SDLC (Software Development life Cycle)

=> Planning => Idea, Requirement, Communication,

=> Defining / analysis => Estimation, (SRS)

=> Designing => Functions, Modules, layout

=> Coding / Implementation => Technology / Language

=> Testing => Unit Testing, Integration Testing

=> Deploy / Maintenance =>

=> Also known as Process Model.

=> It is a descriptive & diagramatic representation of s/w life cycle.

CLASSTIME | Page No.
Date / /

1 Requirement Analysis

→ Communicate with user (requirement)
→ Identification of Risk (related failures, risk)
→ Senior members (Experienced, Understanding)
→ Ambiguity problem (one word in Diff. meaning)

2 Defining Requirement

→ Documenting the product requirements & get approved from customer.
→ SRS (S/W Requirement Specification)

3 Design

→ Product Architecture
→ DDS (Design Document Specification) [Risk checking]
→ Best of Architecture is selected.

4 Building / development

→ Code generated
→ Use compiler, interpreter, debugger.
→ Best suited programming language is selected.

5 Testing

→ Subset of all Stages in SDLC.
→ Detecting, reporting, tracking, fixing and retesting.
→ Till it reaches SRS quality Standards.

6 Deployment

→ Releasing the s/w in market
→ Maintenance after deployment is conducted and it required re release in market.

Waterfall Model

→ Linear Sequential life cycle model
→ No overlapping in phases.

→ Requirement Analysis
↓
Systemdesign
↓
Implementation
↓
Testing
↓
Deployment → Maintenance

Also known as 5P Model.
1970

CLASSTIME | Page No.
Date / /

Advantages :-

→ Simple & easy
→ Easy to manage (data, model)
→ Works well for smaller projects
→ Results are well documented.

Disadvantages :-

→ Risk & Uncertainty
→ Not for big & complex projects
→ Not for projects where requirements are changing
→ i.e. can't accomodate changing requirement

Iterative Model or Incremental Model

Communication	Plan
Planning	requirement
Modeling	analysis &
Construction	Design
Deployment	Implementation
	Testing
	Evaluation

Advantages :-

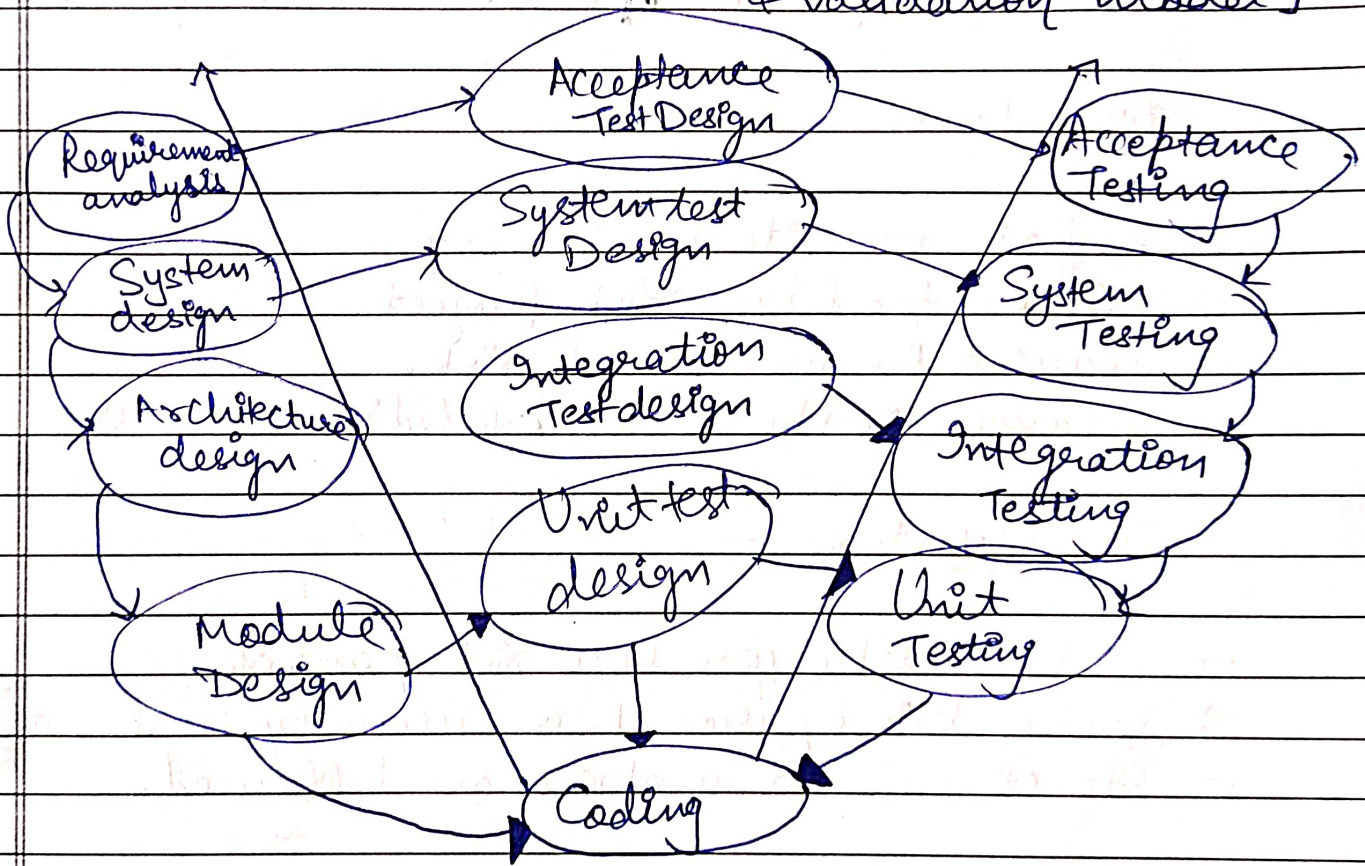
→ Work with small size team
→ Initial product delivery is faster.
→ Can accomodate changes

→ Customer response / feedback is considered

Disadvantages :-

→ actual cost may exceed the estimated cost.
→ System broken into small increments.

V-Shaped Model [also known as Verification & Validation model]



Design & Testing Path में होती है।

CLASSTIME | Page No.
Date / /

Spiral Model (जहाँ ज्यादा Risk होता है | वहाँ Use होता है |)

(Waterfall model + Iterative Model)

1. Identification (problem, risk)
2. Design (acc to req., req & Design)
3. Building / Construct [fast as compared to others, New version बनता है]
4. Evaluation & Risk Analysis

Advantages :-

→ project monitoring is easy.
→ Suitable for high risk project.
→ Reduces the number of risk.
→ Changes can be accomodated in later Stages.

Disadvantages :-

→ Not Suitable for low risk projects.
→ Cost of this approach is usually high. (क्योंकि req. बार बार change होते है |)
→ Strict Rules & protocols are followed.

Agile Model (Move Quickly)

Large Projects

↓

Small Chunks (Iterations)

↓

Release

↓

Feedback

↓

Enhance

↓

Re-release

Plan
Design
Develop
Test
Deploy
Review
Launch

[Highly qualified & experienced person are available, project size is small & client is ready to meet at anytime]

Advantages

1. Frequent Delivery
2. Face to face communication with client
3. Changes
4. Time

Disadvantage

1. Less documentation
2. Maintenance Problem

CLASSTIME | Page No.
Date / /

Bing Bang Model [Websites/projects we have made]

[Academic project]

Starts from Nothing

Simplest model & it requires almost no planning.

Time →
Effort → Big Bang Model → S/W → Release
Resources →