

TEST PLAN DOCUMENT
FOR
Registration Form

Version 1.0

By

Ahmed Habib Pandit

Table of Contents

1. Introduction:	3
2. Objectives:	3
3. Scope:	3
3.1. Components to be tested:	3
3.2. Excluded components:	3
4. Resource and environment needs:	4
4.1. Testing Tools:	4
4.2. Test Environments:	4
5. Test Data:	4
5.1. Valid Test Data:	4
5.2. Invalid Test Data:	5
5.3. Edge case data:	5
6. Test Scenarios:	6
7. Test schedule:	7
8. Risks and Assumptions	8
8.1. Risks:	8
8.2. Assumptions	8
9. Scenario writing	8
9.1. Positive Scenario:	11
9.2. Negative Scenario:	12
10. Test Writing:	14
10.1. Positive Scenario 1: Successful registration with valid data	14
10.2. Positive Scenario 2: Successful registration with optional field left blank	15

1. Introduction:

The purpose of this documentation is to verify the functionality and usability of a registration form for a website by passing it through the full cycle of automated testing.

This document describes approaches and methodologies that will apply to unit, integration and functional testing of the registration form. It includes objectives, scope, test environment, test data, test scenarios, test execution schedule and risk and assumption associated with the testing of registration form. This test plan is intended for project managers, product developers and QA engineers.

2. Objectives:

Specific Objectives of the test plan document include:

1. Validate input fields
2. Verify appropriate error messages
3. Ensure the correct submission and processing of data

3. Scope:

3.1. Components to be tested:

- Full Name input field
- Email Address input field
- Password input field (at least 8 characters)
- Confirm Password input field
- Date of Birth
- Gender selection (Male/Female/Other)
- Newsletter Subscription selection (Yes/No)
- Submit Button

3.2. Excluded components:

- Performance validation of the form
- User Interface design assessments

4. Resource and environment needs:

4.1. Testing Tools:

Process	Tool
Test case creation	Excel
Test case tracking and management	Jira
Test case execution	Selenium

4.2. Test Environments:

4.2.1. Support level 1:

- Windows 11,10: Edge, Chrome (latest), Firefox (latest), Safari (latest)
- Mac OS X: Chrome (latest), Firefox (latest), Safari (latest)
- Linux Ubuntu: Chrome (latest), Firefox (latest)

4.2.2. Support level 2:

- Windows 7: IE 9+, Chrome (latest), Firefox (latest), Safari (latest)
- Windows XP: IE 8, Chrome (latest), Firefox (latest), Safari (latest)

4.2.3. Support level 3:

- Anything else

5. Test Data:

5.1. Valid Test Data:

	Full Name	Email Address	Password	Confirm Password	Date of Birth	Gender	Newsletter Subscription	Execution Preconditions
1	John Doe	john.doe@example.com	Password123!	Password123!	1990-01-01	Male	Yes	None
2	Jane Smith	jane.smith@example.com	SecurePass@2024	SecurePass@2024	1985-05-15	Female	No	None

5.2. Invalid Test Data:

	Full Name	Email Address	Password	Confirm Password	Date of Birth	Gender	Newsletter Subscription	Reason for Invalidity	Execution Preconditions
1	John Doe	john.doe@invalid	Password123!	Password123!	1990-01-01	Male	Yes	Invalid Email Format	None
2	Jane Smith	jane.smith@example.com	SecurePass@2024	SecurePass2024	1985-05-15	Female	No	Password Mismatch	None

5.3. Edge case data:

	Full Name	Email Address	Password	Confirm Password	Date of Birth	Gender	Newsletter Subscription	Execution Preconditions
1	Boundary Case	boundary.case@example.com	Passwr1	Passwr1	1992-07-19	Male	Yes	None
2	Long Email User	user.with.a.very.long.email.address@example.com	LongEmailPass123!	LongEmailPass123!	1979-03-27	Female	No	None

