

Black Box Testing
GROUP 34



Login Page

Constraints

Email

1. Must contain "@" and "." (e.g., example@gmail.com).
2. Must have characters before "@" and after the last ".".
3. No spaces allowed.
4. Length must be between 5 and 320 characters (per RFC 5321).

Password

1. Minimum length: 8 characters.
2. Maximum length: 20 characters.
3. Must contain at least:
 - One uppercase letter (A-Z).
 - One lowercase letter (a-z).
 - One digit (0-9).
 - One special character (!@#\$%^&*).
4. No spaces allowed.

Equivalence Classes:

Email Equivalence Classes

1. E1: Valid email that meets all constraints (e.g., user@example.com).
2. E2: Missing the @ symbol (e.g., examplegmail.com).
3. E3: Missing the . symbol (e.g., user@examplecom).
4. E4: Contains spaces (e.g., user @example.com).
5. E5: Too short (< 5 characters, e.g., a@b.c).
6. E6: Too long (> 320 characters, e.g., repeated 321 times followed by @example.com).
7. E7: Invalid characters in the email (e.g., user#example.com).

Password Equivalence Classes

1. P1: Valid password that meets all constraints (e.g., P@ssw0rd123).
2. P2: Too short (< 8 characters, e.g., P@ss1).
3. P3: Too long (> 20 characters, e.g., P@ssw0rd1234567890123).
4. P4: Missing uppercase letters (e.g., password123!).
5. P5: Missing lowercase letters (e.g., PASSWORD123!).
6. P6: Missing digits (e.g., Password!).
7. P7: Missing special characters (e.g., Password123).
8. P8: Contains spaces (e.g., P@ss word).

Test Cases :

Test Case ID	Email Input	Email Class	Password Input	Password Class	Expected Result
TC1	user@example.com	E1 (Valid)	P@ssw0rd123	P1 (Valid)	Login successful.
TC2	examplegmail.com	E2 (Missing @)	P@ssw0rd123	P1 (Valid)	Error: Invalid email format.
TC3	user@examplcom	E3 (Missing .)	P@ssw0rd123	P1 (Valid)	Error: Invalid email format.
TC4	user @example.com	E4 (Contains spaces)	P@ssw0rd123	P1 (Valid)	Error: Invalid email format.
TC5	a@b.c	E5 (Too short)	P@ssw0rd123	P1 (Valid)	Error: Email too short.
TC6	a * 321 + @ex.com	E6 (Too long)	P@ssw0rd123	P1 (Valid)	Error: Email too long.
TC7	user#example.com	E7 (Invalid characters)	P@ssw0rd123	P1 (Valid)	Error: Invalid email format.
TC8	user@example.com	E1 (Valid)	P@ss1	P2 (Too short)	Error: Password too short.
TC9	user@example.com	E1 (Valid)	P@ssw0rd1234567890123	P3 (Too long)	Error: Password too long.

TC10	user@example.com	E1 (Valid)	password123!	P4 (Missing uppercase)	Error: Password must include uppercase letter.
TC11	user@example.com	E1 (Valid)	PASSWORD123!	P5 (Missing lowercase)	Error: Password must include lowercase letter.
TC12	user@example.com	E1 (Valid)	Password!	P6(Missing Digits)	Error : Password must include Digit.
TC13	user@example.com	E1 (Valid)	Password123	P7 (Missing special char)	Error: Password must include special character.
TC14	user@example.com	E1 (Valid)	P@ss word	P8 (Contains spaces)	Error: Password must not contain spaces.