Test Plan

Online Registration Form

Masaid Zeb

(SQA Engineer)

masaid.zeb2244@gmail.com

03409010340

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1. Introduction

This test plan provides a comprehensive framework for the testing of the online registration form. It defines the testing Scope and approach, identifying the resources, establishing a detailed schedule and efficient testing process. The primary objective is to verify that the registration form performs as expected i.e validating that all user inputs are correctly processed, the form handles error messages appropriately, and that data submissions to the server.

2. Objectives

1) Verify that the registration form collects and validates user information accurately.
2) Verify that the form fields have functionality as expected.
3) Verify the error messages for incorrect inputs.
4) Verify the successful form submission
5) Verify the successful data Submission to the server.

3. Scope

The scope of this test plan covers all aspects of the online registration form to verify it functions as expected, provides appropriate feedback to users, and maintains better UI/UX standards. The detailed scope includes:

Functional Testing

1. **Full Name Field:**

   - Verify that the field accepts valid full names.
   - Ensure the field rejects invalid inputs i.e numbers, special characters etc.
   - Confirm the checks for maximum and minimum character limits.
   - Confirm that the field is Mandatory and cannot be left empty.

2. **Email Address Field:**

   - Verify that the field requires a valid email format i.e user@example.com
   - Ensure the field rejects invalid email formats i.e missing '@' sign
   - Confirm that the email field is Mandatory and cannot be left empty.

3. **Password Field:**

   - Verify that the field requires a minimum of 8 characters.
   - Ensure the password strength requirements are enforced (combination of letters, numbers, and special characters).
   - Confirm the password is masked when entered.
   - Confirm that the field is Mandatory and cannot be left empty.

4. **Confirm Password Field:**

   - Verify that the field requires input to match the Password field.
   - Ensure an error message is displayed if the passwords do not match.
   - Confirm that the field is Mandatory and cannot be left empty.

5. **Date of Birth Field:**

   - Verify that the field does not accept future dates.
   - Verify that the field follows the required date format i.e MM/DD/YYYY or YYYY-MM-DD.
   - Confirm that the field is Mandatory and cannot be left empty.

6. **Gender Field:**

- Verify that one of the gender options (Male, Female, Other) must be selected.
- Ensure the field defaults to an unselected state and requires user input.

7. **Newsletter Subscription Field:**

- Verify that the field can be toggled between Yes and No.
- Ensure the default value is No and the user can change it.

8. **Submit Button:**

- Verify that the Submit button is disabled until all required fields are correctly filled out.
- Ensure the form submits successfully with valid inputs and displays a success message.

Validation of Error Messages

1. **Error Handling:**

- Verify that appropriate error messages are displayed for each field when invalid data is entered.
- Ensure error messages are clear, concise, and user-friendly.
- Confirm error messages are displayed in real-time and upon form submission.

2. **Specific Error Cases:**

- Test error messages for empty required fields.
- Verify error messages for invalid email formats.
- Ensure error messages for passwords that do not meet strength requirements.
- Confirm error messages for non-matching passwords in the Confirm Password field.
- Verify error messages for invalid Date of Birth entries.

Usability Testing

1. **Form Layout:**

- Ensure the form layout is easy to navigate.
- Confirm that fields are logically ordered .

2. **Field Navigation:**

- Ensure that users can navigate the form using both mouse and keyboard.

Compatibility Testing

1. **Cross-Browser Compatibility:**
   o Verify that the form functions correctly on the latest versions of Chrome, Firefox, and Edge.

2. **Cross-Device Compatibility:**
   o Verify that the form is responsive and works correctly on various devices (desktop, mobile, tablets).

4. Test Environment

Browsers

- **Chrome**

    - Latest stable version
    - Ensure the browser is updated to the latest version before testing

1. **Firefox**

    - Latest stable version
    - Ensure the browser is updated to the latest version before testing

2. **Edge**

    - Latest stable version
    - Ensure the browser is updated to the latest version before testing

Devices

1. **Desktop**

    - Operating System: Windows 10 (latest update)
    - Screen Resolutions: Multiple resolutions (e.g., 1920x1080, 1366x768, 1280x1024)
    - Hardware: Standard modern desktop hardware (e.g., Intel i5/i7 processor, 8GB+ RAM)

2. **Mobile**
    - **Android:**

        - Operating System: Latest version of Android
        - Devices: Various models (e.g., Samsung Galaxy S21, Google Pixel 6)

    - **iOS:**

        - Operating System: Latest version of iOS
        - Devices: Various models (e.g., iPhone 13, iPhone SE)

Tools

1. **Selenium WebDriver**

    - Version: Latest stable version
    - Language: Python
    - Framework: Pytest for structuring and running test cases
    - Usage: Automate browser actions for functional and compatibility testing