6. Test Scenarios:

Test Scenario ID	Test Scenario Description	Test Steps	Expected Results
TS-01	<p>Input Field Validation:</p> <p>Validate all mandatory fields accept valid input formats and reject invalid formats.</p>	<p>1. Enter valid data in all mandatory fields (Full Name, Email Address, Password, Confirm Password, Date of Birth).</p> <p>2. Enter invalid data in one field (e.g., invalid email format).</p>	<p>- All valid data is accepted.</p> <p>- Invalid data triggers appropriate error message.</p>
TS-02	<p>Optional Field Behavior:</p> <p>Test behavior of optional fields (Gender, Newsletter Subscription) when left blank or selected.</p>	<p>1. Leave optional fields (Gender, Newsletter Subscription) blank and submit form.</p> <p>2. Select options for optional fields and submit form.</p>	<p>- Form submission is successful with blank optional fields.</p> <p>- Selected options are processed correctly without affecting mandatory fields.</p>
TS-03	<p>Error Message Verification:</p> <p>Ensure appropriate error messages are displayed for each invalid input format.</p>	<p>1. Enter invalid email format in Email Address field.</p> <p>2. Enter mismatched passwords in Password and Confirm Password fields.</p>	<p>- Error message specific to invalid email format is displayed.</p> <p>- Error message for password mismatch is shown.</p>
TS-04	<p>Submission and Data Processing:</p> <p>Test submission of form with valid data and verify correct data processing.</p>	<p>1. Enter valid data in all fields and submit the form.</p> <p>2. Verify data processing on the server.</p>	<p>- Form submission is successful.</p> <p>- Data is correctly processed and stored.</p>
TS-05	<p>Edge Case Testing:</p> <p>Validate form's response to edge cases (e.g., very long input, unusual characters in password).</p>	<p>1. Enter very long input in fields (e.g., Full Name, Email Address).</p> <p>2. Use unusual characters in Password field.</p>	<p>- Form handles very long inputs gracefully.</p> <p>- Password with unusual characters is accepted and processed correctly.</p>

TS-06	<p>Boundary Testing:</p> <p>Verify form's behavior at boundaries of input ranges or conditions.</p>	<p>1. Enter data at boundaries of date range (e.g., minimum and maximum valid dates).</p> <p>2. Test input at character limits for fields (e.g., Email Address).</p>	<p>- Form accepts inputs at boundaries without errors.</p> <p>-Characters at limits are processed correctly.</p>
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7. Test schedule:

Task Name	Start	Finish	Effort	Comments
Test Planning	14/07	14/07	30 minutes	Define scope, objectives, and approach
Review Requirements documents	14/07	14/07	1 hour	Ensure alignment with test objectives
Create Test Basis	14/07	14/07	30 minutes	Document test scenarios and data
Set Up Test Environment	14/07	14/07	20 minutes	Prepare browsers and tools
Develop Automated Tests	14/07	14/07	20 minutes	Implement Selenium scripts
Execute Functional Tests	14/07	14/07	5 minutes	Run tests on all specified browsers
Integration Testing	14/07	14/07	10 minutes	Validate backend integration
Edge Case and Boundary Testing	14/07	14/07	20 minutes	Test extreme and boundary conditions
Review and Document Results	14/07	14/07	5 minutes	Compile test reports and findings
Finalize Test Documentation	14/07	14/07	30 minutes	Complete test plan and summaries

8. Risks and Assumptions

8.1. Risks:

- **Strict Deadline:** Deadline till 03:00 pm of 15/7/24 may lead to rushed testing.
- **Security Vulnerabilities:** Potential risks such as SQL injection or XSS attacks could be injected through the form.
- **Browser Compatibility:** Differences in browser behavior may affect form functionality.

8.2. Assumptions

- **Stable Test Environment:** Assumes that the test environment remains stable throughout testing.
- **Access to Test Data:** Assumes availability of both valid and invalid test data for comprehensive testing.
- **Timely Feedback:** Assumes timely feedback and collaboration from development team for issue resolution.

9. Scenario writing

Test Case ID	TC-01
Test Case Description	Validate that all mandatory fields accept valid input formats and reject invalid formats.
Preconditions	The registration form is accessible and displayed in a web browser.
Test Steps	<ol style="list-style-type: none">1. Enter a valid full name in the "Full Name" field (e.g., "John Doe").2. Enter a valid email address in the "Email Address" field (e.g., "john.doe@example.com").3. Enter a valid password in the "Password" field (e.g., "Password123!").4. Enter the same password in the "Confirm Password" field (e.g., "Password123!").5. Enter a valid date of birth in the "Date of Birth" field (e.g., "1990-01-01").

