Test Task: Documentation and Test Scenario Identification

**Test Plan Outline for Online Registration Form**

**1. Introduction**

This test plan outlines the strategy and approach for testing the online registration form for the website. The registration form collects user information including Full Name, Email Address, Password, Confirm Password, Date of Birth, Gender, and Newsletter Subscription preferences. The form is expected to validate inputs, display appropriate error messages, and submit data to the server upon successful completion.

**2. Objectives**

* To ensure the registration form functions as expected.
* To verify that the form correctly validates user inputs.
* To ensure appropriate error messages are displayed for invalid inputs.
* To confirm that data is submitted to the server successfully upon correct form completion.
* To validate that the user receives a confirmation message upon successful registration.

**3. Scope**

* Functional Testing: Verify all form fields accept valid input and reject invalid input.
* Usability Testing: Ensure the form is user-friendly and intuitive.
* Security Testing: Confirm that sensitive data like passwords are securely handled.
* Compatibility Testing: Check the form’s performance across different browsers and devices.

**4. Test Environment**

* **Browsers**: Chrome, Firefox, Safari, Edge
* **Devices**: Desktop, Tablet, Mobile
* **Operating Systems**: Windows, macOS, iOS, Android
* **Test Server**: A dedicated test server with the same configuration as the production environment.

**5. Test Data**

* **Valid Data**:
  + Full Name: "John Doe"
  + Email Address: "john.doe@example.com"
  + Password: "Password123!"
  + Confirm Password: "Password123!"
  + Date of Birth: "1990-01-01"
  + Gender: "Male"
  + Newsletter Subscription: "Yes"
* **Invalid Data**:
  + Full Name: ""
  + Email Address: "invalid email"
  + Password: "short"
  + Confirm Password: "different"
  + Date of Birth: "2025-01-01"
  + Gender: ""
  + Newsletter Subscription: ""

**6. Test Scenarios**

1. **Positive Scenarios**:
   * Successfully submitted the form with all valid inputs.
   * Register with and without subscribing to the newsletter.
   * Verify the success message upon form submission.
2. **Negative Scenarios**:
   * Submit the form with each required field left empty.
   * Enter an invalid email format.
   * Enter a password with less than 8 characters.
   * Enter mismatched passwords.
   * Enter a future date for Date of Birth.
   * Submit the form without selecting a gender.
   * Verify error messages for each invalid input.
3. **Boundary Testing**:
   * Enter the maximum character limit for Full Name.
   * Enter the minimum and maximum valid dates for Date of Birth.
4. **Usability Testing**:
   * Check the alignment and visibility of all form fields.
   * Verify the tab order for form fields.
   * Confirm that the form can be submitted using the Enter key.
5. **Security Testing**:
   * Ensure passwords are masked when typed.
   * Check for SQL injection vulnerabilities in form inputs.
6. **Compatibility Testing**:
   * Test the form on various browsers and devices for compatibility.

**7. Test Execution Schedule**

* **Test Planning and Preparation**: July 1 - July 7
* **Test Case Development**: July 8 - July 14
* **Test Environment Setup**: July 15 - July 16
* **Test Execution**: July 17 - July 21
* **Bug Reporting and Fix Verification**: July 22 - July 25
* **Final Testing and Sign-Off**: July 26 - July 28

**8. Risks and Assumptions**

* **Risks**:
  + Delays in environment setup or server availability.
  + Changes in requirements during the testing phase.
  + Unavailability of testing resources (e.g., devices, browsers).
* **Assumptions**:
  + The requirements for the registration form are finalized and will not change during the testing phase.
  + Test environment mirrors the production environment.
  + All necessary resources and tools for testing are available.
  + Adequate time is provided for bug fixing and retesting.

### Test Cases: **Test Case 1: Successful Registration**

**Test Case ID**

TC\_RF\_001

**Test Case Description**

Verify that a user can successfully register with valid input data.

**Preconditions**

* The registration form page is accessible.
* The server is running and capable of accepting registration requests.

**Test Steps**

1. Navigate to the registration form page.
2. Enter "John Doe" in the Full Name field.
3. Enter "john.doe@example.com" in the Email Address field.
4. Enter "Password123!" in the Password field.
5. Enter "Password123!" in the Confirm Password field.
6. Enter "1990-01-01" in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Submit button.

**Expected Results**

* The form is submitted successfully.
* A success message is displayed indicating that the registration was successful.
* The user data is correctly saved in the database.

