

“V” Model

- V Stands for Verification(Development) and Validation(Testing)
- In V-Model Verification and Validation process perform Parallel.
- In this Development phases mapping with Testing Phases

Advantage of V-Model:

- In which customer can request for changes at any stage of SDLC but customer need to pay some extra amount.
- Means here we can return back on any stage of SDLC as per requirements. (Overcome Drawback of Waterfall Model)
- V- Model is used in Big Organization
- Duration of Project development in V-Model in 3 Months.

Verification:

1) Information Gathering and Analysis

-Here we can explain general SDLC point Information Gathering and Analysis

Information Gathering

- -Customer and Business Analyst (BA) involve in this
- -Customer has no. of requirements
- -BA gather those all requirements
- -Create on document called BRS (Business Requirement Specification)

Analysis

- -In this stage BRS document convert into SRS (Software Requirement Specification)
- -also called detailed documents
- -This is work of Business Analyst.

Note: Once Left side point completed of verification then explains Validation Point given below.

Validation

1) Assessment of Development phase:

A) Strategy of the Testing of application will be decided

-Strategy will be decided by Project Manager

B) Methodology of Testing

-which methodology we are going to use for testing will be decided

-A) Automation Testing B) Manual Testing

-This is also done by Project Manager

2) Test Plan Preparation:

-Here Implementation of TRM will be done

A) Resources Allocation:

-Resources will be finalised.

-Project Manager Will prepared test team.

-For example: For Security Testing, Performance Testing, Data base testing, Functional Testing & Non - Functional Testing

-For above all types resources will be require and that will be finalised.

Verification:

2) Design & Coding

-Here first we explain same Design and Coding part we learned in SDLC then move to Validation part

Design:

There are two Types of Design

A) High Level Design

For ex: Signup Page, Log In Page, Home Page

-It is related to Main Module

-It is developed/designed by Design Architecture or System Architectures

B) Low Level Design

-It is related to Sub Modules

-For ex: For Main Module Sign Up Page:- First Name, last Name, EmailID, Mobile Number.....etc.

-It is designed by Front End Developer

Validation:

A) Program Phase Testing

- -It is related to Developer
- -It is similar to White box Testing
- -Here Developer only check positive Scenario

B) Test Case Design

Important:

>>When SRS document created then BA send this document to Development and Testing Team on same time.

>>When Developer doing design, coding part then same time testing doing Test Case Design.

>>Test Cases Design means "How to test"

-Test cases means multiple steps involved while testing

-Test cases are mapped with customer requirements.

>>For Example: Scenario: 1 Check Facebook application loaded or not

>>Steps:

1) Take the URL of the Facebook Application

2) Open any browser (chrome) and paste the URL in browser search box and press Enter Key

3) Then we check application loaded or not

>>Test Scenario Means "What to Test"

>We can write multiple test cases for one Scenario.

For Example: We have to check Facebook Application is loaded or not

>>In this positive Scenario and Negative Scenario Testing

>>This is work of Black Box Tester

Verification

3) Integration (Build Installation)

- It is process of adding new module into old Application. Or
- Developers develop number of module separately and adding in one application called Integration.
- In V-Model:
- Duration of V-Model is 3 Month
- In this duration 5-6 module will be develop.
- Once development of all modules done then in at the last integrate/combine into one application/Software.
- It is work of Developer. Once Developer work completed then he send build or module to testing (For that developer Provide Testing URL)

Validation:

Once application came for testing then first testing we perform Sanity Testing.

Sanity Testing:

- It is come under Validation Process.
- In Sanity Testing we check only Core Functionality.
- Basic Functionality will be get checked in this Testing.
- In this testing we only raise Critical Errors (Defect which Blocked Functionality of the application)
- Means here we verify build is stable or not (Build Verification)
- For Example: Facebook Application: Different Modules: Facebook Logo Spelling, Log IN Button, Create New Account button, Sign Up button.
- Critical Issue: Sign Up button not enable (Means not clickable), Facebook Logo Spelling mistake then its Blocker defect so raise in Sanity Testing.

