SDLC

Software Development Lifecycle Model

Intro

The SDLC is a framework that describes the activities performed at each stage of a software development project.

SDLC process is used by the software industry to design, develop and test high quality software.

It aims to produce the quality software that meets or exceeds customer expectations, reaches completion within time and budget.

SDLC Phases

1. Planning and Requirements Analysis

2. Defining Requirements

3. Designing the Software

4. Building or Developing the Software

5. Testing the Software

6. Deployment and Maintenance

Types of SDLC Models

Waterfall Model
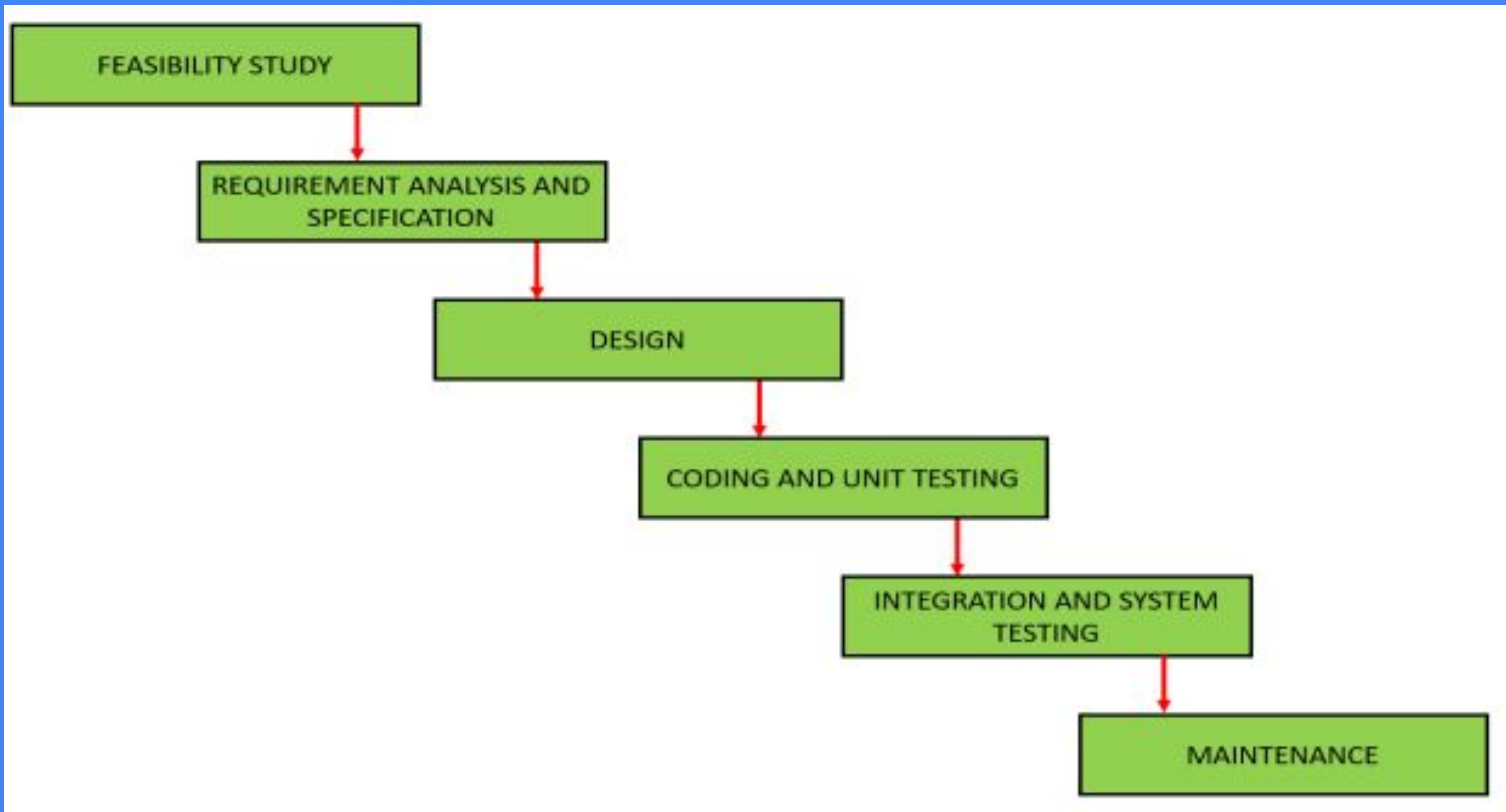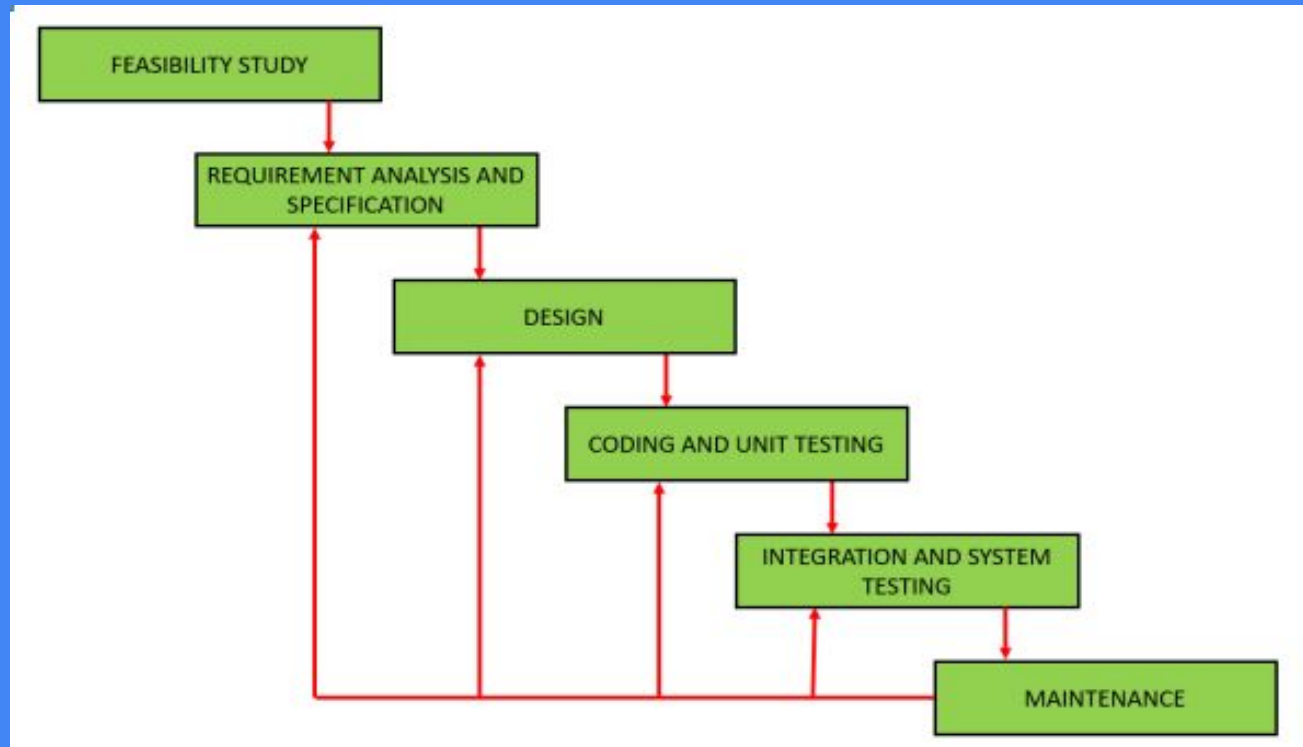
Iterative Model