**Post-conditions**

* The user is registered and can log in with the provided credentials

**Test Case 2: Invalid Email Format**

**Test Case ID**

TC\_RF\_002

**Test Case Description**

Verify that an error message is displayed when an invalid email address is entered.

**Preconditions**

* The registration form page is accessible.

**Test Steps**

1. Navigate to the registration form page.
2. Enter "John Doe" in the Full Name field.
3. Enter "john.doe@invalid" in the Email Address field.
4. Enter "Password123!" in the Password field.
5. Enter "Password123!" in the Confirm Password field.
6. Enter "1990-01-01" in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Submit button.

**Expected Results**

* An error message is displayed next to the Email Address field indicating that the email format is invalid.
* The form is not submitted.

**Post-conditions**

* The user remains on the registration form page with the previously entered data.

### Test Case 1: Successful Registration

#### Test Case ID

TC\_RF\_001

#### Test Case Description

Verify that a user can successfully register with valid input data.

#### Preconditions

* The registration form page is accessible.
* The server is running and capable of accepting registration requests.

#### Test Steps

1. Navigate to the registration form page.
2. Enter "John Doe" in the Full Name field.
3. Enter "john.doe@example.com" in the Email Address field.
4. Enter "Password123!" in the Password field.
5. Enter "Password123!" in the Confirm Password field.
6. Enter "1990-01-01" in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Submit button.

#### Expected Results

* The form is submitted successfully.
* A success message is displayed indicating that the registration was successful.
* The user data is correctly saved in the database.

#### Post-conditions

* The user is registered and can log in with the provided credentials.

### Test Case 2: Invalid Email Format

#### Test Case ID

TC\_RF\_002

#### Test Case Description

Verify that an error message is displayed when an invalid email address is entered.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Enter "John Doe" in the Full Name field.
3. Enter "john.doe@invalid" in the Email Address field.
4. Enter "Password123!" in the Password field.
5. Enter "Password123!" in the Confirm Password field.
6. Enter "1990-01-01" in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Submit button.

#### Expected Results

* An error message is displayed next to the Email Address field indicating that the email format is invalid.
* The form is not submitted.

#### Post-conditions

* The user remains on the registration form page with the previously entered data.

### Test Case 3: Mismatched Passwords

#### Test Case ID

TC\_RF\_003

#### Test Case Description

Verify that an error message is displayed when the passwords entered in the Password and Confirm Password fields do not match.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Enter "John Doe" in the Full Name field.
3. Enter "john.doe@example.com" in the Email Address field.
4. Enter "Password123!" in the Password field.
5. Enter "Password456!" in the Confirm Password field.
6. Enter "1990-01-01" in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Submit button.

#### Expected Results

* An error message is displayed next to the Confirm Password field indicating that the passwords do not match.
* The form is not submitted.

#### Post-conditions

* The user remains on the registration form page with the previously entered data.

### Test Case 4: Password Length Validation

#### Test Case ID

TC\_RF\_004

#### Test Case Description

Verify that an error message is displayed when the password is less than 8 characters long.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Enter "John Doe" in the Full Name field.
3. Enter "john.doe@example.com" in the Email Address field.
4. Enter "Pass12!" in the Password field.
5. Enter "Pass12!" in the Confirm Password field.
6. Enter "1990-01-01" in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Submit button.

#### Expected Results

* An error message is displayed next to the Password field indicating that the password must be at least 8 characters long.
* The form is not submitted.

#### Post-conditions

* The user remains on the registration form page with the previously entered data.

### Test Case 5: Future Date of Birth

#### Test Case ID

TC\_RF\_005

#### Test Case Description

Verify that an error message is displayed when the Date of Birth is set to a future date.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Enter "John Doe" in the Full Name field.
3. Enter "john.doe@example.com" in the Email Address field.
4. Enter "Password123!" in the Password field.
5. Enter "Password123!" in the Confirm Password field.
6. Enter "2025-01-01" in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Submit button.

#### Expected Results

* An error message is displayed next to the Date of Birth field indicating that the date cannot be in the future.
* The form is not submitted.

#### Post-conditions

* The user remains on the registration form page with the previously entered data.

### Test Case 6: Missing Required Fields

#### Test Case ID

TC\_RF\_006

#### Test Case Description

Verify that error messages are displayed when required fields are left empty.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Leave the Full Name field empty.
3. Enter "john.doe@example.com" in the Email Address field.
4. Enter "Password123!" in the Password field.
5. Enter "Password123!" in the Confirm Password field.
6. Enter "1990-01-01" in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Submit button.

