



CUI Abbottabad

Department of Computer Science

SOFTWARE TESTING

Lecture

Test Case Designing

MAIN HEADINGS FOR A TEST CASE

- ❑ Test case ID
- ❑ Test Case Description/Summary
- ❑ Test Data (Input)
- ❑ Expected result
- ❑ Actual result
- ❑ Status / Verdict

DEFINITIONS

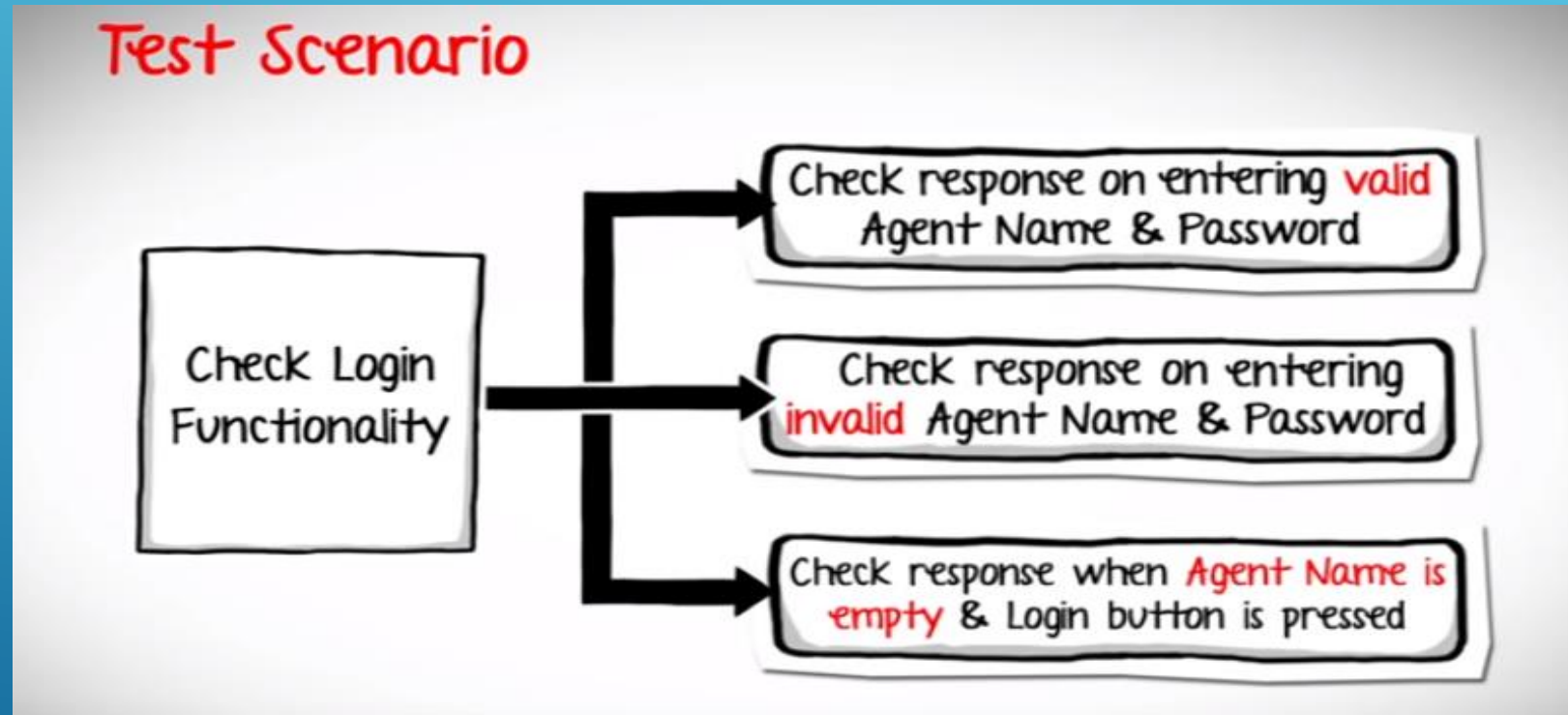
Test Case ID	The ID of the test case (Unique ID)
Test Case Summary/ Description	The summary / objective of the test case (Why the test is to be performed)
Test Data/ Input	The test data, or links to the test data, that are to be used while conducting the test. (Input Vector)
Expected Result	The expected result of the test. (Describe the expected result in detail including message/error that should be displayed on the screen)
Actual Result	The actual result of the test; to be filled after executing the test.
Status/ Verdict	If actual result is not as per the expected result, then mark this test as failed. Otherwise, update it as passed.

