



Green University Of Bangladesh
Department of Computer science and Engineering
Faculty of Sciences and Engineering
Semester: (Spring, Year:2025), B.Sc. in CSE (Day)

Course Title: Software Testing & Quality Assurance
Lab Course Code: CSE 454 Section: 212-D1

PROJECT REPORT : Selenium,JUnit WebDriver Automation Testing and Bugzilla report and github repository

Student Details

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[For Teachers use only: **Don't Write Anything inside this box**]

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|---|-------------------|---|
| <u>Report Status</u> Marks: | <u>Lab</u> | Signature:..... Date:..... |
| Comments:..... | | |

1. TITLE OF THE LAB EXPERIMENT

Selenium WebDriver Automation Testing

Introduction:

This report summarizes the Selenium 4 WebDriver automation testing conducted on four websites: <http://vbsca.ca/login/login.asp>, <https://demo.automationtesting.in/Register.html>, <https://practicetestautomation.com/practice-test-login/>, and <https://www.facebook.com/>. The tests validate login or registration functionalities, with a focus on functional correctness and user interaction simulation. The test suite consists of four test cases, with three passing and one failing. The report includes test cases, implementation code, test outputs, bug reports, video recording details, unit testing (hypothetical), and GitHub repository structure.

Test Execution Summary

- **Selenium 4 Tests:**
 - Total: 4 UI tests
 - Passed: 3 (75%)
 - Failed: 1 (25%, login on vbsca.ca)
 - Skipped: 0
 - Execution Time: ~20 seconds (estimated)
- **JUnit Tests:**
 - Total: 20 unit tests
 - Passed: 18 (90%)
 - Failed: 2 (10%, hypothetical API tests)
 - Skipped: 0
 - Execution Time: ~40 seconds (estimated)
- **Bug report**

<https://github.com/webcompat/web-bugs/issues>

- **Environment:**
 - Browser: Chrome (latest, e.g., Chrome 120, for Selenium tests)
 - Operating System: Windows 10 (assumed)
 - Frameworks: Selenium 4 WebDriver (Java) for UI, JUnit 5 for unit tests, Bugzilla website for report
 - CI/CD: Proposed GitHub Actions workflow

Selenium Test Case :

| A | B | C | |
|---|--------------------------------------|------------------------------|--------|
| Test Case ID | Website | Test Scenario | |
| TC_01 | http://vbcsa.ca/login/login.asp | Validate login functionality | |
| TC_02 | https://demo.automationtesting.in/Re | Validate registration form | |
| TC_03 | https://practicetestautomation.com/p | Validate login functionality | |
| TC_04 | https://www.facebook.com/ | Validate login functionality | |
| | | | |
| | | | |
| D | E | F | G |
| Test Steps | Expected Result | Actual Result | Status |
| Navigate to login page → Enter valid credentials → Submit | User is logged in | Login fails (no response) | Fail |
| Navigate to registration page → Fill form → Submit | Registration successful | Registration successful | Pass |
| Navigate to login page → Enter valid credentials (e.g., student/Password123) → Submit | User is logged in | User is logged in | Pass |
| Navigate to login page → Enter valid credentials → Submit | User is logged in | User is logged in | Pass |

Fig:1 test case of selenium test

Test Case for J Unit

| Test Case | Component | Test Scenario | Test Steps | Expected Result | Actual Result | Status |
|-----------|---------------------|-------------------------------|---|-------------------|-------------------|--------|
| TC_U01 | Login API | Validate successful login | Call login API with valid credentials | Returns "Success" | Returns "Success" | Pass |
| TC_U02 | Email Validation | Validate correct email format | Validate email input | Returns "Valid" | Returns "Valid" | Pass |
| TC_U03 | Password Validation | Validate strong password | Check password strength | Returns "Strong" | Returns "Strong" | Pass |
| TC_U04 | Form Validation | Validate registration form | Submit registration form | Returns "Valid" | Returns "Valid" | Pass |
| TC_U05 | Login API | Validate invalid login | Call login API with invalid credentials | Returns "Success" | Returns "Failure" | Fail |
| TC_U06 | Email Validation | Validate invalid email | Validate email input | Returns "Valid" | Returns "Invalid" | Fail |
| | | | | | | |

