Task:

Introduction:

This is the test plan for the registration form. The registration form is designed to collect data of users and ensure the accuracy and security of the information entered.

Objectives:

- To verify that the registration form correctly collects the information.

- To validate that the registration form shows appropriate error messages when invalid data is entered..

- To check that the data is successfully submitted to the server on correct completion.

- To validate the overall usability and functionality of the registration form.

Scope:

The scope of the test plan includes functional testing of each input and validating the input data against a specific criteria. Verify incorrect inputs by showing error messages, also what behaviour form shows on successful submission.Ensure form's compatibility with different browsers.

Test Environment:

The test environment consists of:

Web browsers: Chrome, firefox,Edge

Operating Systems: Mac, IOS,Android, Windows

Devices: Desktop, Mobile, tablet

Network Conditions: High-speed Internet, Limited connectivity

Test Data:
- Full name
- Email-Address
- Password
- Confirm Password
- Date of Birth
- Gender
- Newsletter Subscription (Yes/No)
- Submit Button

Test Scenarios:

Full name field:
Enter a full name and submit'
Enter special characters and submit.
Leave the field empty and submit.

Email-address:
Enter valid email address and submit.
Enter invalid email address and submit.
Leave the field empty and submit.

Password:
Enter valid password and submit.
Enter invalid password and submit.
Leave the field empty and submit.

Confirm Password:
Enter the same password and submit.
Enter a different password and submit.
Leave the field empty and submit.

Date of birth:
Enter valid date of birth and submit.
Enter invalid date of birth and submit.
Enter the future date of birth and submit.
Leave the field empty and submit.

Newsletter Subscription:
Press "YES" and submit.
Press "NO" and submit.
Do not select any field and submit.

Gender:
Select "Male" and submit.
Select "Female" and submit.
Do not select any field and submit.

Form submission:
Complete all the fields with valid data and submit.
Submit form with one or more invalid data inputs.
Verify that the data is successfully sent to the server upon correct completion.

Test Execution Schedule:

Activity	Start Date	End Date

Test Execution Plan	7/15/2024	7/20/2024
Test Case Design	7/21/2024	7/25/2024
Test Environment SetUp	7/26/2024	7/27/2024
Test Execution	7/28/2024	8/02/2024
Defect Reporting	7/28/2024	8/02/2024
Test Closure	8/03/2024	8/05/2024

Risks and Assumptions:

Risks:
Delays in setting up the test environment.
Incorrect or incomplete test data.
Availability of testing resources.

Assumptions:
The registration form is fully developed and stable.
All necessary testing tools and resources are available.
Tester's are familiar with the requirement and functionality.

Test cases:

TC ID	Description	Pre-Condition	Test Steps	Expected Results	Post-condition
RF_001	Verify that form accepts valid full name	The registration form is accessible on the website. The user is not logged In.	Navigate to the registration form. Enter valid username. Fill all other fields with valid input. Click submit button	Form should accept valid username and other data. The data should be successfully submitted to the server.	Users should be redirected to the home page after successful registration.
RF_002	Verify form should show appropriate error messages on invalid email address.	The registration form is accessible on the server. The user should not be logged in	Navigate to registration form Enter invalid email address. Enter valid data in all other fields. Click the	The form should show an error message for invalid data inputs. The form should not be submitted.	The email address should show a correction message to enter a valid email address

			submit button.		
RF_003	Verify that password and confirm the password field shows error messages when the same passwords are not entered.	The registration form is accessible on the server. The user is not logged in.	Navigate to the registration form page. Enter different password and confirm password. Fill all other fields with correct input data. Click submit button	The form should show error message that the passwords do not match. The form should not be registered.	The password and confirm password field should show the message to enter correct input.

Scenario Identification:

Positive Scenario 1:

Steps:

- Successful registration with valid data
- Navigate to the registration form.
- Enter a valid full name .
- Enter a valid email address .
- Enter a valid password (at least 8 characters).
- Enter the same password in the Confirm Password field.
- Enter a valid date of birth (e.g., "01/01/1990").
- Select a gender option (e.g., "Female").
- Choose whether to subscribe to the newsletter (e.g., "Yes").
- Click the Submit button.

