

# Graphical user interface testing

- Graphical user interface testing is a process of testing the user interface of an application.
- A graphical user interface includes all the elements such as menus, checkboxes, buttons, colors, text, sizes, icons, content, and images.

## Test cases

### → General

1. Verify that The proper field-level error message is displayed on validation failure.
2. Verify that the Tab order is going in sequence on the page.
3. Verify that the website is displayed and work correctly at reduced or different size (the website is responsive)
4. Verify that the website is usable with a mouse.
5. Verify that The mouse cursor should change according to the UI element.
6. Verify that the website is usable with a keyboard.
7. Verify that all the pages and UI elements on the pages should have proper color consistency.
8. Verify the alignment of UI elements.
9. Verify that the UI elements are not overlapping.
10. Verify that the UI elements are not going out of the screen.
11. Verify that the UI elements have proper color consistency across the website.
12. Verify that hovering menus should change their color(feedback).
13. Verify that the hovering menu options should change their color.

### → Messages

14. Verify that correct Error/warning/success messages are displayed.

- a) verify the alignment of error message.
15. Verify that the proper color of messages is displayed.

### → Numerical and input fields

16. Verify invalid values like alphabets or symbols etc. are not accepted.
17. Verify that valid values are intaken without any problem.
18. Verify space and blank are not accepted in any position.
19. Verify maximum and minimum values and verify  $\text{max}+1$  and  $\text{min}-1$  values, should not be accepted.

### → Hyperlinks

20. Verify there are no broken hyperlinks.
21. Verify the standard color to identify hyperlinks.
22. Verify clicking the hyperlink using the mouse.
23. Verify the hyperlink is taking us to the correct place.
24. Verify the tab and enter keys for clicking hyperlinks.
25. Verify that  $\text{ctrl} +$  clicking hyperlink should open in a new tab.

### → Text

26. Verify spelling mistakes and grammatical mistakes.
27. Verify whether the text is readable.
28. Verify whether the font size, color, and family are correct.
29. Verify the alignment of the text(should be left aligned).
30. Verify that the text is not overlapping with any other elements.
31. Verify that the text is not going outside of the page.
32. Verify that the page header and text are distinguished properly.

### → Text fields

33. Verify that correct labels are displayed for text fields.

34. Verify that label texts are aligned properly with text fields.

➤ Enabled text fields

- 35. Enabled text fields should accept text.
- 36. Verify that placeholders are given properly.
- 37. Verify that prepopulated values are given.
- 38. Verify the insert cursor.
- 39. Verify that the red \* symbol is given for mandatory fields.
  - a) Verify that the field should not be empty.
  - b) Verify that it should not accept black values
- 40. Verify the size of characters that is acceptable.
- 41. Verify the height and width of the text field.
- 42. Verify the acceptance of characters, numbers, and symbols.
  - a) It should not accept only space
- 43. There should be scroll bar for long text in the text fields.
- 44. Verify that you can select text inside text fields using the shift + arrow key.

➔ **Dropdown**

- 45. Verify that the arrow sign is shown on the dropdown.
- 46. Verify that selecting the arrow sign should display the list.
- 47. Verify that one default selected option in the dropdown.
- 48. Verify that the mandatory field should force to select a value.
- 49. Verify that the dropdown should not be empty.
- 50. Verify that if we enter the first letter of the option it should select the option.
- 51. There should be scroll bar if more options are in dropdown and few options are shown.
- 52. Verify the alignment of options is correct in dropdown.
- 53. Verify the label is correct for dropdown.
- 54. Verify the alignment of the label with the dropdown.
- 55. Verify that after clicking or selecting an option dropdown should be highlighted.

## → Buttons

56. Verify if it is clickable and working.
57. Verify that the tab and enter key can select this button.
58. Verify the button alignment with other things on the page.
59. Verify that the label on the button is correct.
60. Verify that hovering the mouse should highlight the button.
61. Verify that the spacebar key can click this button.
62. Verify that the buttons on the website have similar font, color, and shape.
  - a) If multiple buttons are there then they should align properly and their size should be the same.
63. Verify that enter or spacebar keys should select the 'OK' button in the Alert and ESC key should select the 'Cancel' button.

## ❖ Manual GUI testing

### → Outputs

Page name	Page includes	Failed test cases
Main lander	buttons, text	62(a),3
Admin Login	Text, Text fields, button	14,15,60,61(home),62,24(home)
Admin home	Overlay, Text, button	60, 5 (logout)
Admin Student information	Overlay, Table, text	Heading should be information not info
Admin Broadcast	Overlay, Text, table, Text field, button	42(a),60,62,39(a),39(b)
Admin feedback	Overlay, Text, Drop-down, button	5,8,58,60,62
Student login	Text, Input fields, buttons	7,14(a),15,62
Student Home	Overlay, Text,button	60, 5 (logout)
Student personal information	Overlay, Text, Input field, button	60,62,39(b)
Student Course report	overlay, Text, Text field, button	5,8,58,60,62
Student feedback	Overlay, Text, Drop-down, input field, button	36,39,39(b),60,62
Faculty login	Text, Input fields, buttons	7,14(a),15,62
Faculty Home	Overlay, Text, button	60, 5 (logout)

