Name : Vidhi Manglik **QE Competency**

Assignment Testing-Concepts 2

1) One of the fields on a form contains a text box that accepts numeric values in the range of 18 to 25. Identify the invalid Equivalence class.

a) 17

b) 19

c) 24

d) 21

Ans. **a) 17**

2) Input Box should accept numbers 1 to 10. Identify Equivalence partitioning and Boundary values for testing

Ans.

Equivalence Partitioning:

Values: 0 , 5 , 11

Class 1: -infinite to 0. For Eg. 0 is an invalid value.

Class 2: any value between 1 to 10(including both of them). For Eg. 5

Class 3: 11 to +infinite. For Eg. 11 is an invalid value.

Boundary Value For Testing:

Values: 0 , 1 , 2 , 9 , 10 , 11

3) Why Equivalence & Boundary Analysis Testing is used?

Ans.

Equivalence Partitioning is used to reduce the total number of test cases to a finite set of testable test cases, still covering maximum requirements.

Boundary value analysis is used to find the errors at the boundaries of the input domain rather than finding those errors in the center of input.

4) Write Test Cases For This Scenario:

If A Job Fails It Should Get Restarted Again. This Should Happen For Three Times. If It Fails again, then It should quit

Ans.

Test Case Id: 1

Condition: If Job doesn’t fail,

Expected: no need to restart, the job is executed.

Test Case Id: 2

Condition: If Job fails for the first time,

Expected: it should restart, the job is executed.

Test Case Id: 3

Condition: If Job fails for the second time,

Expected: it should restart, the job is executed.

Test Case Id: 4

Condition: If Job fails for the third time,

Expected: it should restart, the job is executed.

Test Case Id: 5

Condition: If Job fails for the fourth time,

Expected: it should quit, the job is not executed.

5) Write The Test Case/scenario For A Login Page?

Ans. Assumption: the login page consists of 2 input fields i.e. username and password, and a submit button.

Test Case Id: 1

Condition: If the user enters the correct username and password and click submit,

Expected: it should redirect to a new page like his profile/dashboard/home page.

Test Case Id: 2

Condition: If the user enters the correct username and incorrect password and click submit,

Expected: it should refresh the login page with Error message.

Test Case Id: 3

Condition: If the user enters the incorrect username and correct password and click submit,

Expected: it should refresh the login page with Error message.

Test Case Id: 4

Condition: If the user leaves both the fields blank and click submit,

Expected: it should do nothing and display a message to fill the required fields.

Test Case Id: 5

Condition: If the user leaves either of the fields blank and click submit,

Expected: it should do nothing and display a message to fill the required fields.

6) What Are The Test Cases/scenario For Mouse? (To verify the functionalities of a mouse)

Ans.

TestCaseId: 1

Condition: Connect to the computer/laptops

Expected: Shows Some Activity, mouse Working

TestCaseId: 2

Condition: Move Mouse

Expected: Cursor moves according to mouse movements.

TestCaseId: 2

Condition: Left click of the mouse

Expected: Select and execute

TestCaseId: 3

Condition: Right click of the mouse

Expected: Show options

TestCaseId: 4

Condition: Verify the time duration between two left clicks, in order to consider it as double click

Expected: Execute a process pointed by the cursor

TestCaseId: 5

Condition: Verify if the scroll is present

Expected: Up and down Movement of a Page

TestCaseId: 6

Condition: Verify the speed of the mouse pointer

Expected: Mouse working

7) Write test cases/scenarios to verify the functionality of a printer?

Ans.

TestCaseId: 1

Condition: Connect wire of the printer to the electric socket

Expected: Printer Working

TestCaseId: 2

Condition: Connect to a computer system.

Expected: Printer Working

TestCaseId: 3

Condition: Taking blank pages as an input resource

Expected: Printer Working

TestCaseId: 4

Condition: Availability for both colored and blank and white ink.

Expected: Printer Working

TestCaseId: 5

Condition: Correct command from the computer.

Expected: Print Correct Document

TestCaseId: 6

Condition: Incorrect command from the computer.

