

Login Functionality Coverage Report

Prepared By: William Crane

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1. Project Overview

This report comprehensively covers the **Login Functionality Testing Project**, detailing test scenarios, execution results, defects identified, and recommendations. The project's goal was to validate the reliability and usability of a basic login form, ensuring it meets functional requirements and provides a seamless user experience.

The project was executed using the following tools:

- **Selenium** for automation of test scenarios.
 - **TestRail** is used to document and manage test cases, results, and execution logs.
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2. Test Scenarios and Test Cases

The following test scenarios and test cases were executed to achieve maximum test coverage for the login functionality.

Scenario 1: Valid Login

Objective: Verify that valid credentials allow successful login.

- **Test Case 1.1:**
 - **Name:** Login with the correct username and password.
 - **Steps:**
 1. Navigate to the login page.
 2. Enter a valid username.
 3. Enter a valid password.
 4. Click the "Login" button.
 - **Expected Result:** The user is successfully logged in and redirected to the dashboard.
 - **Actual Result:** Passed.

Scenario 2: Invalid Login

Objective: Validate the system's behaviour with incorrect credentials.

- **Test Case 2.1:**
 - **Name:** Login with an incorrect password.
 - **Steps:**

- 1. Navigate to the login page.
 - 2. Enter a valid username.
 - 3. Enter an invalid password.
 - 4. Click the "Login" button.
- **Expected Result:** "Invalid username or password" error message is displayed.
- **Actual Result:** Failed. (Defect JIRA-101: Error message unclear.)
- **Test Case 2.2:**
 - **Name:** Login with an incorrect username.
 - **Steps:**
 - 1. Navigate to the login page.
 - 2. Enter an invalid username.
 - 3. Enter a valid password.
 - 4. Click the "Login" button.
 - **Expected Result:** "Invalid username or password" error message is displayed.
 - **Actual Result:** Passed.

Scenario 3: Field Validation

Objective: Ensure proper validation for input fields.

- **Test Case 3.1:**
 - **Name:** Login with blank fields.
 - **Steps:**
 - 1. Navigate to the login page.
 - 2. Leave the username and password fields blank.
 - 3. Click the "Login" button.
 - **Expected Result:** "Username and password are required" error message is displayed.
 - **Actual Result:** Failed. (Defect JIRA-102: No error message displayed.)
- **Test Case 3.2:**
 - **Name:** Enter only a username.
 - **Steps:**
 - 1. Navigate to the login page.
 - 2. Enter a valid username.
 - 3. Leave the password field blank.
 - 4. Click the "Login" button.
 - **Expected Result:** "Password is required" error message is displayed.
 - **Actual Result:** Passed.
- **Test Case 3.3:**
 - **Name:** Enter only a password.
 - **Steps:**
 - 1. Navigate to the login page.
 - 2. Leave the username field blank.
 - 3. Enter a valid password.
 - 4. Click the "Login" button.
 - **Expected Result:** "Username is required" error message is displayed.

- **Actual Result:** Passed.

Scenario 4: Usability Features

Objective: Check the functionality of additional features on the login page.

- **Test Case 4.1:**
 - **Name:** Verify the "Forgot Password" link.
 - **Steps:**
 1. Navigate to the login page.
 2. Click on the "Forgot Password" link.
 - **Expected Result:** User is redirected to the password recovery page.
 - **Actual Result:** Passed.
- **Test Case 4.2:**
 - **Name:** Verify "Remember Me" checkbox functionality.
 - **Steps:**
 1. Navigate to the login page.
 2. Enter valid credentials.
 3. Check the "Remember Me" checkbox.
 4. Log in and log out.
 5. Return to the login page.
 - **Expected Result:** Username is pre-filled in the username field.
 - **Actual Result:** Passed.

3. Defects Summary

Defect ID	Title	Description	Priority	Severity
API-101	Unclear Error Message for Password	Error message displayed for incorrect password does not provide sufficient user feedback.	Medium	Low
API-102	Missing Validation for Blank Fields	No error message appears when both fields are left blank.	High	High

4. Execution Summary

Test Scenario	Total Test Cases	Passed	Failed
Valid Login	1	1	0
Invalid Login	2	1	1
Field Validation	3	2	1

5. Recommendations

1. **Resolve Defects:** Fix the identified issues (API-101, API-102) to enhance user experience and reliability.
 2. **Enhance Test Coverage:** Include test cases for edge cases (e.g., SQL injection in username or password fields) and non-functional requirements like performance testing.
 3. **Conduct Regression Testing:** Re-test the failed test cases and ensure that fixes do not introduce new issues.
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6. Conclusion

This project successfully validated the primary functionality and usability of the login page. While most test cases passed, the uncovered defects highlight areas for improvement. Addressing these will help enhance the application's quality and user experience.