\*\*\*\* **V Model or V And V Model** \*\*\*\*

\* In V-Model Verification and Validation process perform Parallel.

\* Development phase mapping with Testing phase.

\* To overcome the drawbacks of Fish Model and Waterfall Model we Use V-Model.

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| **Verification Process** | **Validation Process** |
| 1. Information gathering and analysis –   \*\* Information Gathering-  Customer and BA involve in this  BA gather all the requirements from customer to creates document which we called BRS doc  \*\* Analysis-  In this stage BA converts BRS doc into SRS doc. | 1. Assessment of development phase –   In this phase project manager is involved and strategy of the testing will be decided here by project manager. Also which method we are going to use for testing will be decided.   1. Test plan preparation –   Here project manager will prepared test team. Means he\she distribute work to the team. |

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| **Verification Process** | **Validation Process** |
| 1. Design and Coding   \*\* Design –  There are two types of design  A] High Level Design-  - It is related to Main Module.  Egg. Signup page, Log in page, Home page.  - It is developed by Design Architecture.  B] Low Level Design-  - It is related to Sub Modules.  Egg. For main module sign up page:- first name, last name, mail id, mo.no. etc | 1. Design Phase Testing   - It is related to Developer.  - Here developer do WBT (white bx testing)\Unit Testing  - and check only positive test scenario.  B) Program Phase Testing  - It is related to testing team\tester.  - Here tester do black box testing means check positive as well as negative scenario.   1. Test Case Design   1) Test Scenario = What to test?  2) Test Case = How to test?  \* Test Case depends upon Test Scenario. |
| **Verification Process** | **Validation Process** |
| 1. Integaration (Build Installation)   -In this testing developer merge the old module into the new module.  - after that they again perform wbt/positive testing/unit testing. | 1. Sanity Testing   This is the first type of testing which is perform by tester.  In the sanity testing, tester just check whether our module is able to do testing or not.  And also here we check basic and core functionality.   1. Functional Testing & Sys Testing   In this process we check top to bottom functionality of module/build/software as per SRS document and also check completeness and correctness of the s/w as per customer requirement.   1. UAT (User Acceptance Testing)  |  | | --- | | Testing Phase Environment ==  1.DIT (Development Integration Testing)  म्हंजे डेव्हलपर ने जे इंटिग्रेशन च कॉम्बाइन मॉड्युल तयार केलेल अहे त्याचि to टेस्टिंग krto (wbt)  - Developer involved in it.  2.SIT (System & Integration Testing)  - Tester involved in it.  यात आपन sanity testing आणि functional and system testing perfom krto.  After Successful completion of Sys testing & Functional testing product moved to the UAT.  C. UAT (User Acceptance Testing)  - User & Tester involved in this testing. | |

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|  | 1. Documentation   - It is report of testing.  - Each tester has its own test report.  - Whenever tester did testing on module the he/she create document of testing.  The report involve following points,   1. Name of the Module 2. How many test scenarios? 3. How many test cases? 4. Passed 5. Failed |

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| **Verification Process** | **Validation Process** |
| 1. Maintenance   --- It is service provide after delivery of application to the customer.  There are two types –   1. BPO (Business Process Outsourcing)   --- It is non-technical department.  Egg. Customer care, HR department, account team.   1. KPO (Knowledge Process Outsourcing)   --- It is technical department.  Egg. Data analyst team, testing team. | 1. – (1) DRE (Defect Removal Efficiency)   --- It is the process of calculation at which level tester did testing.  --- Tester efficiency will be calculated here,  Formula for calculate DRE,  DRE = A/A+B  ( A= Defect found by tester, B= Defect found by user/customer)   * 1. to 1 = Good Testing   Below 0.8 = Bad Testing  -(2) RFC (Request For Change)  --- In V-Model customer can request for change at any stage of the SDLC.  --- For this changes customer need to pay some extra amount.  (RFC/ CR/ MR = Request for change/ Change request/ Modification request).   * (3) Regression Testing   It is the process of checking the any adverse effect on module or application due to new changes or bug fixes. |