**Project Proposal: Automated Testing Framework for a Web Application**

**Group Code:** ALX2\_SWD6\_G1 (NHA)  
**Job Profile:** Software Tester  
**Technical Instructor:** Hossin Ali  
**GitHub Repository:** [ALX2\_SWD6\_G1\_Group2](https://github.com/DrNABILSHARAFELDIN/ALX2_SWD6_G1_Group2.git)

**1. Project Name**

**Automated Testing Framework for a Web Application**

**2. Team Members**

| **No** | **Student Name** | **Email** | **Phone** |
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| 1 | Nabil Nabih Abdelwahab (Team Leader) | [drnabilnabih@gmail.com](https://mailto:drnabilnabih@gmail.com/) | 01554510430 |
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**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**

| **Team Member** | **Role & Responsibilities** |
| --- | --- |
| **Nabil Nabih Abdelwahab** | Team Leader: Framework architecture, CI/CD integration, documentation. |
| **Akram El Sabrouty** | Test script development, API testing, and reporting. |
| **Hossam Hassan** | Functional testing, cross-browser compatibility. |
| **Mohamed Hashem Rashad** | 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 execute 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/DrNABILSHARAFELDIN/ALX2_SWD6_G1_Group2.git>
* **Initial Setup:** Repository created with folders for test scripts, documentation, and CI/CD configurations.

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