National University of Computer and Emerging Sciences Chiniot-Faisalabad Campus



**metabase**

Software Quality Engineering

### Semester Project

### Phase 2

### BS (SE) 5A

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# **Test Cases For GUI: -**

## Test Case 1: Dashboard Loading

Test Steps:

Log in as a valid user.

Access the dashboard page.

Verify that the dashboard loads without any error messages.

Ensure that the user can view and interact with the dashboard.

## Test Case 2: Error Message on Invalid Credentials

Test Steps:

Access the login page.

Enter invalid login credentials.

Attempt to log in.

Verify that an error message, such as "Invalid credentials," is displayed.

Ensure that the user remains on the login page.

## Test Case 3: Responsive Design Test (Desktop)

Test Steps:

Access the dashboard from a desktop device.

Verify that the dashboard layout is user-friendly and responsive.

Ensure that the user can interact with the dashboard.

## Test Case 4: Performance Test with Minimal Widgets

Test Steps:

Prepare a dashboard with a single widget.

Load the dashboard.

Verify that the dashboard functions efficiently.

Ensure that the user can interact with the single widget.

## Test Case 5: Performance Test with Maximum Widgets

Test Steps:

Prepare a dashboard with twenty widgets.

Load the dashboard.

Verify that the dashboard remains responsive and user-friendly.

Ensure that the user can interact with all the widgets.

## Test Case 6: Simultaneous User Access Test (100 Users)

Test Steps:

Prepare the dashboard for multiple user access.

Simulate 100 users accessing the dashboard simultaneously.

Verify that the dashboard remains responsive without glitches.

Ensure that multiple users can access and interact with the dashboard concurrently.

## Test Case 7: Security Access Test (Unauthorized)

Test Steps:

Attempt to access the dashboard with unauthorized credentials.

Verify that an "access denied" message is displayed.

Ensure that the user cannot view the dashboard.

## Test Case 8: Data Consistency Test (Real-Time Update)

Test Steps:

Wait for real-time data updates on the dashboard.

Verify that the data is consistently updated.

Ensure that the user views the most recent data.

## Test Case 9: System Failure Test (Recovery)

Test Steps:

Simulate a sudden system failure during dashboard usage.

Verify that the system recovers without data loss or corruption.

Ensure that the user can resume using the dashboard.

## Test Case 10: User Interface Check (UI Elements)

Test Steps:

Inspect the dashboard UI elements.

Check for the presence of widgets, buttons, and menus.

Ensure that all UI elements are properly displayed.

Verify that the user can easily navigate and interact with the UI.

## Test Case 11: Cross-Browser Compatibility (Chrome)

Test Steps:

Access the dashboard using the Chrome browser.

Verify that the dashboard functions consistently in Chrome.

Ensure that the user can access the dashboard without issues.

## Test Case 12: Cross-Browser Compatibility (Firefox)

Test Steps:

Access the dashboard using the Firefox browser.

Verify that the dashboard functions consistently in Firefox.

Ensure that the user can access the dashboard without issues.

## Test Case 13: Cross-Browser Compatibility (Safari)

Test Steps:

Access the dashboard using the Safari browser.

Verify that the dashboard functions consistently in Safari.

Ensure that the user can access the dashboard without issues.

## Test Case 14: Mobile Responsiveness Test (Mobile Device 1)

Test Steps:

Access the dashboard from a specific mobile device.

Verify that the dashboard adjusts to the screen size.

Ensure that the user can interact with the dashboard on the mobile device.

## Test Case 15: Mobile Responsiveness Test (Mobile Device 2)

Test Steps:

Access the dashboard from another mobile device.

Verify that the dashboard adjusts to the screen size.

Ensure that the user can interact with the dashboard on the second mobile device.

These test cases cover various scenarios related to dashboard functionality, including performance, security, responsiveness, and compatibility.

# **Gherkin For GUI: -**

Feature: Dashboard Module Functionality

Scenario: Dashboard Loading

Given a valid user is logged in

When the user accesses the dashboard page

Then the dashboard should load without errors

And the user can view and interact with the dashboard

Scenario: Error Message on Invalid Credentials

Given the user is on the login page

When the user enters invalid login credentials and attempts to log in

Then an error message 'Invalid credentials' should be displayed

And the user should remain on the login page

Scenario: Responsive Design Test (Desktop)

Given the user is accessing the dashboard from a desktop device

When the dashboard is opened

Then the dashboard layout should be user-friendly and responsive

And the user should be able to interact with the dashboard

Scenario: Performance Test with Minimal Widgets

Given a dashboard with a single widget is prepared

When the dashboard is loaded

Then the dashboard should function efficiently

And the user should be able to interact with the single widget

Scenario: Performance Test with Maximum Widgets

Given a dashboard with twenty widgets is prepared

When the dashboard is loaded

Then the dashboard should remain responsive and user-friendly

And the user should be able to interact with all the widgets

Scenario: Simultaneous User Access Test (100 Users)

Given the dashboard is prepared for multiple user access

When 100 users simulate accessing the dashboard simultaneously

Then the dashboard should remain responsive without glitches

And multiple users should be able to access and interact with the dashboard concurrently

Scenario: Security Access Test (Unauthorized)

Given user role validation is enforced

When an attempt is made to access the dashboard with unauthorized credentials

Then an access denied message should be displayed

And the user should not be able to view the dashboard

Scenario: Data Consistency Test (Real-Time Update)

Given real-time data updates are expected

When waiting for real-time data updates on the dashboard

Then data should be consistently updated on the dashboard

And the user should view the most recent data

Scenario: System Failure Test (Recovery)

Given a sudden system failure is simulated during dashboard usage

When the system recovers

Then the system should recover without data loss or corruption

And the user should be able to resume using the dashboard

Scenario: User Interface Check (UI Elements)

Given the presence of dashboard UI elements

When checking for the presence of widgets, buttons, and menus

Then all UI elements should be properly displayed

And the user should be able to easily navigate and interact with the UI

Scenario: Cross-Browser Compatibility (Chrome)

Given the dashboard is accessed from the Chrome browser

When the dashboard is opened in Chrome

Then the dashboard should function consistently in Chrome

And the user should be able to access the dashboard without issues

Scenario: Cross-Browser Compatibility (Firefox)

Given the dashboard is accessed from the Firefox browser

When the dashboard is opened in Firefox

Then the dashboard should function consistently in Firefox

And the user should be able to access the dashboard without issues

Scenario: Cross-Browser Compatibility (Safari)

Given the dashboard is accessed from the Safari browser

When the dashboard is opened in Safari

Then the dashboard should function consistently in Safari

And the user should be able to access the dashboard without issues

Scenario: Mobile Responsiveness Test (Mobile Device 1)

Given the dashboard is accessed from a specific mobile device

When the dashboard is accessed on the mobile device

Then the dashboard should adjust to the screen size

And the user should be able to interact with the dashboard on the mobile device

Scenario: Mobile Responsiveness Test (Mobile Device 2)

Given the dashboard is accessed from another mobile device

When the dashboard is accessed on the second mobile device

Then the dashboard should adjust to the screen size

And the user should be able to interact with the dashboard on the second mobile device