System & Functional Testing:

- When Sanity Testing successfully completed then and then we start System & functional testing.
- In this testing we check all functionality of the application as per SRS Document.
- In this we raise small to large defect will be documented.
- In this Positive and Negative testing will be perform.
- Black box tester is responsible for that.
- For Example: Facebook Logo color not proper, Signup button color not as per SRS,
- Spelling mistake for text present on page which are not useful for Customer.
- System & functional testing fine then we passed application to UAT

UAT (User Acceptance Testing)

Before move to UAT we discuss Different Environment

>>Environment of Testing:

1) DIT (Development Integration Testing)

- Developer involved

2) SIT (System & Integration Testing)

- Tester Involved
- When system and Integration testing successfully completed then product move to UAT.

3) UAT (User Acceptance Testing)

- User and Tester involve in this testing.

4) Production (Final product will be deliver to Customer)

User Acceptance Testing:

- After Successful completion of System and Functional Testing product moved to UAT.
- Tester and User Involve

-In this environment release version will be updated

-Example: Suppose Previous Version Chrome is 90.0 and if some new features added in application or may be some issue will fixed then this changes need to pass Customer and for that need release updated version.

-Release has two Types mainly

1) Minor Release (with some changes or Bug Fixes)

>So if Minor Release for Chrome Browser then Version will update from 90.0 to 90.01 when came in UAT and

2) Major Release (with Lot of Changes and Bug Fixes)

> If Major Release for Chrome Browser then Version will update from 90.0 to 91.0 when came in UAT.

Note: You do not need to mention above two point related release while explaining UAT. It is just for your information.

-So in UAT Tester test application with User/customer. Some time customer have their test data so tester will test application with that data.

-In this environment we check UI, Design, color and Functionality of the application as per SRS Document. Less defect found in UAT.

-Mostly customer not request for change at the time UAT because of less Time bandwidth of Release date.(Release date already fixed)

-If customer request for change at the time UAT then BA take decision as per Time Bandwidth.

-When user gives the permission then Product will be moved to Production.

Documentation/Test Documentation

-Test Documentation is report of Testing.

-Each tester has its own test report.

-Whenever tester did testing on Module then he/she create document of testing.

Test Report involve following point.

1) Name of the Module

Ex. Sign Up Module

2) Test Cases designed count

Suppose Designed: 20 Test Cases

3) Test Cases Executed

Suppose Executed: 20 Test Cases

4) Passed

Suppose Passed: 19 Test Cases

5) Failed

Suppose Failed: 1

- So we create bug ticket of failed test cases.
- We create this report in Excel Sheet and after that send to Team Leader
- Then Team Leader sent this report to Project Manager/Test Manager
- Project Manager sends this document to Customer.

Verification:

Maintenance

-It is service provided after delivery of application to customer.

-In this Mainly Two Types:

1) BPO- Business Process Outsourcing

-It is Non-Technical Department

-For Example: Customer Care, HR, Finance and account team.

2) KPO- Knowledge Process Outsourcing

-It is Technical Department

-for example: Market Research Activities, Data Analytics, Business Research Services, and Solution for any issue

Validation:

1) DRE (Defect Removal Efficiency)

-DRE is the process of calculating at which level tester testing did.

-In that Tester efficiency will be calculated.

-Tester Efficiency will be calculated by below formula,

Formula for calculate $DRE = A/A+B$

-A=Defect found by Tester

-B=Defect found by User/Customer

Suppose: at the time of UAT

-Tester found 60 defects

-Customer found 30 defects

$DRE = 60/60+30 = 0.6$ (Avg. Testing)

If DRE, then Remarks,

1) 0.8 to 1= Good Testing

2) 0.5 to 0.8= Avg. Testing

3) Below 0.5= bad testing

Suppose,

Tester found 30 defects and User found 50 defects

$DRE = 30/30+50 = 0.375$ (bad Testing)

Suppose,

Tester found 90 defects and User found only 10 defects

$DRE = 90/90+10 = 0.9$ (Good Testing)

2) RFC :(Request for Change)

-In V-model customer can request for change at any stage of the SDLC

-If customer request changes then BA takes those changes and add in the SRS Document.

-SRS Document one Section "CR" Means Change Request in Red color

-It is also called as MR (Modification Request)

-But for this changes customer need to pay some extra amount

-For Example: Facebook Sign Up page

-If customer want to add Nick Name field below Name field then BA and took Customer request and add this in SRS Document in Red Color but for this changes customer need to pay some extra amount.