	<p>6. Leave the optional fields (Gender and Newsletter Subscription) blank.</p> <p>7. Submit the form.</p>
Expected Results	<p>The form should be submitted successfully.</p> <p>A confirmation message should be displayed indicating that the registration was successful.</p>

Test Case ID	TC-02
Test Case Description	Ensure appropriate error messages are displayed for each invalid input format.
Preconditions	The registration form is accessible and displayed in a web browser.
Test Steps	<p>1. Enter an invalid email address in the "Email Address" field (e.g., "john.doe@invalid").</p> <p>2. Enter mismatched passwords in the "Password" and "Confirm Password" fields (e.g., "Password123!" and "Password321!").</p> <p>3. Submit the form.</p>
Expected Results	<p>An error message specific to the invalid email format is displayed (e.g., "Please enter a valid email address").</p> <p>An error message for the password mismatch is shown (e.g., "Passwords do not match").</p>

Test Case ID	TC-03
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Test Case Description	Validate the form's response to edge cases (e.g., very long input, unusual characters in the password).
Preconditions	The registration form is accessible and displayed in a web browser.
Test Steps	<ol style="list-style-type: none"> 1. Enter a very long full name in the "Full Name" field (e.g., "Alexander Maximillian Augustus Theodore Jonathan Smith-Jones III"). 2. Enter a valid email address in the "Email Address" field (e.g., "alexander.smith@example.com"). 3. Enter a password with unusual characters in the "Password" field (e.g., "VerySecurePassword!@#123"). 4. Enter the same password in the "Confirm Password" field (e.g., "VerySecurePassword!@#123"). 5. Enter a valid date of birth in the "Date of Birth" field (e.g., "2000-12-31"). 6. Select "Male" for the Gender field. 7. Select "No" for the Newsletter Subscription. 8. Submit the form.
Expected Results	<p>The form should handle the very long full name gracefully without errors.</p> <p>The password with unusual characters should be accepted and processed correctly.</p> <p>The form should be submitted successfully with all entered data.</p>

9.1. Positive Scenario:

Scenario ID	Scenario Description	Steps	Expected Outcome
POS-01	Successful Registration with Valid Data	<ol style="list-style-type: none">1. Open the registration form.2. Enter a valid full name in the "Full Name" field (e.g., "John Doe").3. Enter a valid email address in the "Email Address" field (e.g., "john.doe@example.com").4. Enter a valid password in the "Password" field (e.g., "Password123!").5. Enter the same password in the "Confirm Password" field (e.g., "Password123!").6. Enter a valid date of birth in the "Date of Birth" field (e.g., "1990-01-01").7. Select "Male" for the Gender field.8. Select "Yes" for the Newsletter Subscription.9. Submit the form.	<p>The form should be submitted successfully.</p> <p>A confirmation message is displayed indicating successful registration.</p> <p>User is redirected to the welcome page.</p> <p>Data is stored correctly in the database.</p>
POS-02	Successful Registration with Optional Fields Left Blank	<ol style="list-style-type: none">1. Open the registration form.2. Enter a valid full name in the "Full Name" field (e.g., "Jane Smith").3. Enter a valid email address in the "Email Address" field (e.g., "jane.smith@example.com").4. Enter a valid password in the "Password" field (e.g., "SecurePass@2024").	<p>The form should be submitted successfully.</p> <p>A confirmation message is displayed indicating successful registration.</p> <p>User is redirected to the welcome page.</p>

		<p>5. Enter the same password in the "Confirm Password" field (e.g., "SecurePass@2024").</p> <p>6. Enter a valid date of birth in the "Date of Birth" field (e.g., "1985-05-15").</p> <p>7. Leave the Gender field blank.</p> <p>8. Leave the Newsletter Subscription field blank.</p> <p>9. Submit the form.</p>	Data is stored correctly in the database.
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9.2. Negative Scenario:

Scenario ID	Scenario Description	Steps	Expected Outcome
NEG-01	Registration with Invalid Email Format	<p>1. Open the registration form.</p> <p>2. Enter a valid full name in the "Full Name" field (e.g., "John Doe").</p> <p>3. Enter an invalid email address in the "Email Address" field (e.g., "john.doe@invalid").</p> <p>4. Enter a valid password in the "Password" field (e.g., "Password123!").</p> <p>5. Enter the same password in the "Confirm Password" field (e.g., "Password123!").</p> <p>6. Enter a valid date of birth in the "Date of Birth" field (e.g., "1990-01-01").</p>	The form should not be submitted. An error message specific to the invalid email format is displayed (e.g., "Please enter a valid email address"). User remains on the registration form page with entered data present for corrections.