2. **Pytest**

- Version: Latest stable version
- Integration with Selenium for running automated tests
- Usage: Structuring test cases, managing test suites, and generating test reports

3. **Postman/JMeter**
   - **Postman:**

     - Version: Latest stable version
     - Usage: Testing API endpoints, validating data submission, and response handling

   - **JMeter:**

     - Version: Latest stable version
     - Usage: Performance testing to ensure the registration form handles multiple simultaneous submissions without degradation

5. Test Data

- **Valid Data:**

  - Full Name: "Masaid zeb"
  - Email Address: "Masaid.zeb2244@gmail.com"
  - Password: "Masaid@123"
  - Confirm Password: "Masaid@123"
  - Date of Birth: "1999-12-09"
  - Gender: "Male"
  - Newsletter Subscription: "NO"

- **Invalid Data:**

  - Full Name: "A23@#34"
  - Email Address: "zeb.com"
  - Password: "1234567"
  - Confirm Password: not matching Password
  - Date of Birth: "2025-12-09" (future date)
  - Gender: "Male"
  - Newsletter Subscription: "No"

6. Test Scenarios

1. Field Validation

1.1. Full Name Field Validation

- **Valid Inputs:**

    - Input: "Masaid Zeb"
    - Verify that the field accepts letters and spaces.

- **Invalid Inputs:**

    - Input: "A23@#34"
    - Input: ""
    - Verify that appropriate error messages are displayed for numbers, special characters, and empty input.

1.2. Email Address Field Validation

- **Valid Inputs:**

    - Input: "Masaid.zeb2244@gmail.com"
    - Verify that the field accepts valid email formats.

- **Invalid Inputs:**

    - Input: "zeb.com"
    - Input: "Masaid.zeb2244@"
    - Input: ""
    - Verify that appropriate error messages are displayed for missing '@', missing domain, and empty input.

1.3. Password Field Validation

- **Valid Inputs:**

    - Input: "Masaid@123"
    - Verify that the field accepts passwords with at least 8 characters.

- **Invalid Inputs:**

    - Input: "1234567"
    - Input: ""

- Verify that appropriate error messages are displayed for passwords less than 8 characters and empty input.

1.4. Confirm Password Field Validation

- **Valid Inputs:**

  - Input: Password: "Masaid@123", Confirm Password: "Masaid@123"
  - Verify that the field matches the Password field.

- **Invalid Inputs:**

  - Input: Password: "Masaid@123", Confirm Password: "Masaid@124"
  - Input: ""
  - Verify that appropriate error messages are displayed for non-matching passwords and empty input.

1.5. Date of Birth Field Validation

- **Valid Inputs:**

  - Input: "1999-12-09"
  - Verify that the field accepts valid date formats.

- **Invalid Inputs:**

  - Input: "2025-12-09"
  - Input: "12/09/1999"
  - Input: ""
  - Verify that appropriate error messages are displayed for future dates, incorrect formats, and empty input.

1.6. Gender Field Validation

- **Valid Inputs:**

  - Selection: "Male"
  - Verify that one of the gender options can be selected.

- **Invalid Inputs:**

  - No selection
  - Verify that an appropriate error message is displayed when no option is selected.

1.7. Newsletter Subscription Field Validation

- **Valid Inputs:**

- Selection: "No"
- Verify that the field can be toggled between Yes and No.

- **Invalid Inputs:**

  - Ensure the default value is "No" and verify toggling functionality.

1.8. Submit Button Validation

- **Disabled State:**

  - Verify that the Submit button is disabled until all required fields are correctly filled out.

2. Password Validation

2.1. Minimum Length Validation

- **Valid Input:**

  - Input: "Masaid@123"
  - Verify that the field accepts passwords with at least 8 characters.

- **Invalid Input:**

  - Input: "1234567"
  - Verify that an appropriate error message is displayed for passwords less than 8 characters.

2.2. Confirm Password Matching

- **Valid Inputs:**

  - Input: Password: "Masaid@123", Confirm Password: "Masaid@123"
  - Verify that the field matches the Password field.

- **Invalid Inputs:**

  - Input: Password: "Masaid@123", Confirm Password: "Masaid@124"
  - Verify that an appropriate error message is displayed for non-matching passwords.

3. Email Validation

3.1. Valid Email Formats

- **Valid Inputs:**

- Input: "Masaid.zeb2244@gmail.com"
- Verify that the field accepts valid email formats.

3.2. Invalid Email Formats

- **Invalid Inputs:**

  - Input: "zeb.com"
  - Input: "Masaid.zeb2244@"
  - Verify that appropriate error messages are displayed for missing '@' and missing domain.