V Model

Spiral Model

Waterfall Model
Advantages
- **This model is very simple and is easy to understand.**
- **Phases in this model are processed one at a time.**
- **Each stage in the model is clearly defined.**
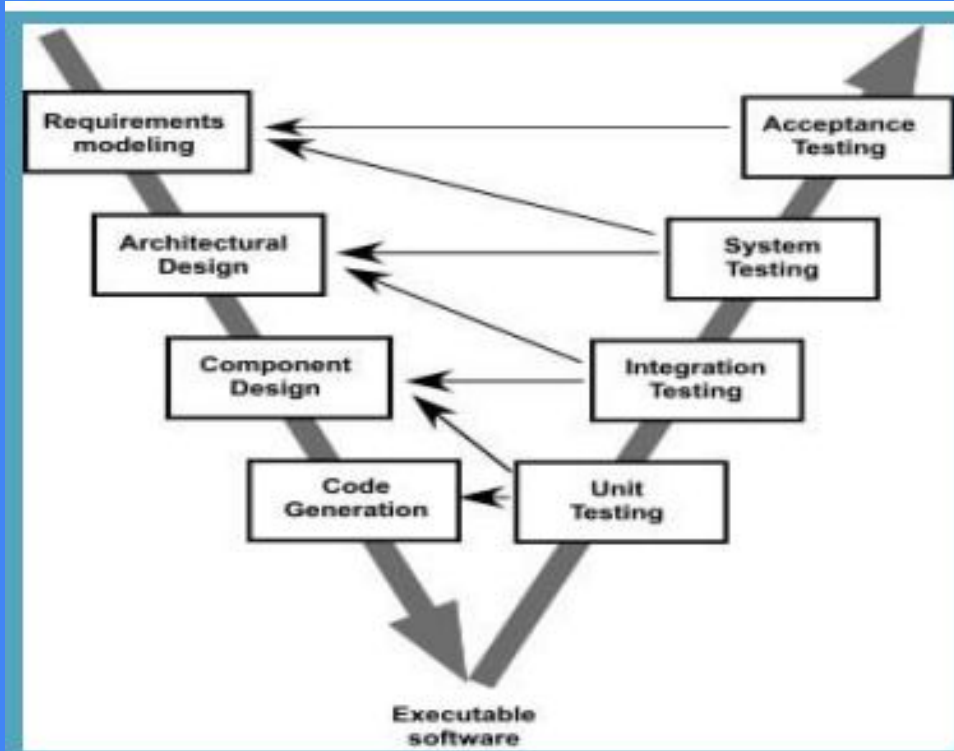- **Reinforces good habits: define-before-design, design-before-code.**

Disadvantages
- **No feedback path**
- **Difficult to accommodate change requests**
- **Inefficient error corrections**
- **No overlapping of phases:**

Waterfall Model

Iterative Model

V Model

Iterative Model

Advantages
- Feedback Path
- Simple Model

Disadvantages
- Difficult to accommodate the change request. (no scope for any modifications to the requirements.)
- Incremental delivery not supported.
- Overlapping of phases not supported.
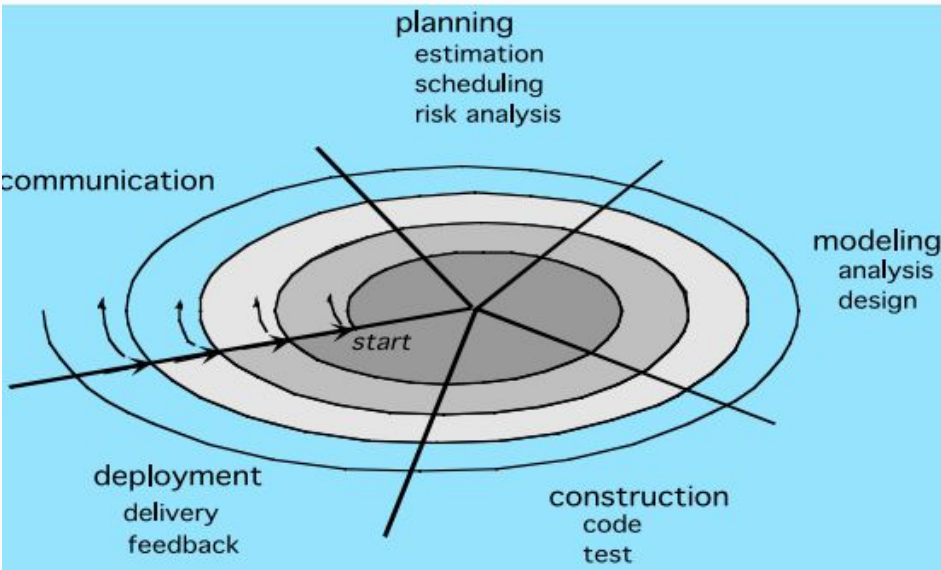- No support for Risk handling and code reuse.

V Model

Advantages
- This is a highly disciplined model and Phases are completed one at a time.
- V-Model is used for small projects where project requirements are clear.
- Simple and easy to understand and use.

Disadvantages
- High risk and uncertainty.
- It is not a good for complex and object-oriented projects.
- It does not easily handle concurrent events.

Final point

planning
estimation
scheduling
risk analysis

communication

modeling
analysis
design

start

deployment
delivery
feedback

construction
code
test

The best is evolutionary model that is spiral model

Advantages
- Error Reduction (core modules are used by the customer from the beginning of the phase and
- then these are tested thoroughly)
- **High amount of risk analysis hence, avoidance of Risk is enhanced.**
- **Good for large and mission-critical projects.**
- **Strong approval and documentation control.**
- **Additional Functionality can be added at a later date.**

Thanks!

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