#### Expected Results

* An error message is displayed next to the Full Name field indicating that it is required.
* The form is not submitted.

#### Post-conditions

* The user remains on the registration form page with the previously entered data.

### Test Case 7: Invalid Characters in Full Name

#### Test Case ID

TC\_RF\_007

#### Test Case Description

Verify that an error message is displayed when the Full Name contains invalid characters.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Enter "John Doe123" in the Full Name field.
3. Enter "john.doe@example.com" in the Email Address field.
4. Enter "Password123!" in the Password field.
5. Enter "Password123!" in the Confirm Password field.
6. Enter "1990-01-01" in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Submit button.

#### Expected Results

* An error message is displayed next to the Full Name field indicating that it contains invalid characters.
* The form is not submitted.

#### Post-conditions

* The user remains on the registration form page with the previously entered data.

### Test Case 8: Optional Newsletter Subscription

#### Test Case ID

TC\_RF\_008

#### Test Case Description

Verify that the form can be successfully submitted without selecting the Newsletter Subscription option.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Enter "John Doe" in the Full Name field.
3. Enter "john.doe@example.com" in the Email Address field.
4. Enter "Password123!" in the Password field.
5. Enter "Password123!" in the Confirm Password field.
6. Enter "1990-01-01" in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Do not select any option for the Newsletter Subscription field.
9. Click the Submit button.

#### Expected Results

* The form is submitted successfully.
* A success message is displayed indicating that the registration was successful.
* The user data is correctly saved in the database without the Newsletter Subscription preference.

#### Post-conditions

* The user is registered and can log in with the provided credentials.

### Test Case 9: No Gender Selection

#### Test Case ID

TC\_RF\_009

#### Test Case Description

Verify that an error message is displayed when no gender is selected.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Enter "John Doe" in the Full Name field.
3. Enter "john.doe@example.com" in the Email Address field.
4. Enter "Password123!" in the Password field.
5. Enter "Password123!" in the Confirm Password field.
6. Enter "1990-01-01" in the Date of Birth field.
7. Leave the Gender field unselected.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Submit button.

#### Expected Results

* An error message is displayed next to the Gender field indicating that it is required.
* The form is not submitted.

#### Post-conditions

* The user remains on the registration form page with the previously entered data.

### Test Case 10: Maximum Length for Full Name

#### Test Case ID

TC\_RF\_010

#### Test Case Description

Verify that the Full Name field accepts input up to its maximum length and no more.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Enter a name with the maximum allowed characters (e.g., "John Jacob Jingleheimer Schmidt" if the limit is 30 characters) in the Full Name field.
3. Enter "john.doe@example.com" in the Email Address field.
4. Enter "Password123!" in the Password field.
5. Enter "Password123!" in the Confirm Password field.
6. Enter "1990-01-01" in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Submit button.

#### Expected Results

* The form is submitted successfully.
* A success message is displayed indicating that the registration was successful.
* The user data is correctly saved in the database with the full name up to the maximum length.

#### Post-conditions

* The user is registered and can log in with the provided credentials.

### Test Case 11: Invalid Date Format

#### Test Case ID

TC\_RF\_011

#### Test Case Description

Verify that an error message is displayed when the Date of Birth is entered in an invalid format.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Enter "John Doe" in the Full Name field.
3. Enter "john.doe@example.com" in the Email Address field.
4. Enter "Password123!" in the Password field.
5. Enter "Password123!" in the Confirm Password field.
6. Enter "01-01-1990" (assuming the format should be YYYY-MM-DD) in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Submit button.

#### Expected Results

* An error message is displayed next to the Date of Birth field indicating that the date format is invalid.
* The form is not submitted.

#### Post-conditions

* The user remains on the registration form page with the previously entered data.

### Test Case 12: Special Characters in Email

#### Test Case ID

TC\_RF\_012

#### Test Case Description

Verify that an error message is displayed when the Email Address contains invalid special characters.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Enter "John Doe" in the Full Name field.
3. Enter "john.doe!@example.com" in the Email Address field.
4. Enter "Password123!" in the Password field.
5. Enter "Password123!" in the Confirm Password field.
6. Enter "1990-01-01" in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Submit button.

#### Expected Results

* An error message is displayed next to the Email Address field indicating that the email contains invalid characters.
* The form is not submitted.

#### Post-conditions

* The user remains on the registration form page with the previously entered data.

### Test Case 13: Checkbox Default State

#### Test Case ID

TC\_RF\_013

#### Test Case Description

Verify that the Newsletter Subscription checkbox defaults to "No" (unchecked) on page load.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.

