

**V Model**

Verification

Validation

**LCD- Development stage**

**LCT- Testing Stage**

Information Gathering  
& Analysis

Assessment of Dev. Plan  
Preparation of Test Plan  
Requirement of phase Testing

**Design &  
Coding**

**Design Phase Testing  
Program Phase Testing  
Test Case Design**

**(Installation Build)  
Integration Testing**

**Sanity Testing  
System & functional Testing  
UAT  
Test Documentation**

**Maintains**

**DRE  
RFC  
Post marten testing  
Regression Testing**

- The V-model is an SDLC model where execution of processes happens in a sequential manner in a V-shape. It is also known as **Verification and Validation model**.
- V stands for verification & validation
- In v model, verification & validation works/run parallel
- In the v model, development stages are mapped with testing stages
- In v model, suppose, we have completed 1<sup>st</sup> stage & now, we are in second stage which is running. If any change in requirement (CR) comes for 1<sup>st</sup> stage or for previous stage, then we can revert back to the previous stage or 1<sup>st</sup> stage to full-fill CR but, for this CR client/customer has to pay extra amount
- V model is used in big organization
- In v model, duration of the project is 3 or 3 plus month
- It is plan driven methodology- because CR are rarely come

## **Information Gathering & Analysis**

1. Assessment of development plan
2. Preparation of test plan
3. Requirement of phase testing / Requirement testing/ Understand

### **1. Assessment of development plan**

- Defining objective of project- Banking, Telecom, and Healthcare.....etc.
- Defining steps to how we can achieve objective of project
- Strategy for project development & strategy for testing is prepared here
- In testing- there are automation & manual testing. So among these two, which methodology needs to be implemented is decided here
- Test responsibility matrix (TRM) is finalized in this stage
- CEO, MD, Vice president & top level people of the company involved in this stage
- Ex  
BCCI-Format- Test/Day/T20  
IND Vs AUS  
BCCA-  
BCCI/Rahul/Rohit

## **2. Preparation of test plan**

- TRM is implemented in preparation of test plan
- PM is responsible for TRM implementation
- PM prepares a test team
- PM assigns team leader & both PM & TL distribute work to all member
- Test estimation is created in this phase
- Estimation- means how much time it will take to complete test/particular assigned task (Start to end time)
- In this phase job allocation, resource allocation & estimation are done
- Ex-  
Coach -Rahul  
Captain -Rohit/Virat  
Team-IND vs AUS  
TRM-Testing factor-15-Team member-15  
Select-11  
Batsman-5  
Keeper-1  
All-rounder-1  
Bowler-2  
Spinner-2

## **3. Requirement of phase testing**

- Phase means unit
- In this phase, estimated requirements of the phase are finalized
- Ex- Paytm  
Paytm continuously introduce new modules like money transfer, so this money transfer is like new product so, for them we need requirement estimation
- Ex. Whatsp  
Introduce new module video calling, for them we need requirement estimation

## Design & Coding

1. Design phase testing
2. Program phase testing
3. Test case design

### 1. Design phase & program phase testing

- Design & program phase testing means code testing
- Code testing is started from small unit of program
- Developers are involved in program phase & design phase testing process, because he checks the code, finds the error & fix the error this testing is like unit testing
- In this phase white box testing & unit testing is implemented

### 2. Test case design

#### Design test Case

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##### Positive Test Cases Cases

##### Negative Test

- Tester understand the SRS document & then tester prepares test case design
- Test case design includes
  1. Positive test cases / positive scenario
  2. Negative test cases / negative scenario
- These scenarios will be executed in the later stage
- Tester are involved here
- This testing is similar to black box testing (+ve & -Ve)

## Integration (Build Installation/Install Build)

1. Sanity Testing
2. System & Functional Testing
3. User Acceptance Testing
4. Test Documentation

## Install Build/Integration

- In 3 month duration, generally 5 to 6 module are developed
- For ex.  
For current/ running project, if organization receives new requirement from client/customer to develop new module, if client/customer wants to add this new module into the existing flow then we can call it as integration testing
- In such case, developer comes in to the picture, where developer works on the new requirements, develops code for new requirement & perform WBT also
- So, when new module is ready, they add/integrate new module in the existing application flow

Example – Amazon E-commerce

Home – Fashion – electronics – Mobile - flight - Beauty –etc.

### Existing Flow

Mobile – view Product – Buy Product/Add –place order – payment – delivery

### New

Mobile – view Product – Buy Product/Add –**Exchange** - place order – payment – delivery

**Device Company**

**Module**

**Year**

**IMEI**

**Price**

- Note-So, when we fill exchange mobile info & come to price stage, then exchange mobile price will be deducted from the final product price (new mobile price) & you will get new price when you reach at payment stage
- So, developer are involved in the integration
- Integration testing has 2 types
  1. Front end integration- front end developers add or combine all dependent module by using CALL function.
  2. Back end integration- back end developers combine all the tables together by using JOIN function