CHARACTERISTICS OF A GOOD TEST CASE

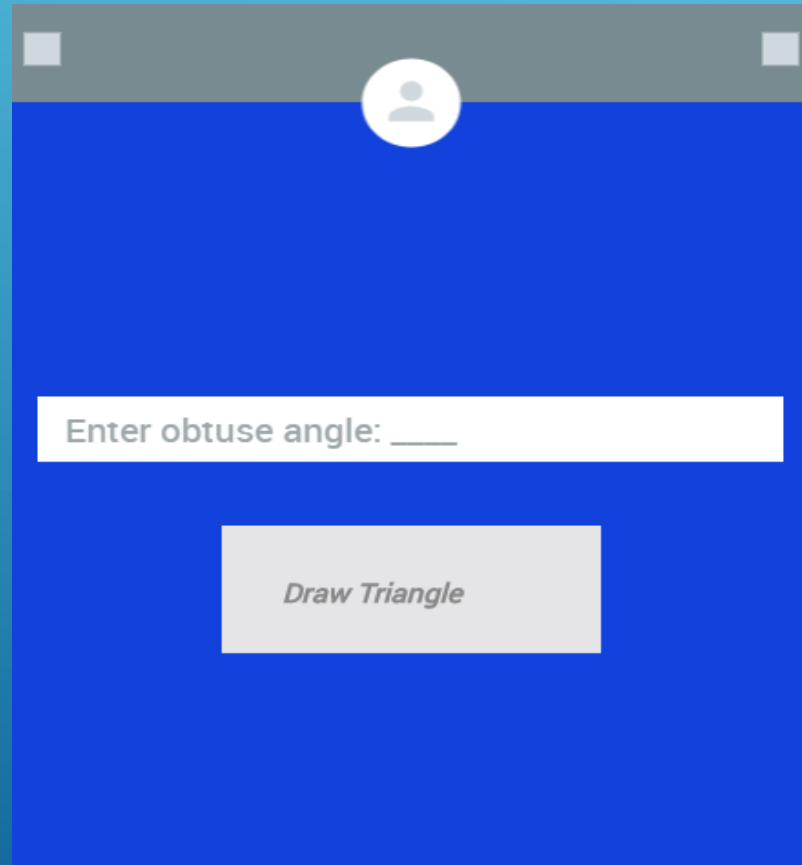
- ❑ *Accurate*: Exacts the purpose.
- ❑ *Economical*: No unnecessary steps or words.
- ❑ *Traceable*: Capable of being traced to requirements.
- ❑ *Repeatable*: Can be used to perform the test over and over.
- ❑ *Reusable*: Can be reused if necessary.

EXAMPLE: (TEST SCENARIO)

(3 **DISTINCT** TEST INPUTS)



EXAMPLE: (TEST SCENARIO) TRIANGLE FOR OBTUSE ANGLE ($\text{ANGLE} > 90$ IS OBTUSE)



The image shows a web application interface with a blue background. At the top, there is a grey header bar containing a user profile icon. Below the header, there is a white input field with the placeholder text "Enter obtuse angle: ____". Below the input field, there is a grey button with the text "Draw Triangle".

WRITING TEST CASES (1/2)

Test Case ID	Test Case Description	Input Data	Expected Outcome	Actual Outcome	Status
TC_01	To draw triangle for angle >90	95	Message: Triangle Drawn Successfully	Message: Triangle Drawn successfully	Pass
TC_02	To not draw triangle for angle <90	89	Message: Angle is not obtuse	Message: Angle is not obtuse	Pass
TC_03	To not draw for triangle angle=90	90	Message: Angle is not obtuse	Message: Angle is not obtuse	Pass
TC_04	To not draw triangle for angle < 90	60	Message: Angle is not obtuse	Triangle drawn	Fail
TC_05	To not draw triangle for angle <=0	0	Message: 0 is invalid	Triangle drawn for 90	Fail

WRITING TEST CASES (2/2)

Test Case ID	Test Case Description	Input Data	Expected Outcome	Actual Outcome	Status
TC_06	To not draw triangle for angle <0	-20	Message: -20 is invalid	Message: Triangle Drawn successfully	Fail
TC_07	To draw triangle for angle >90	100	Message: Triangle is drawn	Message: Angle is not obtuse	Fail

CONCLUSION

- ▶ Writing test cases have their own template which must be followed.
- ▶ Both positive and negative scenarios should be covered with explicitly mentioning actual outcome against input and mapping to expected outcome.
- ▶ Either test case passes or fails. There is no other mediocre choice.

REFERENCES

Book:

The Art of Software Testing, Second Edition, Glenford J. Myers

Chapter 1