#### Expected Results

* The Newsletter Subscription checkbox should be unchecked by default.

#### Post-conditions

* The user can proceed with filling out the form as desired.

### Test Case 14: Password Field Masking

#### Test Case ID

TC\_RF\_014

#### Test Case Description

Verify that the Password and Confirm Password fields mask the input characters.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Enter "Password123!" in the Password field.
3. Enter "Password123!" in the Confirm Password field.

#### Expected Results

* The characters entered in the Password and Confirm Password fields should be masked (e.g., displayed as dots or asterisks).

#### Post-conditions

* The user can proceed with filling out the rest of the form.

### Test Case 15: Verify Tab Order

#### Test Case ID

TC\_RF\_015

#### Test Case Description

Verify that the tab order is logical and follows the expected sequence through the form fields.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Press the Tab key to navigate through the form fields.

#### Expected Results

* The tab order should follow this sequence: Full Name -> Email Address -> Password -> Confirm Password -> Date of Birth -> Gender -> Newsletter Subscription -> Submit Button.

#### Post-conditions

* The user can proceed with filling out the form as desired.

### Test Case 16: Form Submission with Enter Key

#### Test Case ID

TC\_RF\_016

#### Test Case Description

Verify that the form can be submitted using the Enter key.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Enter valid data in all required fields.
3. Press the Enter key.

#### Expected Results

* The form should be submitted successfully.
* A success message is displayed indicating that the registration was successful.

#### Post-conditions

* The user is registered and can log in with the provided credentials.

### Test Case 17: Special Characters in Full Name

#### Test Case ID

TC\_RF\_017

#### Test Case Description

Verify that an error message is displayed when the Full Name contains special characters that are not allowed.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Enter "John Doe@123" in the Full Name field.
3. Enter "john.doe@example.com" in the Email Address field.
4. Enter "Password123!" in the Password field.
5. Enter "Password123!" in the Confirm Password field.
6. Enter "1990-01-01" in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Submit button.

#### Expected Results

* An error message is displayed next to the Full Name field indicating that special characters are not allowed.
* The form is not submitted.

#### Post-conditions

* The user remains on the registration form page with the previously entered data.

### Test Case 18: Invalid Characters in Date of Birth

#### Test Case ID

TC\_RF\_018

#### Test Case Description

Verify that an error message is displayed when the Date of Birth contains invalid characters.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Enter "John Doe" in the Full Name field.
3. Enter "john.doe@example.com" in the Email Address field.
4. Enter "Password123!" in the Password field.
5. Enter "Password123!" in the Confirm Password field.
6. Enter "1990-01-01abc" in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Submit button.

#### Expected Results

* An error message is displayed next to the Date of Birth field indicating that it contains invalid characters.
* The form is not submitted.

#### Post-conditions

* The user remains on the registration form page with the previously entered data.

### Test Case 19: Verify Form Reset Functionality

#### Test Case ID

TC\_RF\_019

#### Test Case Description

Verify that the Reset button clears all input fields in the registration form.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Enter "John Doe" in the Full Name field.
3. Enter "john.doe@example.com" in the Email Address field.
4. Enter "Password123!" in the Password field.
5. Enter "Password123!" in the Confirm Password field.
6. Enter "1990-01-01" in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Reset button.

#### Expected Results

* All input fields are cleared.
* The form is reset to its initial state.

#### Post-conditions

* The user can start entering data from scratch.

### Test Case 20: Verify Mandatory Fields Asterisk

#### Test Case ID

TC\_RF\_020

#### Test Case Description

Verify that all mandatory fields are marked with an asterisk (\*).

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.

#### Expected Results

* All mandatory fields (Full Name, Email Address, Password, Confirm Password, Date of Birth, Gender) are marked with an asterisk (\*).

#### Post-conditions

* The user can clearly identify the required fields.

### Test Case 21: Email Field Auto-Complete

#### Test Case ID

TC\_RF\_021

#### Test Case Description

Verify that the Email Address field provides auto-complete suggestions.

#### Preconditions

* The registration form page is accessible.
* Browser settings allow auto-complete suggestions.

#### Test Steps

1. Navigate to the registration form page.
2. Begin typing "john" in the Email Address field.

#### Expected Results

* The Email Address field provides auto-complete suggestions based on the user's previous entries or common email domains.

#### Post-conditions

* The user can select an auto-complete suggestion if applicable.

### Test Case 22: Cross-Browser Compatibility

#### Test Case ID

TC\_RF\_022

#### Test Case Description

Verify that the registration form functions correctly across different browsers.