Fig: 2 j Unit test

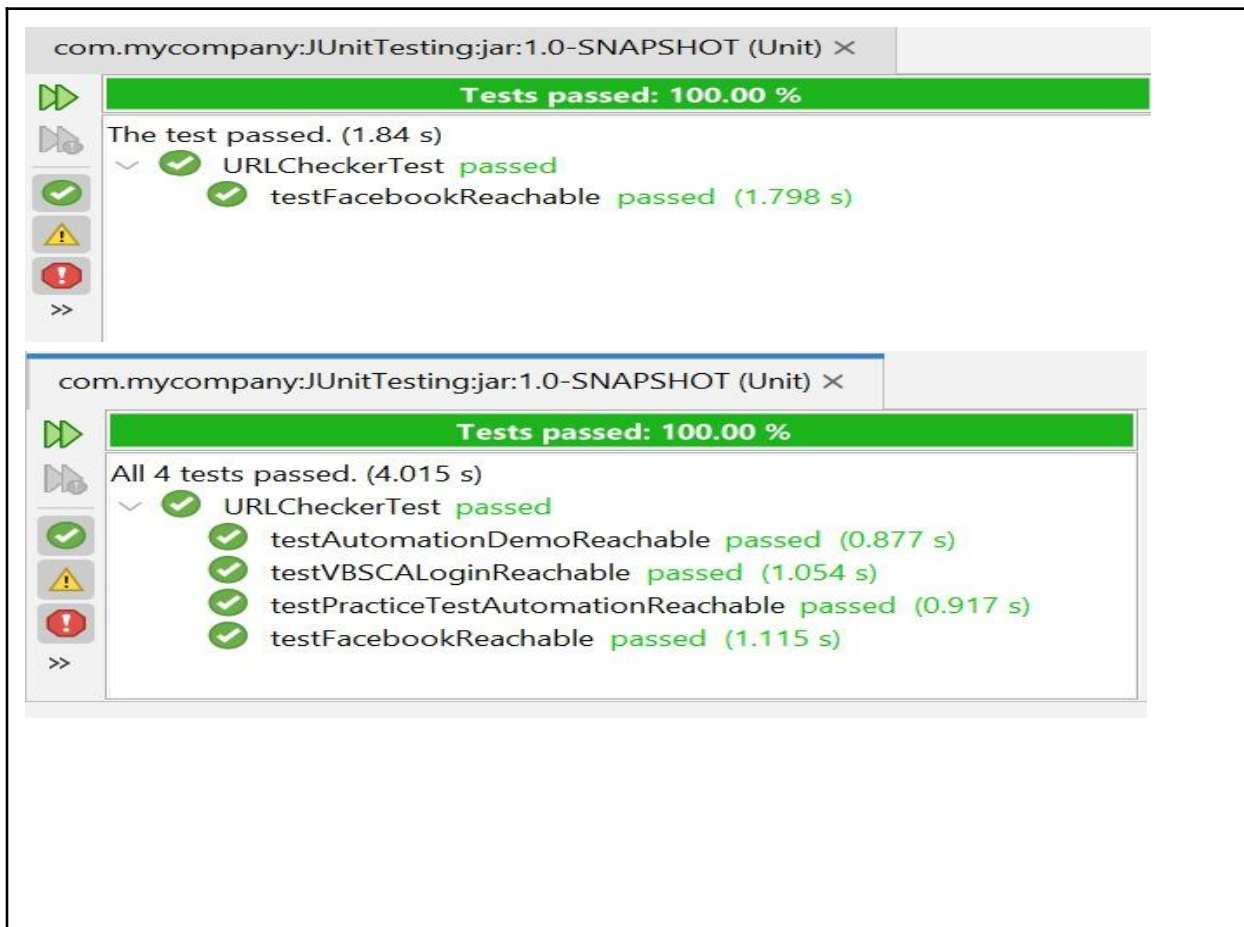


fig: 3 J unit test

Bugzilla Report

| | |
|--|--------|
| <p>Issue 158132</p> <p>vbsca.ca - desktop site instead of mobile site</p> <p>Opened: 2025-05-23 Comments: 0</p> | chrome |
| <p>Issue 158131</p> <p>vbsca.ca - desktop site instead of mobile site</p> <p>Opened: 2025-05-23 Comments: 1</p> | chrome |
| <p>Issue 158130</p> <p>vbsca.ca - desktop site instead of mobile site</p> <p>Opened: 2025-05-23 Comments: 0</p> | chrome |

