SUBJECT NAME : SOFTWARE TESTING

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SEMESTER:- 3

DETAILED TEST EXECUTION REPORT

Tutorial 1: Test Case Design and Execution for GitHub website

Login and Registration System

1. Report Title

Design, Documentation, and Execution of Test Cases for GitHub Login System

2. Objective

To analyze and validate the login functionality of a real-world web application — GitHub. This practical demonstrates how to design comprehensive test scenarios and execute them manually to ensure each functionality behaves as expected. It simulates professional software quality assurance (SQA) processes, including bug detection and reporting.

3. Project Overview

- Application Name: GitHub Login System
- Technology Stack: HTML, CSS, JavaScript, Backend APIs
- Application Type: Web-based
- Environment: Public Website
- Application URL: https://github.com/login
- Purpose of Application:

To allow registered users to securely log in using their credentials and gain access to their repositories and settings. It also includes validation and protection mechanisms for authentication.

4. Tools and Software Used

Tool Name	Purpose
Google Chrome	Browser to test GitHub login
Windows 10	Operating System
Snipping Tool	Screenshot capture
Google Sheets	Test case documentation

5. Functional Modules of the Application

Module	Function Description
Login	Allows registered users to log in with email and password
Forgot Password	Redirects to reset password functionality
Sign Up	Redirects to registration page
Dashboard	Main area for logged-in users
Logout	Signs out the user and ends the session

6. Test Scenarios (High-Level Functional Coverage)

Sr. No.	Module	Test Scenario Description
1	Login	Login with valid credentials

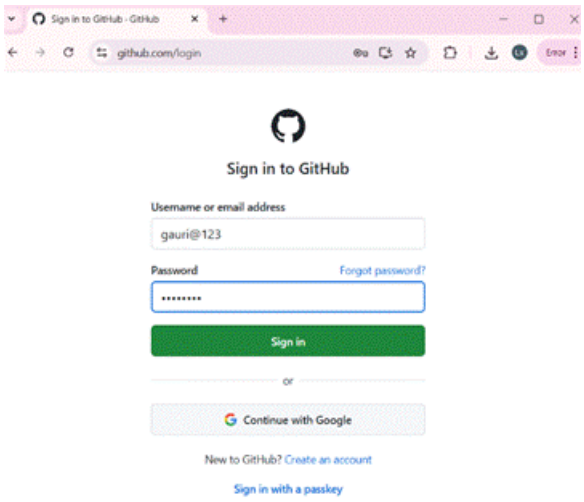
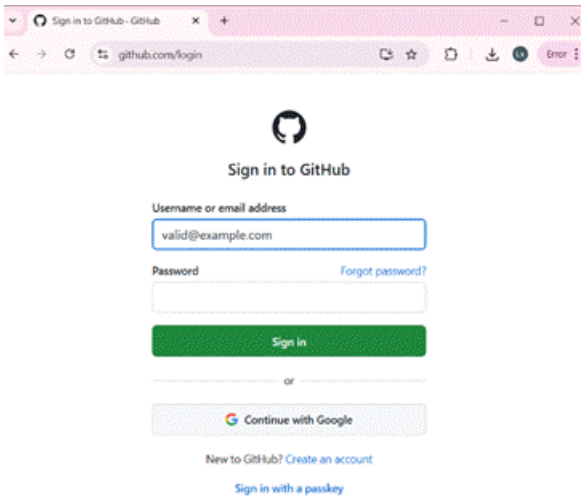
2	Login	Show error for invalid credentials
3	Login	Field validation for blank input
4	Forgot Password	Redirect to password reset page
5	Sign Up	Redirect to GitHub Sign Up page
6	Dashboard	Prevent access without login
7	Session	Stay logged in after refresh
8	Logout	Ensure logout ends session

