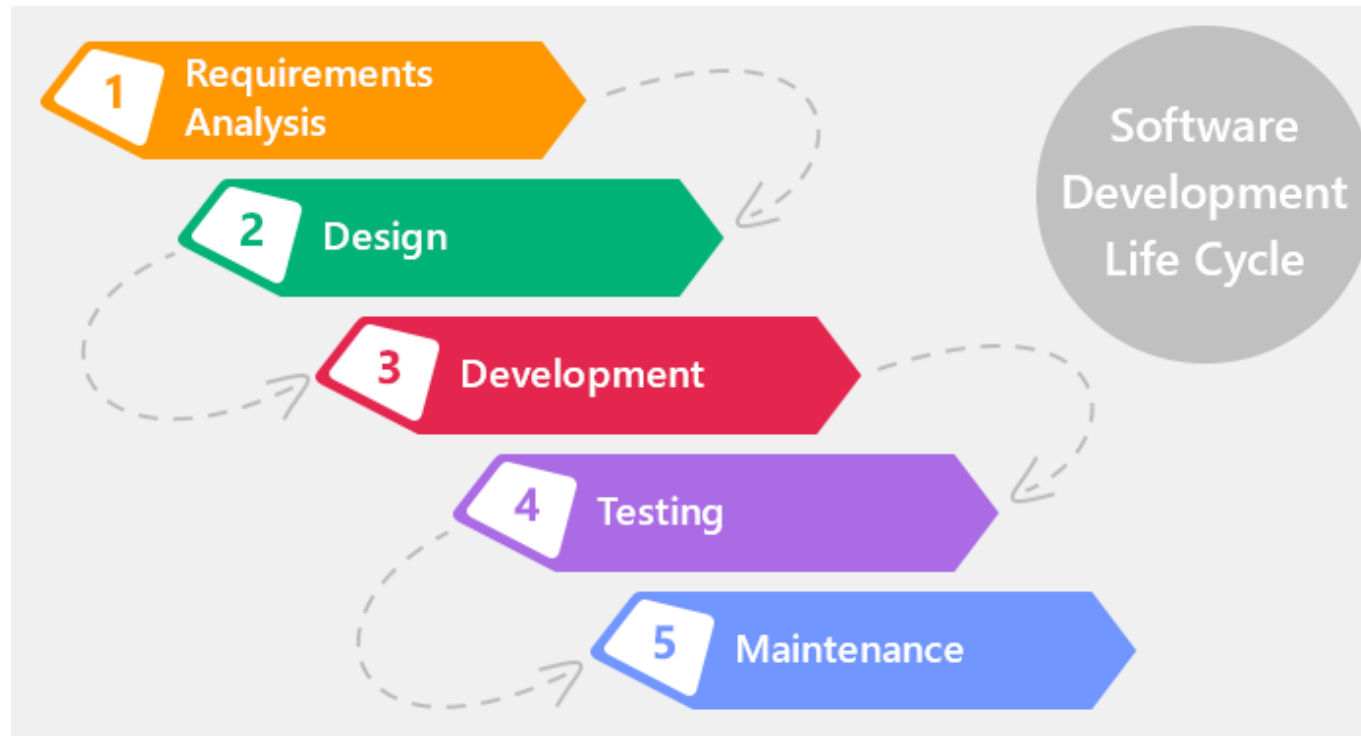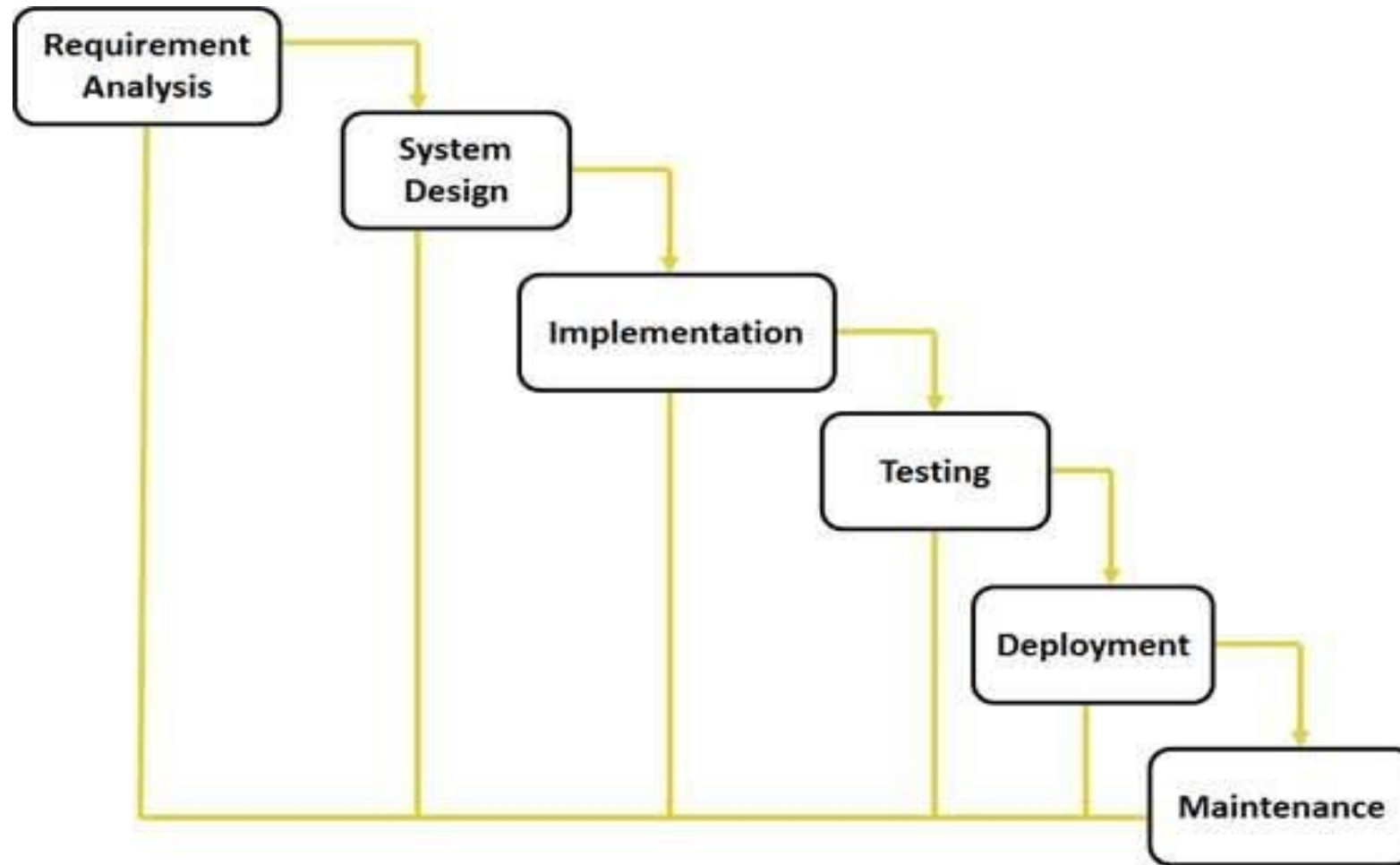# Manual Testing
Session-2

