Allamamr00@gmail.com">Allamamr00@gmail.com</a>	

---

## 3. Project Idea & Overview

**Problem Statement:** Manual testing of web applications is time-consuming, error-prone, and inefficient for continuous integration/continuous deployment (CI/CD) pipelines.

**Solution:** Develop an **automated testing framework** to validate web applications' functionality, performance, and security, reducing human effort and improving testing accuracy.

**Scope:**

- Create reusable test scripts for critical workflows (e.g., login, data submission, API integration).
- Integrate with CI/CD tools for automated test execution.
- Generate detailed test reports for stakeholders.

## 4. Technologies & Tools

- **Test Automation:** Selenium WebDriver, TestNG/JUnit
  - **CI/CD Integration:** Jenkins, GitHub Actions
  - **Version Control:** Git/GitHub
  - **Test Reporting:** Allure Reports, ExtentReports
  - **Performance Testing:** JMeter (optional)
  - **Security Testing:** OWASP ZAP (optional)
  - **Programming Language:** Java/Python
  - **Collaboration:** Jira/Trello
- 

## 5. Work Plan & Team Roles

<b>Omar Saeed Mohammed</b>	Role & Responsibilities
<b>Alhassan Hamdy Ameen</b>	Team Leader: Framework architecture, CI/CD integration, documentation.
<b>Alhussein Hamdy Ameen</b>	Test script development, API testing, and reporting.
<b>Omar Mahmoud Ahmed</b>	Functional testing, cross-browser compatibility.
<b>Ahmed Mohamed Antar &amp; Amr Ahmed Allam</b>	Performance testing, security testing, bug tracking.

### Timeline:

1. **Week 1-2:** Requirement analysis and tool setup.
  2. **Week 3-4:** Develop core test scripts and integrate with Selenium.
  3. **Week 5-6:** Implement CI/CD pipeline and reporting.
  4. **Week 7-8:** Final testing, documentation, and demo preparation.
- 

## 6. Functional Requirements

- Test scripts must validate login functionality, form submissions, and API responses.
  - Support cross-browser testing (Chrome, Firefox, Edge).
  - Generate HTML/PDF test reports with pass/fail status.
  - Integrate with GitHub for version control and Jenkins for CI/CD.
-

## 7. Non-Functional Requirements

- **Performance:** Tests must be executed within 10 minutes for a medium-sized web app.
  - **Scalability:** Framework must handle 100+ concurrent test cases.
  - **Usability:** Easy-to-read reports for non-technical stakeholders.
  - **Security:** Encrypt sensitive test data (e.g., passwords).
- 

## 8. GitHub Repository

- **Link:** [https://github.com/omar1215/ALX2\\_SWD6\\_G2\\_G4.git](https://github.com/omar1215/ALX2_SWD6_G2_G4.git)
  - **Initial Setup:** Repository created with folders for test scripts, documentation, and CI/CD configurations.
- 

**Organizing Company:** New Horizons Alex (NHA)  
**Training Governorate:** Alexandria

---