**Login Feature Test Cases**

**1. Test Case ID: TC-LOGIN-01**

**Title:** Verify login with valid credentials  
**Description:** Ensure that users can log in with valid username and password  
**Preconditions:** User must be registered and activated  
**Steps:**

1. Open the login page
2. Enter valid username
3. Enter valid password
4. Click on the login button

**Expected Result:** User is successfully logged in and redirected to the dashboard or home page

**2. Test Case ID: TC-LOGIN-02**

**Title:** Verify login with invalid username  
**Description:** Ensure that login fails when the username is invalid  
**Preconditions:** None  
**Steps:**

1. Open the login page
2. Enter invalid username
3. Enter valid password
4. Click on the login button

**Expected Result:** Error message "Invalid username or password" is displayed, and user remains on the login page

**3. Test Case ID: TC-LOGIN-03**

**Title:** Verify login with invalid password  
**Description:** Ensure that login fails when the password is invalid  
**Preconditions:** User must be registered  
**Steps:**

1. Open the login page
2. Enter valid username
3. Enter invalid password
4. Click on the login button

**Expected Result:** Error message "Invalid username or password" is displayed, and user remains on the login page

**4. Test Case ID: TC-LOGIN-04**

**Title:** Verify login with empty username and password  
**Description:** Ensure that login fails when username and password fields are empty  
**Preconditions:** None  
**Steps:**

1. Open the login page
2. Leave username and password fields empty
3. Click on the login button

**Expected Result:** Error message "Username and password cannot be empty" is displayed

**5. Test Case ID: TC-LOGIN-05**

**Title:** Verify login with special characters in username  
**Description:** Ensure that login fails when special characters are used in the username  
**Preconditions:** None  
**Steps:**

1. Open the login page
2. Enter a username with special characters (e.g., user@name)
3. Enter valid password
4. Click on the login button

**Expected Result:** Error message "Invalid username format" is displayed

**6. Test Case ID: TC-LOGIN-06**

**Title:** Verify login with SQL injection  
**Description:** Ensure that login is protected against SQL injection attacks  
**Preconditions:** None  
**Steps:**

1. Open the login page
2. Enter a SQL injection string (e.g., ' OR '1'='1' --) as username
3. Enter any password
4. Click on the login button

**Expected Result:** Error message "Invalid username or password" is displayed, and user remains on the login page; application should not execute any SQL injection commands

**7. Test Case ID: TC-LOGIN-07**

**Title:** Verify the 'Remember Me' functionality  
**Description:** Ensure that the 'Remember Me' checkbox works as expected  
**Preconditions:** User must be registered and activated  
**Steps:**

1. Open the login page
2. Enter valid username
3. Enter valid password
4. Check the 'Remember Me' checkbox
5. Click on the login button
6. Close the browser and reopen it
7. Navigate back to the login page

**Expected Result:** User should still be logged in without needing to enter credentials again

**8. Test Case ID: TC-LOGIN-08**

**Title:** Verify password masking  
**Description:** Ensure that the password field masks the entered characters  
**Preconditions:** None  
**Steps:**

1. Open the login page
2. Enter any text in the password field

**Expected Result:** Characters entered in the password field should be masked (e.g., as dots or asterisks)

**9. Test Case ID: TC-LOGIN-09**

**Title:** Verify login session timeout  
**Description:** Ensure that user session times out after a period of inactivity  
**Preconditions:** User must be logged in  
**Steps:**

1. Log in with valid credentials
2. Leave the session idle for the timeout period (e.g., 15 minutes)
3. Try to perform any action on the website

**Expected Result:** User session should expire, and user should be redirected to the login page

**10. Test Case ID: TC-LOGIN-10**

**Title:** Verify forgot password link  
**Description:** Ensure that the 'Forgot Password' link works correctly  
**Preconditions:** None  
**Steps:**

1. Open the login page
2. Click on the 'Forgot Password' link
3. Enter registered email address
4. Submit the request

**Expected Result:** User should receive a password reset email, and a success message should be displayed on the screen