. **Test Plan Document for the Registration Form**

* **Introduction:**

This test plan Describes the approach, objectives, scope, and schedule for testing the online registration form of the application. The purpose of this form is to ensure the form functions correctly, validates user inputs properly, displays Proper error messages, and successfully submits data to the server.

* **Objectives**
* To verify that user input should be validated as per the requirements.
* To verify that Proper error message should display to the user with invalid input.
* To verify that user should be able to submit all the data with valid inputs
* To verify that proper success message should display to the user with valid inputs.
* To verify that integration with backend server for data submission.
* **Scope**
* Functional testing of the registration form.
* Validation of error messages.
* Verification of form submission and backend integration.
* Cross-browser compatibility testing.
* **Test Environment**
* Operating Systems: Windows 10,
* Browsers: Chrome, Firefox, Safari, Edge
* Test Tools: Selenium WebDriver, Cypress
* **Test Data**
* Valid and invalid email addresses
* Passwords of various lengths and complexities
* Different dates of birth (valid, invalid, edge cases)
* All gender options
* Newsletter subscription choices
* **Risks and Assumptions**
* Risks: Delays in backend server availability, Cross-browser issues
* Assumptions: Test environment is stable, All required tools and access are available

**Test Cases**

**Test Case 1: Successful Registration with Valid Data**  
Test Case Description**:** Verify successful registration with all valid inputs.  
**Preconditions:** Registration form is accessible.  
**Test Steps:**

1. Navigate to the registration form.
2. Enter a valid full name.
3. Enter a valid email address.
4. Enter a password (at least 8 characters).
5. Confirm the password.
6. Enter a valid date of birth.
7. Select a gender.
8. Choose "Yes" for the newsletter subscription.
9. Click the "Submit" button.  
   **Expected Results:** Registration is successful, and the user receives a confirmation message.  
   **Post-conditions:** User is registered in the system.

**Test Case 2: Registration with Invalid Email Format**

**Test Case Description:** Verify error message for invalid email format.  
**Preconditions:** Registration form is accessible.  
**Test Steps:**

1. Navigate to the registration form.
2. Enter a valid full name.
3. Enter an invalid email address (e.g., "user@domain").
4. Enter a password (at least 8 characters).
5. Confirm the password.
6. Enter a valid date of birth.
7. Select a gender.
8. Choose "Yes" for the newsletter subscription.
9. Click the "Submit" button.  
   **Expected Results:** An error message "Invalid email address" is displayed.  
   **Post-conditions:** User is prompted to correct the email format.

**Test Case 3: Password and Confirm Password Mismatch**

**Test Case Description:** Verify error message when password and confirm password do not match.  
**Preconditions:** Registration form is accessible.  
**Test Steps:**

1. Navigate to the registration form.
2. Enter a valid full name.
3. Enter a valid email address.
4. Enter a password (at least 8 characters).
5. Enter a different password in the confirm password field.
6. Enter a valid date of birth.
7. Select a gender.
8. Choose "Yes" for the newsletter subscription.
9. Click the "Submit" button.  
   **Expected Results:** An error message "Passwords do not match" is displayed.  
   **Post-conditions:** User is prompted to correct the password mismatch.

**Scenario Identification**

**Positive Scenarios**

1. **Successful Registration with Valid Data**
   * Steps: Enter valid full name, email, password, confirm password, date of birth, select gender, subscribe to newsletter, click submit.
   * Expected Outcome: User is registered successfully, and a confirmation message is displayed.
2. **Registration with Newsletter Subscription**
   * Steps: Enter valid full name, email, password, confirm password, date of birth, select gender, subscribe to newsletter, click submit.
   * Expected Outcome: User is registered successfully, and a confirmation message is displayed along with a subscription confirmation.

**Negative Scenarios**

1. **Invalid Email Format**
   * Steps: Enter valid full name, invalid email, password, confirm password, date of birth, select gender, subscribe to newsletter, click submit.
   * Expected Outcome: Error message "Invalid email address" is displayed.
2. **Password and Confirm Password Mismatch**
   * Steps: Enter valid full name, email, password, different confirm password, date of birth, select gender, subscribe to newsletter, click submit.
   * Expected Outcome: Error message "Passwords do not match" is displayed.

**Automated Script using cypress Language.**

describe ('Registration Form Tests', () => {

it ('should register successfully with valid data', () => { cy.visit('/(URL name)');

cy.get('#fullName').type('John Doe');

cy.get('#email').type('john.doe@example.com');

cy.get('#password').type('Password123');

cy.get('#confirmPassword').type('Password123');

cy.get('#dob').type('1990-01-01');

cy.get('#gender').select('Male');

cy.get('#newsletter').check();

cy.get('#submit').click();

cy.get('.success-message').should('contain', 'Registration successful'); }); });