#### Preconditions

* The registration form page is accessible.
* Various browsers (Chrome, Firefox, Safari, Edge) are available.

#### Test Steps

1. Navigate to the registration form page using each browser.
2. Enter valid data in all required fields.
3. Submit the form.

#### Expected Results

* The form is submitted successfully in each browser.
* A success message is displayed indicating that the registration was successful.

#### Post-conditions

* The user is registered and can log in with the provided credentials in each browser.

### Test Case 23: Form Submission without JavaScript

#### Test Case ID

TC\_RF\_023

#### Test Case Description

Verify that the form can still be submitted without JavaScript enabled.

#### Preconditions

* The registration form page is accessible.
* JavaScript is disabled in the browser.

#### Test Steps

1. Navigate to the registration form page.
2. Enter valid data in all required fields.
3. Submit the form.

#### Expected Results

* The form is submitted successfully.
* A success message is displayed indicating that the registration was successful.

#### Post-conditions

* The user is registered and can log in with the provided credentials.

### Test Case 24: Verify Email Uniqueness

#### Test Case ID

TC\_RF\_024

#### Test Case Description

Verify that an error message is displayed when a duplicate email address is used for registration.

#### Preconditions

* The registration form page is accessible.
* An account already exists with the email address "john.doe@example.com".

#### Test Steps

1. Navigate to the registration form page.
2. Enter "John Doe" in the Full Name field.
3. Enter "john.doe@example.com" in the Email Address field.
4. Enter "Password123!" in the Password field.
5. Enter "Password123!" in the Confirm Password field.
6. Enter "1990-01-01" in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Submit button.

#### Expected Results

* An error message is displayed next to the Email Address field indicating that the email address is already in use.
* The form is not submitted.

#### Post-conditions

* The user remains on the registration form page with the previously entered data.

### Test Case 25: Form Submission with Maximum Allowed Fields

#### Test Case ID

TC\_RF\_025

#### Test Case Description

Verify that the form can be submitted when all fields are filled to their maximum allowed lengths.

#### Preconditions

* The registration form page is accessible.

#### Test Steps

1. Navigate to the registration form page.
2. Enter the maximum allowed characters in the Full Name field.
3. Enter "john.doe@example.com" in the Email Address field.
4. Enter a password with the maximum allowed characters.
5. Enter the same password in the Confirm Password field.
6. Enter a valid date in the Date of Birth field.
7. Select "Male" for the Gender field.
8. Select "Yes" for the Newsletter Subscription field.
9. Click the Submit button.

#### Expected Results

* The form is submitted successfully.
* A success message is displayed indicating that the registration was successful.

#### Post-conditions

* The user is registered and can log in with the provided credentials.

### Scenario Identification: Positive Scenarios

#### Positive Scenario 1: Successful Registration with All Valid Inputs

**Steps:**

1. User navigates to the registration form page.
2. User enters "Alice Johnson" in the Full Name field.
3. User enters "alice.johnson@example.com" in the Email Address field.
4. User enters "SecurePass123!" in the Password field.
5. User enters "SecurePass123!" in the Confirm Password field.
6. User enters "1995-05-15" in the Date of Birth field.
7. User selects "Female" for the Gender field.
8. User selects "Yes" for the Newsletter Subscription field.
9. User clicks the Submit button.

**Expected Outcome:**

* The form is submitted successfully.
* A success message is displayed indicating that the registration was successful.
* The user is redirected to a welcome or login page.

#### Positive Scenario 2: Successful Registration without Newsletter Subscription

**Steps:**

1. User navigates to the registration form page.
2. User enters "Bob Smith" in the Full Name field.
3. User enters "bob.smith@example.com" in the Email Address field.
4. User enters "MyPass1234!" in the Password field.
5. User enters "MyPass1234!" in the Confirm Password field.
6. User enters "1980-03-25" in the Date of Birth field.
7. User selects "Male" for the Gender field.
8. User leaves the Newsletter Subscription field unselected.
9. User clicks the Submit button.

**Expected Outcome:**

* The form is submitted successfully.
* A success message is displayed indicating that the registration was successful.
* The user data is correctly saved without the newsletter subscription preference.

#### Positive Scenario 3: Successful Registration with Optional Gender

**Steps:**

1. User navigates to the registration form page.
2. User enters "Emma Brown" in the Full Name field.
3. User enters "emma.brown@example.com" in the Email Address field.
4. User enters "StrongPass!23" in the Password field.
5. User enters "StrongPass!23" in the Confirm Password field.
6. User enters "1990-08-22" in the Date of Birth field.
7. User selects "Other" for the Gender field.
8. User selects "No" for the Newsletter Subscription field.
9. User clicks the Submit button.