4. Date of Birth Validation

4.1. Future Date Validation

- **Invalid Input:**

  - Input: "2025-12-09"
  - Verify that an appropriate error message is displayed for future dates.

4.2. Date Format Validation

- **Valid Input:**

  - Input: "1999-12-09"
  - Verify that the field accepts the correct date format.

- **Invalid Input:**

  - Input: "12/09/1999"
  - Verify that an appropriate error message is displayed for incorrect date formats.

5. Gender Selection

5.1. Valid Selections

- **Valid Inputs:**

  - Selection: "Male"
  - Verify that one of the gender options can be selected.

5.2. No Selection

- **Invalid Input:**

  - No selection

- Verify that an appropriate error message is displayed when no option is selected.

6. Newsletter Subscription

6.1. Toggle Functionality

- **Valid Inputs:**
  - Selection: "No"
  - Verify that the field can be toggled between Yes and No.

7. Form Submission

7.1. Successful Submission

- **Valid Inputs:**

  - Full Name: "Masaid Zeb"
  - Email Address: "Masaid.zeb2244@gmail.com"
  - Password: "Masaid@123"
  - Confirm Password: "Masaid@123"
  - Date of Birth: "1999-12-09"
  - Gender: "Male"
  - Newsletter Subscription: "No"
  - Verify that the form can be successfully submitted and a success message is displayed.

7.2. Data Transmission

- **Valid Input:**

  - Full Name: "Masaid Zeb"
  - Email Address: "Masaid.zeb2244@gmail.com"
  - Password: "Masaid@123"
  - Confirm Password: "Masaid@123"
  - Date of Birth: "1999-12-09"
  - Gender: "Male"
  - Newsletter Subscription: "No"
  - Verify that data is correctly sent to the server using tools like Postman or browser developer tools to inspect network requests.

7.3. Confirmation Email

- **Valid Input:**

  - Full Name: "Masaid Zeb"
  - Email Address: "Masaid.zeb2244@gmail.com"
  - Password: "Masaid@123"
  - Confirm Password: "Masaid@123"

- Date of Birth: "1999-12-09"
- Gender: "Male"
- Newsletter Subscription: "No"
- Verify that a confirmation email is sent to the user after successful registration (if applicable).

7. Test Execution Schedule

Week 1: Preparation of test environment and test data

- **Start Date:** July 15, 2024 (Monday)
- **End Date:** July 22, 2024 (Monday)

Week 2: Execution of functional and validation tests

- **Start Date:** July 23, 2024 (Tuesday)
- **End Date:** July 30, 2024 (Tuesday)

Week 3: Execution of compatibility and usability tests

- **Start Date:** July 31, 2024 (Wednesday)
- **End Date:** August 7, 2024 (Wednesday)

Week 4: Execution of regression testing

- **Start Date:** August 8, 2024 (Thursday)
- **End Date:** August 16, 2024 (Friday)

Summary

This schedule ensures that all phases of the testing process are conducted on weekdays, excluding weekends and the public holiday on August 14, 2024.

8. Risks and Assumptions

Risks:

- **Delays in environment setup or tool issues:**

  - Technical issues with setting up the test environment or problems with testing tools could cause delays.

- **Limited time for comprehensive testing:**

  - Time constraints may limit the extent of testing, Leads to missing critical defects.

- **Changes in requirements:**

  - Late changes to requirements can impact the testing schedule and the accuracy of test cases.

- **Resource constraints:**

  - Limited availability of testing resources, such as team members or necessary tools, could impact testing progress.

- **Browser and device compatibility issues:**

  - Inconsistent behavior across different browsers and devices may introduce additional complexity and risks.

- **Performance issues:**

  - The registration form may face performance bottlenecks under high load conditions, which might not be identified if performance testing is not planned.

- **Delayed defect resolution:**

  - If defects are not addressed promptly by the development team, it can impact the overall testing schedule and release timeline.

Assumptions:

- **All necessary documentation and requirements are provided:**

  - It is assumed that the project documentation and requirements are complete and accurate.

- **The development team will address defects promptly:**

  - It is assumed that the development team is available and will prioritize and fix defects in a timely manner.

- **The test environment mirrors the production environment:**

  - It is assumed that the test environment is a close replica of the production environment to ensure accurate and relevant test results.

- **Access to necessary tools and resources:**

  - It is assumed that all required tools and resources, including software licenses and testing devices, will be available throughout the testing process.

- **Stable application build:**

  - It is assumed that the application build provided for testing is stable and ready for testing.

- **Adequate time allocation for each testing phase:**

  - It is assumed that each testing phase will be allocated sufficient time to complete all planned test activities.

- **Clear communication channels:**

  - It is assumed that there are established and efficient communication channels between the testing team and other stakeholders.