**Functional Testing**

When sanity testing successfully completed then we start functional testing.

It is also called system and functional testing.

In this process we check top to bottom functionality of module/build/software as per Sprint backlog and also check completeness and correctness of the s/w as per customer requirement.

In this testing we execute test cases written by us.

Also we check internal functionalities means we check different coverages-

1. Behavioural Coverage
2. Input Domain Coverage
3. Error Handling Coverage
4. Service Level Coverage
5. Calculation Based Coverage
6. Back End Coverage

(**Test case lihinyasathi aapn coverage vaprat asto** म्हंजे **ya aadharavr test case lihito)**

1. **Behavioural Coverage:-**

Here we check Property and Behaviour of the object.

For egg. Text Box

Property:- It should accept user input.

Behaviour :- When we clicked on text box then it should focusable when remove focus it should un-focus.

Another egg. Dropdown Box

Property :- It should hidden list

Behaviour :- Show list or hide list.

1. **Input Domain Coverage:-**

There are two test design techniques

BVA and ECP

In input domain coverage we maintain BVA and ECP.

BVA (Boundary value analysis) = BVA check size of the input.

ECP (Equivalence Class Partition) = ECP check data type of the input. (Means valid and invalid data).

For egg. Mobile Number Field

BVA: Min 10 digit and Max 10 digit (If you put 9 digit in that field it should not be accepted)

ECP: Valid and invalid input

Valid input for mobile no. field is between 0-9 numbers

Invalid field means, alphabets like A-Z, symbols, space.

1. **Error Handling Coverage:-**

Here we check whether system generate error message or not.

When we entered invalid data in field the system should be generate error message.

Egg. Mobile No. Field : If we entered less and more than 10 digit in mobile no. field then system generated message--- “ please enter valid Mobile Number”

1. **Back End Coverage:-**

The backend of any software is data base.

Here we check whether entered data stored successfully in data base or not.

And also check whether data get fetch from data base or not.

Egg. If we filled online examination form by adding all required information then clicked on Submit button.

--- Then all data saves in data base. Then we check we are able to log in or not by using user name and password.

--- We can also fetch specific person/candidate information from data base.

1. **Service Level Coverage:-**

Here we check working of system as per functional flow diagram or not.

In this we check sequentially of functional module.

-Ex: If you are filling online examination form

-Then, 1) Personal Information Detail 2) Contact Details 3) Academic Details 4) Banking/Payment details 5) Submit

-In above example once one stage completed then system should allow to next stage.

1. **Calculation Based Coverage:-**

In this we check arithmetic operations.

Addition, subtraction, multiplication, division.

**Non-Functional Testing**

It is the process of checking the outer correctness and completeness of the software as per customer requirement.

1. **Recovery Testing:-**

It is the process of checking whether application is able to recover from abnormal condition to normal condition.

It is also called Relability Testing.

Recovery requirements are given by customer.

Customer can give requirements that application should recover from specific point or from start point.

Example: Suppose we are Downloading large music file and suddenly internet connection lost, then downloading paused, When Internet connection return back then System should start downloading of music from paused position. (This is customer Requirement) -If Music downloading start from starting then there will customer data lost.

1. **Compatibility Testing:-**

It is also called Portability Testing.

Here we check our applications how perform on different platforms (Browsers, Operating System).

-Browsers: Chrome, Mozilla Firefox, IE, Safari

-Operating System : Windows, Linux, Mac

There are two types of compatibility testing:

1. Forward Compatibility Testing
2. Backward Compatibility Testing
   * + - **Forward Compatibility Testing:-**

If build/application is correct but browser/operating system do not working properly then it is forward compatibility testing.

And we found less errors in this testing.

* + - * **Backward Compatibility Testing:-**

If browser/operating system is okay but build/application do not working properly then it is Backward compatibility testing.

--We found maximum error in this testing.

In compatibility testing I am involve in Browser compatibility testing.

Browser compatibility testing have two types:-

1. **Cross browser compatibility testing:-**

In this process tester check application on different browsers.

Egg. Chrome, Mozilla Firefox, Opera mini, edge, EI, Safari…

1. **Version Comparison compatibility testing:-**

In this process tester check application on different version of same browser.

Egg. Chrome: 94.0, 94.01, 94.02…

1. **Inter System Testing:-**

It is the process of checking whether our application able to share resources with other application or not.

--Means we just check our application share data with other application or not.

(mhanje he third party type ast)

Egg. Airtel Customer Recharge with Phone Pay Application

-We enter our mobile number in Phone Pay for plan search then clicked on Search button...Then you will get plans in result. so here Airtel server share data with Phone Pay server.

1. **Globalization Testing:-**

It is the process of checking whether application is support different languages or not.

There are 3 types of testing in it….

1. **Localization Testing:-**

Here we check whether our application supports local languages or not…

Egg. (Suppose we are developing application for indian country okay so what we do…? We just check our application is support local indian languages or not …languages like marathi, telgu, tamil, gujrati and others like that).

1. **Internationalization Testing:-**

Here we check whether our application supports official languages of different countries.

Egg. Hindi, Chinese, French, Japanese, and others (Thodkyat kay rashtriya bhasha veg-veglya deshanchi support krto ki nahi te baghto)

1. **Globalization Testing:-**

Here we check whether our application supports Global English Language.

It also called as G11N Testing.

---- Whenever user change language, so at that time language should be change but Numbers should be in English. (It is user requirement)