**Expected Outcome:**

* The form is submitted successfully.
* A success message is displayed indicating that the registration was successful.
* The user is redirected to a welcome or login page.

#### Positive Scenario 4: Successful Registration with Minimum Password Length

**Steps:**

1. User navigates to the registration form page.
2. User enters "John Davis" in the Full Name field.
3. User enters "john.davis@example.com" in the Email Address field.
4. User enters "Abcdefgh1" in the Password field (assuming 8 characters is the minimum).
5. User enters "Abcdefgh1" in the Confirm Password field.
6. User enters "1975-11-11" in the Date of Birth field.
7. User selects "Male" for the Gender field.
8. User selects "Yes" for the Newsletter Subscription field.
9. User clicks the Submit button.

**Expected Outcome:**

* The form is submitted successfully.
* A success message is displayed indicating that the registration was successful.
* The user is redirected to a welcome or login page.

#### Positive Scenario 5: Successful Registration with Age Validation

**Steps:**

1. User navigates to the registration form page.
2. User enters "David Miller" in the Full Name field.
3. User enters "david.miller@example.com" in the Email Address field.
4. User enters "Password1234!" in the Password field.
5. User enters "Password1234!" in the Confirm Password field.
6. User enters "2000-04-25" in the Date of Birth field.
7. User selects "Male" for the Gender field.
8. User selects "No" for the Newsletter Subscription field.
9. User clicks the Submit button.

**Expected Outcome:**

* The form is submitted successfully.
* A success message is displayed indicating that the registration was successful.
* The user is redirected to a welcome or login page.

#### Positive Scenario 6: Successful Registration with No Gender Selected

**Steps:**

1. User navigates to the registration form page.
2. User enters "Olivia Wilson" in the Full Name field.
3. User enters "olivia.wilson@example.com" in the Email Address field.
4. User enters "MySecurePass12!" in the Password field.
5. User enters "MySecurePass12!" in the Confirm Password field.
6. User enters "1983-06-30" in the Date of Birth field.
7. User leaves the Gender field unselected.
8. User selects "Yes" for the Newsletter Subscription field.
9. User clicks the Submit button.

**Expected Outcome:**

* The form is submitted successfully.
* A success message is displayed indicating that the registration was successful.
* The user is redirected to a welcome or login page.

### Negative Scenarios

#### Negative Scenario 1: Passwords Do Not Match

**Steps:**

1. User navigates to the registration form page.
2. User enters "Carol Lee" in the Full Name field.
3. User enters "carol.lee@example.com" in the Email Address field.
4. User enters "Password123!" in the Password field.
5. User enters "Password1234!" in the Confirm Password field.
6. User enters "1992-07-10" in the Date of Birth field.
7. User selects "Female" for the Gender field.
8. User selects "No" for the Newsletter Subscription field.
9. User clicks the Submit button.

**Expected Outcome:**

* An error message is displayed next to the Confirm Password field indicating that the passwords do not match.
* The form is not submitted.
* The user remains on the registration form page with the previously entered data.

#### Negative Scenario 2: Invalid Email Format

**Steps:**

1. User navigates to the registration form page.
2. User enters "David Wong" in the Full Name field.
3. User enters "david.wong@invalid" in the Email Address field.
4. User enters "Password123!" in the Password field.
5. User enters "Password123!" in the Confirm Password field.
6. User enters "1988-12-30" in the Date of Birth field.
7. User selects "Male" for the Gender field.
8. User selects "Yes" for the Newsletter Subscription field.
9. User clicks the Submit button.

**Expected Outcome:**

* An error message is displayed next to the Email Address field indicating that the email format is invalid.
* The form is not submitted.
* The user remains on the registration form page with the previously entered data.

#### Negative Scenario 3: Future Date of Birth

**Steps:**

1. User navigates to the registration form page.
2. User enters "Alice Thompson" in the Full Name field.
3. User enters "alice.thompson@example.com" in the Email Address field.
4. User enters "SecurePass456!" in the Password field.
5. User enters "SecurePass456!" in the Confirm Password field.
6. User enters "2030-05-20" in the Date of Birth field.
7. User selects "Female" for the Gender field.
8. User selects "Yes" for the Newsletter Subscription field.
9. User clicks the Submit button.