Faculty details	Overlay, Text, input field, button	60,62,39(b)
Faculty Course reports	Overlay, Text, drop-down,button	60
Faculty course resources	Overlay, Text, href	5

## → Final Outputs

Page name	Page includes	Failed test cases
Main lander	buttons, text	62(a),3
Admin Login	Text, Text fields, button	14,15,62
Admin home	Overlay, Text, button	60, 5(login)
Admin Student information	Overlay, Table, text	Header Should be information
Admin Broadcast	Overlay, Text, table, Text field, button	42(a),60,62, 39(a),39(b)
Admin feedback	Overlay, Text, Drop-down, button	5,8,58,60,62
Student login	Text, Input fields, buttons	
Student Home	Overlay, Text,button	60, 5 (login)
Student personal information	Overlay, Text, Input field, button	60,62,39(b)
Student Course report	overlay, Text, Text field, button	60
Student feedback	Overlay, Text, Drop-down, input field,	36,39,39(b),62

	button	
Faculty login	Text, Input fields, buttons	
Faculty Home	Overlay, Text, button	60, 5 (logout)
Faculty details	Overlay, Text, input field, button	60,62,39(b)
Faculty Course reports	Overlay, Text, drop-down,button	60,5
Faculty course resources	Overlay, Text, href	5

## ❖ Selenium GUI testing

### → Why selenium?

- Selenium is open source, which means it is free to use and has a large community of developers contributing to its development and improvement.
- Selenium is easy to use and requires minimal setup. You can start writing tests right away without the need for any additional configuration.
- Selenium supports multiple browsers such as Chrome, Firefox, Safari, and Internet Explorer. This allows you to write tests once and run them across multiple browsers, ensuring that your application works correctly in all of them.

### → Login functionalities

1. Admin login and logout functionality

Recording:

[https://drive.google.com/file/d/1d7mrZFPK6AxLYXhSMekvz\\_07HfPnLWR8/view?usp=sharing](https://drive.google.com/file/d/1d7mrZFPK6AxLYXhSMekvz_07HfPnLWR8/view?usp=sharing)

2. Student login and logout functionality

Recording:

[https://drive.google.com/file/d/1n34vgWfD-mZccpAnFPrJnrsrXg7mkqgX/view?usp=share\\_link](https://drive.google.com/file/d/1n34vgWfD-mZccpAnFPrJnrsrXg7mkqgX/view?usp=share_link)

3. Faculty login functionality

Recording:

<https://drive.google.com/file/d/123PYGOpqNm9DTJyrgwNwD4d6mJ1-vq6-/view?usp=sharing>

→ **Overlay functionalities**

4. Admin overlay functionality

Recording:

[https://drive.google.com/file/d/1eKqIVZkMUdEenKNJ-zqiAdjDlglkUoTF4/view?usp=share\\_link](https://drive.google.com/file/d/1eKqIVZkMUdEenKNJ-zqiAdjDlglkUoTF4/view?usp=share_link)

5. Student overlay functionality

Recording:

[https://drive.google.com/file/d/1OVLHANZk7vjgMrp8huUSrfXQIrPjbX7s/view?usp=share\\_link](https://drive.google.com/file/d/1OVLHANZk7vjgMrp8huUSrfXQIrPjbX7s/view?usp=share_link)

6. Faculty overlay functionality

Recording:

[https://drive.google.com/file/d/1DMQdg8Rglak0rSAs5Y0-sYDzp4XQoqGF/view?usp=share\\_link](https://drive.google.com/file/d/1DMQdg8Rglak0rSAs5Y0-sYDzp4XQoqGF/view?usp=share_link)

→ **Admin General functionalities**

7. Admin feedback functionality

Recording:

[https://drive.google.com/file/d/1GccES4FBv1nY1GjuDKg4j\\_Ji2MuIoqWJ/view?usp=share\\_link](https://drive.google.com/file/d/1GccES4FBv1nY1GjuDKg4j_Ji2MuIoqWJ/view?usp=share_link)

8. Admin broadcast functionality



Recording:

[https://drive.google.com/file/d/1slmmUzfbFDSePvNs30T7fAP4bWwHa8oV/view?usp=share\\_link](https://drive.google.com/file/d/1slmmUzfbFDSePvNs30T7fAP4bWwHa8oV/view?usp=share_link)

- Code files link

[https://drive.google.com/drive/folders/1ZsRvy0RnuuyT7nxggTMRIBdnM8ZeUiDk?usp=share\\_link](https://drive.google.com/drive/folders/1ZsRvy0RnuuyT7nxggTMRIBdnM8ZeUiDk?usp=share_link)