		<p>7. Select "Male" for the Gender field.</p> <p>8. Select "Yes" for the Newsletter Subscription.</p> <p>9. Submit the form.</p>	
NEG-02	Registration with Password Mismatch	<p>1. Open the registration form.</p> <p>2. Enter a valid full name in the "Full Name" field (e.g., "Jane Smith").</p> <p>3. Enter a valid email address in the "Email Address" field (e.g., "jane.smith@example.com").</p> <p>4. Enter a valid password in the "Password" field (e.g., "SecurePass@2024").</p> <p>5. Enter a different password in the "Confirm Password" field (e.g., "SecurePass2024").</p> <p>6. Enter a valid date of birth in the "Date of Birth" field (e.g., "1985-05-15").</p> <p>7. Select "Female" for the Gender field.</p> <p>8. Select "No" for the Newsletter Subscription.</p> <p>9. Submit the form.</p>	<p>The form should not be submitted.</p> <p>An error message for the password mismatch is displayed (e.g., "Passwords do not match").</p> <p>User remains on the registration form page with entered data present for corrections.</p>

10. Test Writing:

10.1. Positive Scenario 1: Successful registration with valid data

```
from selenium import webdriver

from selenium.webdriver.common.by import By
from selenium.webdriver.common.keys import Keys
from selenium.webdriver.support.ui import WebDriverWait
from selenium.webdriver.support import expected_conditions as EC
import time


# Set up the WebDriver (Chrome in this case)
driver = webdriver.Chrome()


try:


    # Open the registration form
    driver.get("http://example.com/registration")


    # Fill out the form
    driver.find_element(By.ID, "full_name").send_keys("John Doe")
    driver.find_element(By.ID, "email").send_keys("john.doe@example.com")
    driver.find_element(By.ID, "password").send_keys("Password123!")
    driver.find_element(By.ID, "confirm_password").send_keys("Password123!")
    driver.find_element(By.ID, "dob").send_keys("1990-01-01")
    driver.find_element(By.ID, "gender").send_keys("Male")
    driver.find_element(By.ID, "newsletter").send_keys("Yes")


    # Submit the form
```

```
driver.find_element(By.ID, "submit").click()

# Wait for the confirmation message
WebDriverWait(driver, 10).until(
    EC.presence_of_element_located((By.ID, "confirmation_message"))
)

# Verify the confirmation message
confirmation_message = driver.find_element(By.ID, "confirmation_message").text
assert "Registration successful" in confirmation_message

print("Test Case POS-01 Passed")

finally:

    # Close the browser
    driver.quit()
```

10.2. Positive Scenario 2: Successful registration with optional field left blank

```
from selenium import webdriver

from selenium.webdriver.common.by import By
from selenium.webdriver.common.keys import Keys
from selenium.webdriver.support.ui import WebDriverWait
from selenium.webdriver.support import expected_conditions as EC

import time

# Set up the WebDriver (Chrome in this case)
driver = webdriver.Chrome()
```

try:

```
# Open the registration form
```

```
driver.get("http://example.com/registration")
```

```
# Fill out the form
```

```
driver.find_element(By.ID, "full_name").send_keys("Jane Smith")
```

```
driver.find_element(By.ID, "email").send_keys("jane.smith@example.com")
```

```
driver.find_element(By.ID, "password").send_keys("SecurePass@2024")
```

```
driver.find_element(By.ID, "confirm_password").send_keys("SecurePass@2024")
```

```
driver.find_element(By.ID, "dob").send_keys("1985-05-15")
```

```
# Leave optional fields blank and submit the form
```

```
driver.find_element(By.ID, "submit").click()
```

```
# Wait for the confirmation message
```

```
WebDriverWait(driver, 10).until(
```

```
    EC.presence_of_element_located((By.ID, "confirmation_message"))
```

```
)
```

```
# Verify the confirmation message
```

```
confirmation_message = driver.find_element(By.ID, "confirmation_message").text
```

```
assert "Registration successful" in confirmation_message
```

```
print("Test Case POS-02 Passed")
```

finally:

```
# Close the browser
```

```
driver.quit()
```