**Expected Outcome:**

* An error message is displayed next to the Date of Birth field indicating that the date cannot be in the future.
* The form is not submitted.
* The user remains on the registration form page with the previously entered data.

#### Negative Scenario 4: Missing Required Fields

**Steps:**

1. User navigates to the registration form page.
2. User enters "Michael Green" in the Full Name field.
3. User leaves the Email Address field empty.
4. User enters "SecurePass789!" in the Password field.
5. User enters "SecurePass789!" in the Confirm Password field.
6. User leaves the Date of Birth field empty.
7. User selects "Male" for the Gender field.
8. User selects "No" for the Newsletter Subscription field.
9. User clicks the Submit button.

**Expected Outcome:**

* Error messages are displayed next to the Email Address and Date of Birth fields indicating that these fields are required.
* The form is not submitted.
* The user remains on the registration form page with the previously entered data.

### Negative Scenario 5: Invalid Characters in Full Name

**Steps:**

1. User navigates to the registration form page.
2. User enters "Jane Doe@123" in the Full Name field.
3. User enters "jane.doe@example.com" in the Email Address field.
4. User enters "SecurePass123!" in the Password field.
5. User enters "SecurePass123!" in the Confirm Password field.
6. User enters "1985-09-15" in the Date of Birth field.
7. User selects "Female" for the Gender field.
8. User selects "Yes" for the Newsletter Subscription field.
9. User clicks the Submit button.

**Expected Outcome:**

* An error message is displayed next to the Full Name field indicating that special characters are not allowed.
* The form is not submitted.
* The user remains on the registration form page with the previously entered data.

#### Negative Scenario 6: Short Password

**Steps:**

1. User navigates to the registration form page.
2. User enters "Liam Johnson" in the Full Name field.
3. User enters "liam.johnson@example.com" in the Email Address field.
4. User enters "Pass1" in the Password field (assuming the password must be at least 8 characters).
5. User enters "Pass1" in the Confirm Password field.
6. User enters "1991-01-15" in the Date of Birth field.
7. User selects "Male" for the Gender field.
8. User selects "No" for the Newsletter Subscription field.
9. User clicks the Submit button.

**Expected Outcome:**

* An error message is displayed next to the Password field indicating that the password is too short.
* The form is not submitted.
* The user remains on the registration form page with the previously entered data.

#### Negative Scenario 7: Empty Full Name Field

**Steps:**

1. User navigates to the registration form page.
2. User leaves the Full Name field empty.
3. User enters "emma.jones@example.com" in the Email Address field.
4. User enters "Password!1234" in the Password field.
5. User enters "Password!1234" in the Confirm Password field.
6. User enters "1987-12-05" in the Date of Birth field.
7. User selects "Female" for the Gender field.
8. User selects "Yes" for the Newsletter Subscription field.
9. User clicks the Submit button.

**Expected Outcome:**

* An error message is displayed next to the Full Name field indicating that it is required.
* The form is not submitted.
* The user remains on the registration form page with the previously entered data.

### Negative Scenario 8: Incorrect Confirm Password

**Steps:**

1. User navigates to the registration form page.
2. User enters "Sophia Martinez" in the Full Name field.
3. User enters "sophia.martinez@example.com" in the Email Address field.
4. User enters "StrongPass!123" in the Password field.
5. User enters "StrongPass!124" in the Confirm Password field.
6. User enters "1994-03-18" in the Date of Birth field.
7. User selects "Female" for the Gender field.
8. User selects "Yes" for the Newsletter Subscription field.
9. User clicks the Submit button.

**Expected Outcome:**

* An error message is displayed next to the Confirm Password field indicating that the passwords do not match.
* The form is not submitted.
* The user remains on the registration form page with the previously entered data.

### Negative Scenario 9: Special Characters in Date of Birth

**Steps:**

1. User navigates to the registration form page.
2. User enters "James Brown" in the Full Name field.
3. User enters "james.brown@example.com" in the Email Address field.
4. User enters "Password1234!" in the Password field.
5. User enters "Password1234!" in the Confirm Password field.
6. User enters "1990-12-3@1" in the Date of Birth field.
7. User selects "Male" for the Gender field.
8. User selects "No" for the Newsletter Subscription field.
9. User clicks the Submit button.

**Expected Outcome:**

* An error message is displayed next to the Date of Birth field indicating that it contains invalid characters.
* The form is not submitted.
* The user remains on the registration form page with the previously entered data.

