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Assignment: Manual Testing

1. Design and create test cases to verify the login functionality of a web application.

I WORKED ON “STAR AGILE” OFFICIAL WEBSITE. TEST CASES ARE REVOLVING AROUND THE “LOGIN FUNCTIONALITY”.

Note: The positive test cases are marked green and negative test cases are marked red.

Test Case ID	Scenario	Preconditions	Steps	Expected Result	Actual Result	Status
TC-1	Successful Login with valid credentials	Email <u>nehabhardwaj0167@gmail.com</u> is registered, password ***** exists	1. Go to login page 2. Enter valid credentials 3. Click Login	directed to homepage	successfully directed to homepage	Pass
TC-2	Wrong Password	Registered e-mail	1. Enter registered e-mail, wrong password 2. Click Login	Error: “Invalid login, please try again”	Error displayed correctly; login failed	Pass
TC-3	Unregistered email	None	1. Enter unregistered e-mail 2. Enter any password 3. Click Login	Error: “Invalid login, please try again”	error shown; login failed	Pass
TC-4	Password Reset Link	Valid email	1. Click Forgot Password 2. Enter email 3. Follow link	Link expires in 30 minutes; one-time use; reset successful	Reset link worked; expired correctly after 30 minutes; new password functional	Pass
TC-5	Blank username field	Password	1.Go to login page 2. leave the username field blank and enter password	Error: “Invalid login, please try again”	error shown; login failed	Pass
TC-6	Blank password field	Registered e-mail	1.Go to login page 2. leave the password field blank and enter valid email	Error: “Invalid login, please try again”	error shown; login failed	Pass
TC-7	Both	None	1.Go to login	Error: “Invalid login,	error shown; login	Pass

Test Case ID	Scenario	Preconditions	Steps	Expected Result	Actual Result	Status
	username and password field blank		page 2. leave the username field blank	please try again"	failedPass	
TC-8	Remember username	Valid email and password	1.Go to Login page 2. Login with valid credentials once and then logout, keeping the Remember Username" button on 3. Go to the login page again	The username is saved	As expected	Pass
TC-9	Password protection with bullets	Valid email and password	1.Go to Login page 2. Login with valid credentials once and then observe pattern in which password is being typed	The password should be hidden	The password is hidden with bullets	Pass

2. Perform compatibility testing of a web application across multiple browsers and operating systems, documenting any issues found.

(I worked on Star Agile official website)

Test Case ID	Browser	Operating System	Test Scenario	Expected Result	Actual Result	Issues Found	Issue Description	Status
CT-1	Chrome	Windows 11	Verify login page layout and responsiveness	Layout displays correctly with no overlapping elements	There is no display issue	NA	NA	Pass
CT-2	Firefox	Windows 11	Check functionality of "Submit" button	Button responds and navigates	directed to the homepage successfully	NA	NA	Pass

Test Case ID	Browser	Operating System	Test Scenario	Expected Result	Actual Result	Issues Found	Issue Description	Status
				to correct page				
CT-3	Edge	Windows 11	Check dropdown functionality in the settings menu	Dropdown opens and options are selectable	As expected	NA	NA	Pass
CT-4	Chrome	Android 14	Verify form submission and validation	Form submits successfully with valid data	No issues found in functionality	NA	NA	Pass
CT-5	Google	Android	Check page load time and layout consistency	Page loads within 2 seconds and layout is consistent	As expected	NA	NA	Pass

3. Conduct usability testing of a mobile application, focusing on user interface and user experience.

Test Case ID	Feature / Module	Test Scenario	Test Objective	Expected Result	Actual Result	Issues Found	Issue Description	Severity	Status
UT-1	Login Screen	Check clarity and visibility of input fields and buttons	Ensure users can easily locate and interact with UI elements	Input fields and buttons clearly visible and accessible	Username, Password and Login button are clearly visible	NA	NA	Medium	Pass
UT-2	Navigation Menu	Test ease of navigation between main sections	Ensure smooth and intuitive navigation flow	User can navigate between sections within 2 clicks	No issues found in navigation	NA	NA	High	Pass
UT-3	Dashboard	Assess readability of text and icons	Ensure text is legible and icons easily identifiable	All text legible; icons easily understood	Everything displayed is legible	NA	NA	Low	Pass

Test Case ID	Feature / Module	Test Scenario	Test Objective	Expected Result	Actual Result	Issues Found	Issue Description	Severity	Status
UT-4	Buttons & Gestures	Verify tap responsiveness and gesture recognition	Ensure app responds instantly to user input	Buttons respond within 1 second of tap	As expected	NA	NA	High	Pass
UT-5	Feedback & Confirmation	Check for proper feedback after user actions	Ensure users receive confirmation for actions taken	Confirmation messages appear promptly	I got a quick message that my order is placed.	NA	NA	Medium	Pass

4. Perform boundary value analysis and design test cases to validate the handling of input ranges for a form validation feature.

Test Case ID	Field Name	Test Scenario	Input Value (Boundary)	Expected Result	Actual Result	Status
BVA-01	Enter mobile number or email	Minimum boundary (no input)	empty	Error message	"Enter your email or mobile number"	Pass
BVA-02	Enter mobile number or email	Just below valid minimum	"Z"	Error message	"Invalid email address"	Pass
BVA-03	Enter mobile number or email	Minimum valid email	nehabhardwaj0167@gmail.com	Field accepts and moves to OTP page	Moved to password page	Pass
BVA-04	Enter mobile number or email	Just above valid minimum	Avainu6@gmail.com	Field accepts and proceeds	Proceeded to create an account	Pass
BVA-05	Enter mobile	Maximum boundary	10 numbers(a valid phone number)	Accepted	As expected	Pass
BVA-06	Enter mobile	Above maximum boundary	15 numbers	Error message	"Invalid mobile number"	Pass

5. Create a test plan for testing the performance and scalability of a web service, including test scenarios, test environment setup, and performance metrics to be measured.

The objective of this test plan is to evaluate how well the web service performs under normal and peak load conditions, and to determine its ability to scale efficiently as the number of concurrent users increases.

Section	Description
Test Plan ID	TC-001
Objective	To evaluate the performance, stability, and scalability of the web service under various load conditions.
Scope	The test will assess response time, throughput, resource utilization, and scalability when the number of concurrent users increases.
Test Type	Non-functional Testing (Performance, Load, Stress, Scalability Testing)
Test Tools	Postman
Test Environment Setup	Network: Stable connection Clients: Load generator machines with required tools installed. Monitoring Tools: CPU, memory, and network tracking enabled.
Test Scenarios	1. Measure response time under normal load (e.g., 100 concurrent users). 2. Gradually increase users (100 → 500 → 1000) and record response times.
Test Data	Sample user requests, API payloads, and database entries simulating real-world usage.
Performance Metrics	<ul style="list-style-type: none">- Response Time (avg, min, max)- Throughput (requests/sec)- Error Rate (%)- CPU & Memory Utilization (%)- Concurrent User Handling- Scalability Factor
Entry Criteria	<ul style="list-style-type: none">- Web service deployed in test environment- Functional testing completed successfully.- Monitoring tools configured.
Exit Criteria	<ul style="list-style-type: none">- Response time within acceptable limits (e.g., ≤ 2 sec).- Error rate $< 1\%$- System stable under target load.- No major performance bottlenecks remain.

This test plan ensures the web service can handle expected user loads efficiently and remain stable under stress.