

SESSION 7

Test Design Techniques

Test Design Techniques

Test design techniques helps to design better cases. It Reduce the number of test cases to be executed.

1. Equivalence Class Partitioning
2. Boundary Value Analysis (BVA)
3. Decision Table based testing.
4. State Transition
5. Error Guessing

Equivalence Class Partitioning (ECP)

- Partition data into various classes and we can select data according to class then test.
- It reduce the number of test-cases and saves time for testing.

Name:

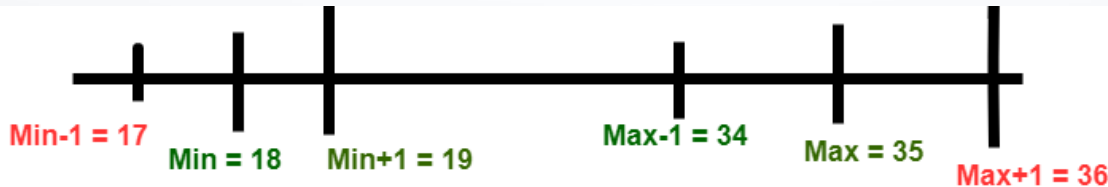
* Allow only alphabets

Equivalence Classes	Valid/Invalid	Test Data
A..Z	Valid	XYZ
a..z	Valid	zyz
Special Characters	Invalid	@#\$\$%
Spaces	Invalid	Xy z
Numbers	Invalid	1234

Boundary Value Analysis (BVA)

- Boundary Value Analysis (BVA) is a testing technique where we focus on testing the boundaries or edges of valid and invalid input values.

Enter a Age: * Allow digits from 18--35



Parameter	Data	Valid/Invalid
Min	18	Valid
Min-1	17	Invalid
Min+1	19	Valid
Max	35	Valid
Max-1	34	Valid
Max+1	36	Invalid

Decision Table

- Decision Table is also called as Cause-Effect Table.
- This technique will be used if we have more conditions and corresponding actions.
- In Decision table technique, we deal with combinations of inputs.
- To identify the test cases with decision table, we consider conditions and actions.
- Refer the below document for Decision Table.



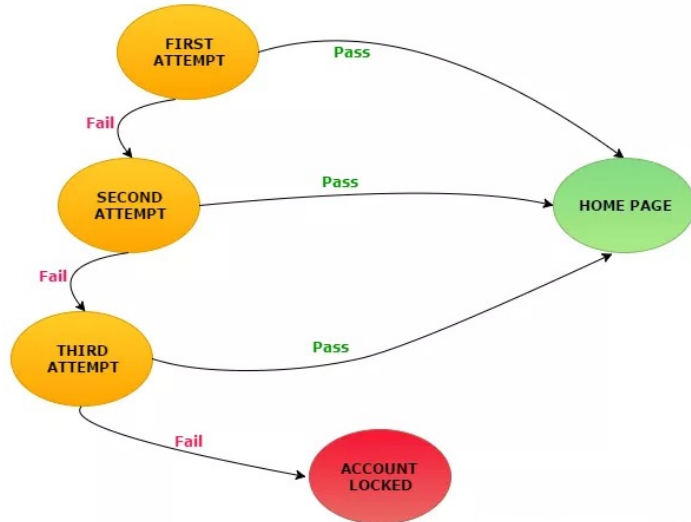
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State Transition

- In State Transition technique changes in input conditions change the state of the Application.
- This testing technique allows the tester to test the behavior of an AUT.
- The tester can perform this action by entering various input conditions in a sequence.
- In State transition technique, the testing team provides positive as well as negative input test values for evaluating the system behavior.

State Transition Diagram and State Transition Table

- Take an example of login page of an application which locks the user name after three wrong attempts of password



State	Login	Correct Password	Incorrect Password
S1	First attempt	S4	S2
S2	Second attempt	S4	S3
S3	Third attempt	S4	S5
S4	Home Page		
S5	Display message "Account locked. Please consult admin"		

Error Guessing

Error guessing is a software testing technique where testers use their experience and intuition to identify potential areas of a system where errors or defects might occur.

This technique relies on the tester's knowledge of the system.