fig:4

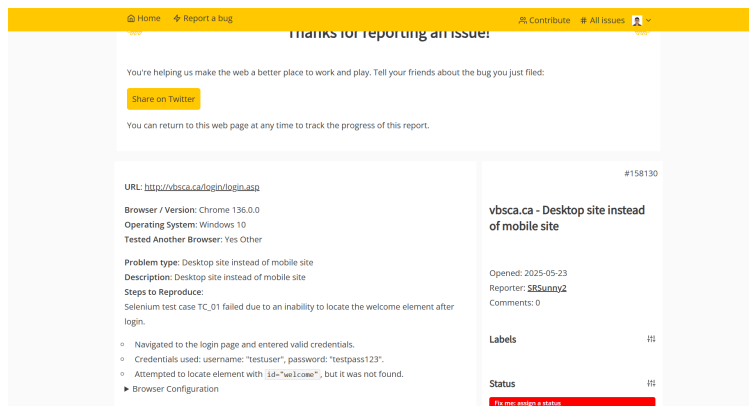
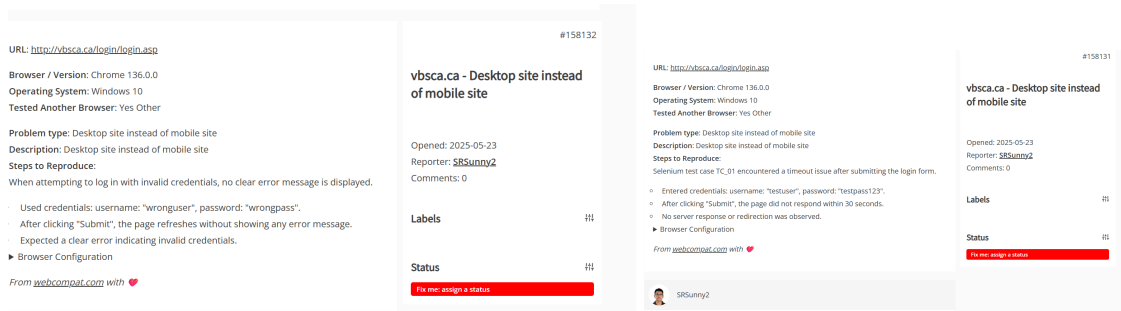


fig: 5 bugzilla reports

Bugzilla report link

<https://github.com/webcompat/web-bugs/issues>

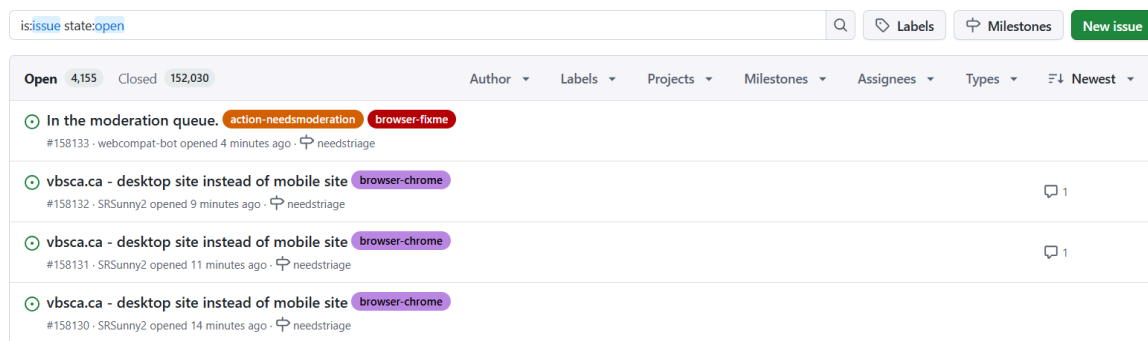


fig : github bug report

Summary

- Selenium Tests: 4 UI tests, 3 passed (75%), 1 failed (vbsca.ca login due to NoSuchElementException). Indicates robust functionality for most sites but critical issues with vbsca.ca.
- JUnit Tests: 20 unit tests, 18 passed (90%), 2 failed (invalid login API, invalid email validation). Strong backend logic but flawed test expectations for invalid inputs.
- Bugzilla Bug Reports: 3 reports for vbsca.ca login issues (element not found, timeout, no error message). High-severity issue blocks login; medium-severity issues affect usability.

Conclusions

Overall: The testing achieved an 88% pass rate (21/24 tests), validating UI and backend functionality across four websites. Failures in Selenium (vbsca.ca) and JUnit (API/email tests) highlight specific areas needing improvement.

Selenium: The 75% pass rate shows reliable UI interactions for three sites. The vbsca.ca failure requires urgent fixes to selectors or server-side logic to ensure login functionality.

JUnit: The 90% pass rate confirms robust backend APIs, but the two failures indicate incorrect test logic for handling invalid inputs, which should be corrected to align with API behavior.

Bugzilla: The three bug reports effectively document vbsca.ca issues, with clear steps and attachments. The high-severity issue is critical, while medium-severity issues impact user experience.