### Negative Scenario 10: Email Already Registered

**Steps:**

1. User navigates to the registration form page.
2. User enters "Emily White" in the Full Name field.
3. User enters "emily.white@example.com" in the Email Address field (assuming this email is already registered).
4. User enters "NewPassword123!" in the Password field.
5. User enters "NewPassword123!" in the Confirm Password field.
6. User enters "1996-07-22" in the Date of Birth field.
7. User selects "Female" for the Gender field.
8. User selects "Yes" for the Newsletter Subscription field.
9. User clicks the Submit button.

**Expected Outcome:**

* An error message is displayed next to the Email Address field indicating that the email is already in use.
* The form is not submitted.
* The user remains on the registration form page with the previously entered data.

Test Scripts:  
  
  
describe('Registration Form - Positive Scenarios', () => {

beforeEach(() => {

cy.visit('/registration');

});

it('should successfully register with all valid inputs', () => {

cy.get('input[name="fullName"]').type('Alice Johnson');

cy.get('input[name="email"]').type('alice.johnson@example.com');

cy.get('input[name="password"]').type('SecurePass123!');

cy.get('input[name="confirmPassword"]').type('SecurePass123!');

cy.get('input[name="dob"]').type('1995-05-15');

cy.get('input[name="gender"][value="Female"]').check();

cy.get('input[name="newsletter"][value="Yes"]').check();

cy.get('button[type="submit"]').click();

cy.contains('Registration successful').should('be.visible');

cy.url().should('include', '/welcome');

});

it('should successfully register without newsletter subscription', () => {

cy.get('input[name="fullName"]').type('Bob Smith');

cy.get('input[name="email"]').type('bob.smith@example.com');

cy.get('input[name="password"]').type('MyPass1234!');

cy.get('input[name="confirmPassword"]').type('MyPass1234!');

cy.get('input[name="dob"]').type('1980-03-25');

cy.get('input[name="gender"][value="Male"]').check();

cy.get('input[name="newsletter"][value="No"]').check();

cy.get('button[type="submit"]').click();

cy.contains('Registration successful').should('be.visible');

cy.url().should('include', '/welcome');

});

it('should successfully register with optional gender', () => {

cy.get('input[name="fullName"]').type('Emma Brown');

cy.get('input[name="email"]').type('emma.brown@example.com');

cy.get('input[name="password"]').type('StrongPass!23');

cy.get('input[name="confirmPassword"]').type('StrongPass!23');

cy.get('input[name="dob"]').type('1990-08-22');

cy.get('input[name="gender"][value="Other"]').check();

cy.get('input[name="newsletter"][value="No"]').check();

cy.get('button[type="submit"]').click();

cy.contains('Registration successful').should('be.visible');

cy.url().should('include', '/welcome');

});

it('should successfully register with minimum password length', () => {

cy.get('input[name="fullName"]').type('John Davis');

cy.get('input[name="email"]').type('john.davis@example.com');

cy.get('input[name="password"]').type('Abcdefgh1');

cy.get('input[name="confirmPassword"]').type('Abcdefgh1');

cy.get('input[name="dob"]').type('1975-11-11');

cy.get('input[name="gender"][value="Male"]').check();

cy.get('input[name="newsletter"][value="Yes"]').check();

cy.get('button[type="submit"]').click();

cy.contains('Registration successful').should('be.visible');

cy.url().should('include', '/welcome');

});

it('should successfully register with age validation', () => {

cy.get('input[name="fullName"]').type('David Miller');

cy.get('input[name="email"]').type('david.miller@example.com');

cy.get('input[name="password"]').type('Password1234!');

cy.get('input[name="confirmPassword"]').type('Password1234!');

cy.get('input[name="dob"]').type('2000-04-25');

cy.get('input[name="gender"][value="Male"]').check();

cy.get('input[name="newsletter"][value="No"]').check();

cy.get('button[type="submit"]').click();

cy.contains('Registration successful').should('be.visible');

cy.url().should('include', '/welcome');

});

it('should successfully register with no gender selected', () => {

cy.get('input[name="fullName"]').type('Olivia Wilson');

cy.get('input[name="email"]').type('olivia.wilson@example.com');

cy.get('input[name="password"]').type('MySecurePass12!');

cy.get('input[name="confirmPassword"]').type('MySecurePass12!');

cy.get('input[name="dob"]').type('1983-06-30');

cy.get('input[name="newsletter"][value="Yes"]').check();

cy.get('button[type="submit"]').click();

cy.contains('Registration successful').should('be.visible');

cy.url().should('include', '/welcome'); //

});

});

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