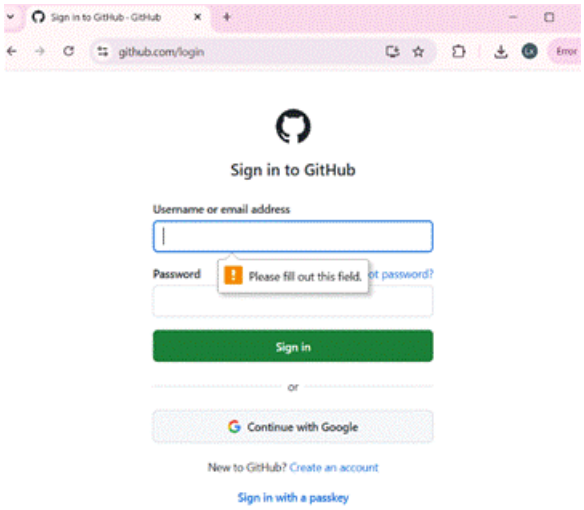
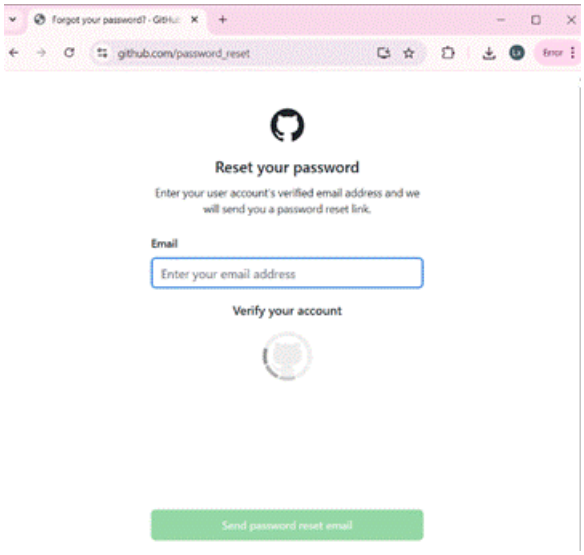
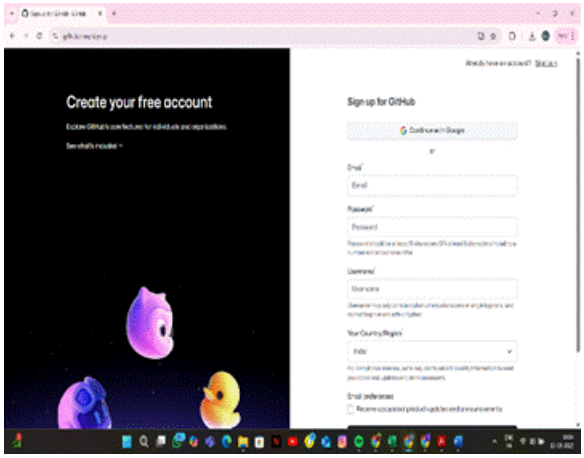
7. Detailed Test Case Table with Execution Results

TC ID	Module	Test Case Description	Input Data (Steps)	Expected Output	Actual Output	Status
TC01	Login	Login with valid credentials	Username: gauri@123 Password: pass@123	Redirect to GitHub dashboard	As expected	Pass
TC02	Login	Login with incorrect credentials	Username:valid@example.com Password: wrongpassword	Show error message: 'Incorrect credentials'	As expected	Pass
TC03	Login	Attempt login with blank fields	Username: [blank] Password: [blank]	Show validation error message	As expected	Pass

TC04	Forgot Password	Click 'Forgot password' link	Click the link	Redirect to password reset page	As expected	Pass
TC05	Sign Up	Click 'Sign up' link	Click the link	Redirect to GitHub registration page	As expected	Pass
TC06	Dashboard	Access dashboard directly (unauthenticated)	Open https://github.com/dashboard	Redirect to login page	As expected	Pass
TC07	Session	Refresh browser after login	Login → Refresh	Remain logged in	As expected	Pass
TC08	Logout	Log out from GitHub	Click profile → Sign out	Redirect to login page, session ended	As expected	Pass

8. Screenshot table reference

	**TC001** Login with valid credentials with Username:- gauri@123 Password:- pass@123
	**TC002** Login with incorrect credentials with Username:- valid@example.com Password:- wrongpassword

	**TC003**Attempt login with blank fields But get error message of please fill this required field
	**TC004**Click 'Forgot password' link Redirected to reset password page
	**TC005**Click 'Sign up' link Redirected to registration page.

9. Test Execution Summary

Metric	Count
Total Test Cases Designed	8
Total Test Cases Executed	8
Test Cases Passed	8
Test Cases Failed	0
Major Bugs Identified	0
Minor Bugs Identified	0

10. Learning Outcomes

- Understood the GitHub login system's flow and validation behavior
- Designed test cases based on real web interactions
- Executed and documented results effectively
- Practiced UI flow validation and session testing
- Strengthened defect detection and reporting skills

11. Conclusion

The GitHub login system passed all designed test cases. The site handles valid/invalid inputs correctly, has proper redirections, and enforces secure access to protected areas. No bugs were detected during testing. This test case execution simulates real QA testing standards for a production web application.