Expected: Should not Print

TestCaseId: 7

Condition: Only single print for a single command

Expected: Printer Working

8) Write down test case/scenarios to list down possible steps to test a smartphone

Ans.

TestCaseId: 1

Condition: Pressing the Power Button if turned Off

Expected: Smartphone Starts or Turns On

TestCaseId: 2

Condition: Tap or Touch the Screen

Expected: Smartphone responds.

TestCaseId: 3

Condition: Play some audio

Expected: Receive a Voice output

TestCaseId: 4

Condition: Press Volume Button

Expected: Volume increases/ decreases

TestCaseId: 5

Condition: Take photos/videos from Camera

Expected: Photos/videos are saved in the gallery

TestCaseId: 6

Condition: Record Audio

Expected: Audio gets recorded

TestCaseId: 7

Condition: Play songs using Earphones

Expected: Audio output received, hence earphone jack works

TestCaseId: 8

Condition: Turn on Wifi

Expected: Smartphone gets connected to wifi, hence the internet should work

TestCaseId: 9

Condition: Transfering/Receiving media via Bluetooth

Expected: Media is transferred/received with a success message

TestCaseId: 10

Condition: Installing Application

Expected: Application starts

TestCaseId: 11

Condition: Pressing the Power Button if turned On

Expected: Smartphone Turns Off

9) There is a text box that accepts numbers from 1-10. List down the test data which needs to be tested for Boundary value analysis.

Ans. Boundary Value For Testing: 0 , 1 , 5 , 10 , 11

10) Suppose you have a bank account that offers variable interest rates:

5% for the first $1000 credit;

10% for the next $1000;

And 15% for the rest.

If you wanted to check that the bank was handling your account correctly what valid input partitions might you use?

Ans. **Equivalence Partitioning for the Following Cases:**

Class 1: From 0 to 1000.

Class 2: From 1001 to 2000.

Class 3: From 2001 to infinite.

11) A mail-order company charges $2.95 postage for deliveries if the package weighs less than 2 kg, $3.95 if the package weighs 2 kg or more but less than 5 kg and $5 for packages weighing 5 kg or more.

Generate a set of valid test cases using equivalence partitioning.

Ans. **Equivalence Partitioning for the Following Cases:**

Class 1:From 0 to 1.

Class 2: From 2 to 4.

Class 3: From 5 to infinite

Therefore Values tested are 1, 2, 5.

12) The boiling point of water is at 100 degrees Celsius. Determine the boundary values

Ans. **Boundary Values for Boiling Point of Water is 99, 100, 101.**

13) Exam pass – for 40 marks; merit at 60 and above; and distinction at 80 and above.

Determine the boundary values

Ans. **Boundary Values for the Following Cases:**

For Pass: 39 , 40 , 41

For Merit: 59 , 60 , 61

For Distinction: 79 , 80 , 81

14) Order numbers on a stock control system can range between 10000 and 99999 inclusive. Which of the following inputs might be a result of designing tests for only valid equivalence classes and valid boundaries:

a) 1000, 5000, 99999

b) 9999, 50000, 100000

c) 10000, 50000, 99999

d) 10000, 99999

e) 9999, 10000, 50000, 99999, 100000

Ans. **c) 10000, 50000, 99999**

15) A program validates a numeric field as follows:

Values less than 10 are rejected, values between 10 and 21 are accepted, values greater than or equal to 22 are rejected. which of the following input values cover all of the equivalence partitions?

a. 10,11,21

b. 3,20,21

c. 3,10,22

d. 10,21,22

Ans. **c. 3,10,22**

16) Which test cases are written first: white boxes or black boxes?

Ans. **White Box test cases are written first because they are performed by the developer.**

17) Can you explain requirement traceability and its importance?

Ans. **Requirements traceability** describe and follow the life of a requirement, in both forwards and backward direction.

Performing a requirements traceability analysis is an important part of the software engineering process as it ensures that all of the requirements have been adequately considered during each phase of the project and that there isn't any scope that the developed system missed any requirements. The activity also ensures that all of the requirements are internally consistent with each other and support the business requirements, goals and objectives.