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1) One of the fields on a form contains a text box which 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 the Number 1 to 10. Identify Equivalence partitioning and Boundary values for testing

Ans) Equivalence classes for the Input Box will be -

1. (<10) ; invalid
2. (>=1, <=10) ; valid
3. (>10) ; invalid

Boundary value test cases for the Input Box will be -

* 0, 1, 2, 9, 10, 11

3) Why Equivalence & Boundary Analysis Testing is used?

Ans) We need an easy way or special techniques that can select test cases intelligently from the pool of test-case, such that all test scenarios are covered. We use two techniques - **Equivalence Partitioning** & **Boundary Value Analysis** testing techniques to achieve this.

* 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 boundaries of 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, job is executed.

Test Case Id:2

* Condition: If Job fails for first time,
* Expected: it should restart, job is executed.

Test Case Id:3

* Condition: If Job fails for second time,
* Expected:it should restart, job is executed.

Test Case Id:4

* Condition: If Job fails for third time,
* Expected: it should restart, job is executed.

Test Case Id:5

* Condition: If Job fails for fourth time,
* Expected: it should quit, job is not executed.

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

Ans) 1. Test Case Id:1

* Condition: Test with correct username and password and press ‘Submit’.
* Expected : Login should be allowed.

2. Test Case Id:2

* Condition: Test with incorrect username or password and press ‘Submit’.
* Expected: Login not allowed; correct error message displayed.

3. Test Case Id:3

* Condition: Test with empty username and empty password and press ‘Submit’.
* Expected: Login not allowed; correct error message displayed.

4. Test Case Id:4

* Condition: Test with correct username and empty password and press ‘Submit’.
* Expected: Login not allowed; correct error message displayed.

5. Test Case Id:5

* Condition: Test with empty username and correct password and press ‘Submit’.
* Expected: Login not allowed; correct error message displayed.

6. Test Case Id:6

* Condition: Test with correct username and password and press ‘Clear’.
* Expected: Input boxes become blank.

7. Test Case Id:7

* Condition: Test with incorrect username or password and press ‘Clear’.
* Expected: Input boxes become blank.

8. Test Case Id:8

* Condition: Test with empty username and empty password and press ‘Clear’.
* Expected: Input boxes remain blank.

9. Test Case Id:9

* Condition: Test with correct username and empty password and press ‘Clear’.
* Expected: Input boxes become blank.

10. Test Case Id:10

* Condition: Test with empty username and correct password and press ‘Clear’.
* Expected: Input boxes become blank.

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

* Verify that left click and right click buttons are working fine.
* Check if double click is working fine.
* Verify the time duration between two left clicks, in order to consider it as double click.
* Check if scroll is present at the top or not.
* Check if scroll is working or not.
* Verify the speed of mouse pointer.
* Check the pressure required for clicking the mouse buttons.

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

Ans) 1. Test Case Id1:

* Condition:Connect wire of the printer to the electric socket
* Expected:Printer Working

2. Test Case Id2:

* Condition:Connect to a computer system .
* Expected:Printer Working

3. Test Case Id3:

* Condition:Taking blank pages as input.
* Expected:Printer Working

4. Test Case Id4:

* Condition:Availability for both coloured and black ink.
* Expected:Printer Working

5. Test CaseId5:

* Condition:Correct command from the computer.
* Expected:Print Correct Document

6. Test CaseId5:

* Condition:Incorrect command from the computer.
* Expected: Printer should not print

7. Test Case Id7:

* Condition:Only single print for single command
* Expected:Printer Working

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

Ans) 1. **Touchscreen Test Cases**

* Check if the natural gestures work for swipe functions of phone.
* Check if the touch gestures work for phone setting.
* Check if the launch icons for software work with touchscreen.
* Check if the idle applications can be removed from the queue.
* Check if the idle applications are possible to open with touch.

2. **Volume Buttons**

* Check if the top press on the button increases volume.
* Check if the down press on the button decreases volume.
* Check if pressing the entire button opens up the volume bar.

3. **Power Button**

* Check if the power button opens up menu for the restart, shutdown and other boot options.
* Check if the power button pressing once locks the phone.
* Check if the power button pressing turns off the light.
* Check if the idle phone can be boot up by pressing power button.

**4. Calling Test Cases**

* Check if the phone allows dial-pad for making call.
* Check if the phone allows disconnect and connect option for the ringing phone.
* Check if the phone allows connection from the contacts.
* Check if the phone provides history for missed calls and called numbers.
* Check the incoming call.
* Check the outgoing call.

**5. Generic test cases irrespective of the mobile operating system**

* Check the phone operating system for usability.
* Check the phone design for usability.
* Check if the curve edges of the phone makes it easy to hold.
* Check if the square edges are easy to handle.
* Check the battery performance of the mobile.
* Check the functionality of the additional keys if exist.
* Check if the model of the phone is according to the requirements.
* Check if the display works as expected ( or according to specifications)
* Check if the manual instructions work on the mobile phone.
* Check if the mobile dimensions are as per specifications.
* Insert the SIM incorrectly and check the phone.
* Don’t insert the SIM and see how the phone operates.
* Check if the SIM can be inserted properly.
* Check if the SD card can be inserted properly.
* Check if the message sending function works.

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

Ans) Boundary value test cases for the Text Box will be -

* 0, 1, 2, 9, 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) Valid input partitions for checking if your account is being handled correctly will be -

1. ( 0$-1000$) ; 5% interest rate
2. (1001$-2000$) ; 10% interest rate
3. ( >=2001$); 15% interest rate

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) Valid test cases using equivalence partitioning are -

1. (<2kg); $2.95
2. (2kg- 4.99kg) ; $3.95
3. (>=5kg) ; $5

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

Ans) The BVA points will be - 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) BVA points will be -

* 39.5, 40, 40.5, 59.5, 60, 60.5, 79.5 ,80, 80.5

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) and D - (10000, 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) Black box test cases are written first as they do not require understanding of the internal structure.

17) Can you explain requirement traceability and its importance?

Ans) **Requirement Traceability** is mapping of requirements to test cases. There are two main traceability: Forward and Backward. It is important to know whether all the requirements mentioned in the Requirement Document have a corresponding test case or not. At the same time, it is important to know which requirement a particular test case has been written for. These are important if there are any changes in the requirement, we should know which test cases need to be re-written or modified.

Requirement Traceability is the final section of the test plan for measuring to cover all the requirement of the projects. It enables the users for finding the origin of every requirement and track all the changes which made the requirement.

Its importance is-

1. To ensure that a particular test case is based on one more requirements mentioned in the Requirement Doc.

2. To determine which test cases are written for which requirements

3. Also to check if test cases are written for every requirement.

4. If there arises any dispute over a bug in which developer says “it is not a bug as per the design”, in that case the test case can be traced back to the requirement.

5. It helps in finding out how many test cases are affected whenever there is any change in the application.