Expected Outcome:

- The form is successfully submitted without any errors.
- The user receives a success message indicating successful registration.
- The data is sent to the server and stored appropriately.

Positive Scenario 2: Registration with Optional Newsletter Subscription

Steps:

- Navigate to the registration form.
- Enter a valid full name (e.g., "John Doe").
- Enter a valid email address (e.g., "john.doe@example.com").
- Enter a valid password (at least 8 characters, e.g., "Password123").
- Enter the same password in the Confirm Password field.
- Enter a valid date of birth (e.g., "05/15/1985").
- Select a gender option (e.g., "Male").
- Opt not to subscribe to the newsletter (select "No").

- Click the Submit button.

Expected Outcome:
- The form is successfully submitted without any errors.
- The user receives a success message indicating successful registration.
- The data is sent to the server and stored appropriately, including the newsletter subscription preference.

Negative Scenarios

Negative Scenario 1: Registration with Invalid Email Format

Steps:

1. Navigate to the registration form.
2. Enter a valid full name (e.g., "Alice Johnson").
3. Enter an invalid email address (e.g., "alice.johnson@com").
4. Enter a valid password (at least 8 characters, e.g., "Password123").
5. Enter the same password in the Confirm Password field.
6. Enter a valid date of birth (e.g., "07/20/1992").
7. Select a gender option (e.g., "Other").
8. Choose whether to subscribe to the newsletter (e.g., "Yes").
9. Click the Submit button.

Expected Outcome:
- The form displays an error message indicating that the email address is not in a valid format.
- The form is not submitted.
- The user is prompted to correct the email address.

Negative Scenario 2: Registration with Non-Matching Passwords

Steps:
1. Navigate to the registration form.
2. Enter a valid full name (e.g., "Michael Brown").
3. Enter a valid email address (e.g., "michael.brown@example.com").
4. Enter a valid password (at least 8 characters, e.g., "Password123").
5. Enter a different password in the Confirm Password field (e.g., "Password124").
6. Enter a valid date of birth (e.g., "12/25/1988").
7. Select a gender option (e.g., "Male").
8. Choose whether to subscribe to the newsletter (e.g., "No").
9. Click the Submit button.

Expected Outcome:
- The form displays an error message indicating that the passwords do not match.
- The form is not submitted.
- The user is prompted to correct the passwords.

Automated Test Script:

```javascript
describe('Registration Form', () => {
  // Base URL for the application
  const baseUrl = 'http://localhost:3000'; // Replace with your application URL

  // Positive Scenario 1: Successful Registration with Valid Data
  it('should successfully register with valid data', () => {
    cy.visit(`${baseUrl}/register`); // Visit the registration page

    cy.get('input[name="fullName"]').type('Jane Smith');
    cy.get('input[name="email"]').type('jane.smith@example.com');
    cy.get('input[name="password"]').type('Password123');
    cy.get('input[name="confirmPassword"]').type('Password123');
    cy.get('input[name="dob"]').type('1990-01-01'); // Format should match the date picker
    cy.get('select[name="gender"]').select('Female');
    cy.get('input[name="newsletter"][value="Yes"]').check();
    cy.get('button[type="submit"]').click();

    // Verify success message
    cy.contains('Registration successful').should('be.visible');
  });

  // Positive Scenario 2: Registration with Optional Newsletter Subscription
  it('should successfully register without subscribing to the newsletter', () => {
    cy.visit(`${baseUrl}/register`); // Visit the registration page

    cy.get('input[name="fullName"]').type('John Doe');
    cy.get('input[name="email"]').type('john.doe@example.com');
    cy.get('input[name="password"]').type('Password123');
    cy.get('input[name="confirmPassword"]').type('Password123');
    cy.get('input[name="dob"]').type('1985-05-15'); // Format should match the date picker
    cy.get('select[name="gender"]').select('Male');
    cy.get('input[name="newsletter"][value="No"]').check();
    cy.get('button[type="submit"]').click();

    // Verify success message
    cy.contains('Registration successful').should('be.visible');
  });
});
```

- Change the base url with actual url and run the test.