Software Development Life Cycle (SDLC)

- SDLC, Software Development Life Cycle is a process used by software industry to design, develop and test software's.

Waterfall Model

Waterfall Model(Advantages & Disadvantages)

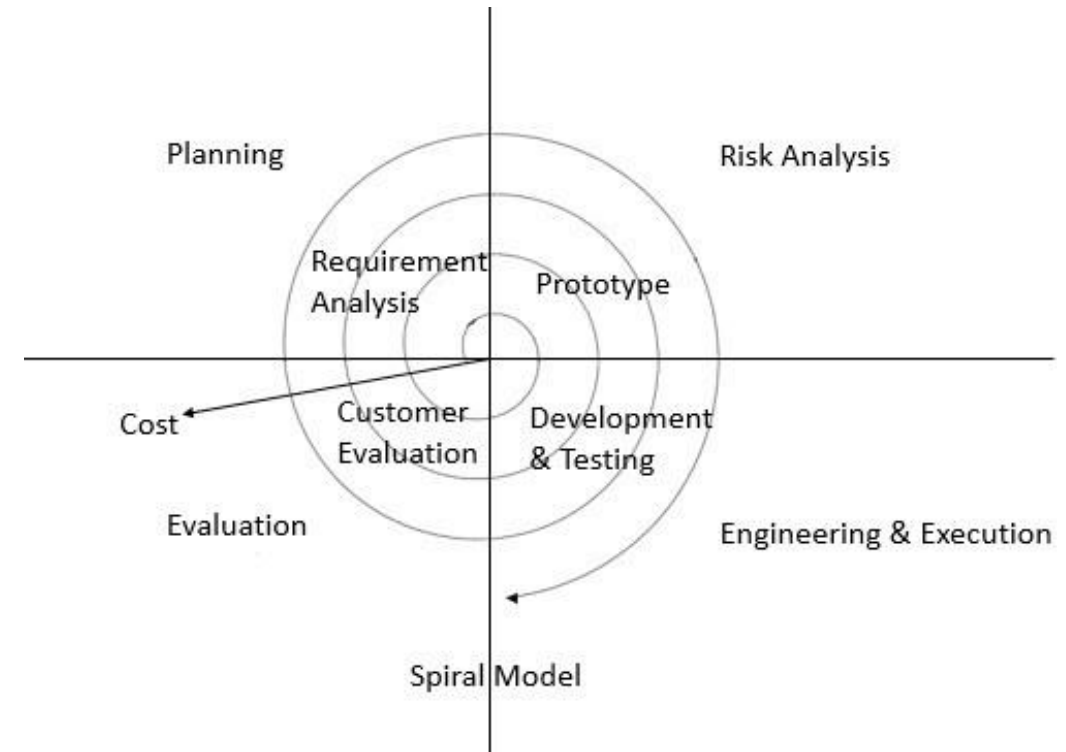- **Advantages of Waterfall Model**

  - Quality of the product will be good.

  - Since Requirement changes are not allowed , chances of finding bugs will be less.

  - Initial investment is less since the testers are hired at the later stages.

  - Preferred for small projects where requirements are feezed.

- **Disadvantages of Waterfall Model**

  - Requirement changes are not allowed.

  - If there is defect in Requirement that will be continued in later phases.

  - Total investment is more because time taking for rework on defect is time consuming which leads to high investment.

  - Testing will start only after coding.

Spiral Model

- Spiral Model is iterative model.

- Spiral Model overcome drawbacks of Waterfall model.

- We follow spiral model whenever there is dependency on the modules.

- In every cycle new software will be released to customer.

- Software will be released in multiple versions. So it is also called version control model.

Planning

Risk Analysis

Requirement Analysis

Prototype

Cost

Customer Evaluation

Development & Testing

Evaluation

Engineering & Execution

Spiral Model

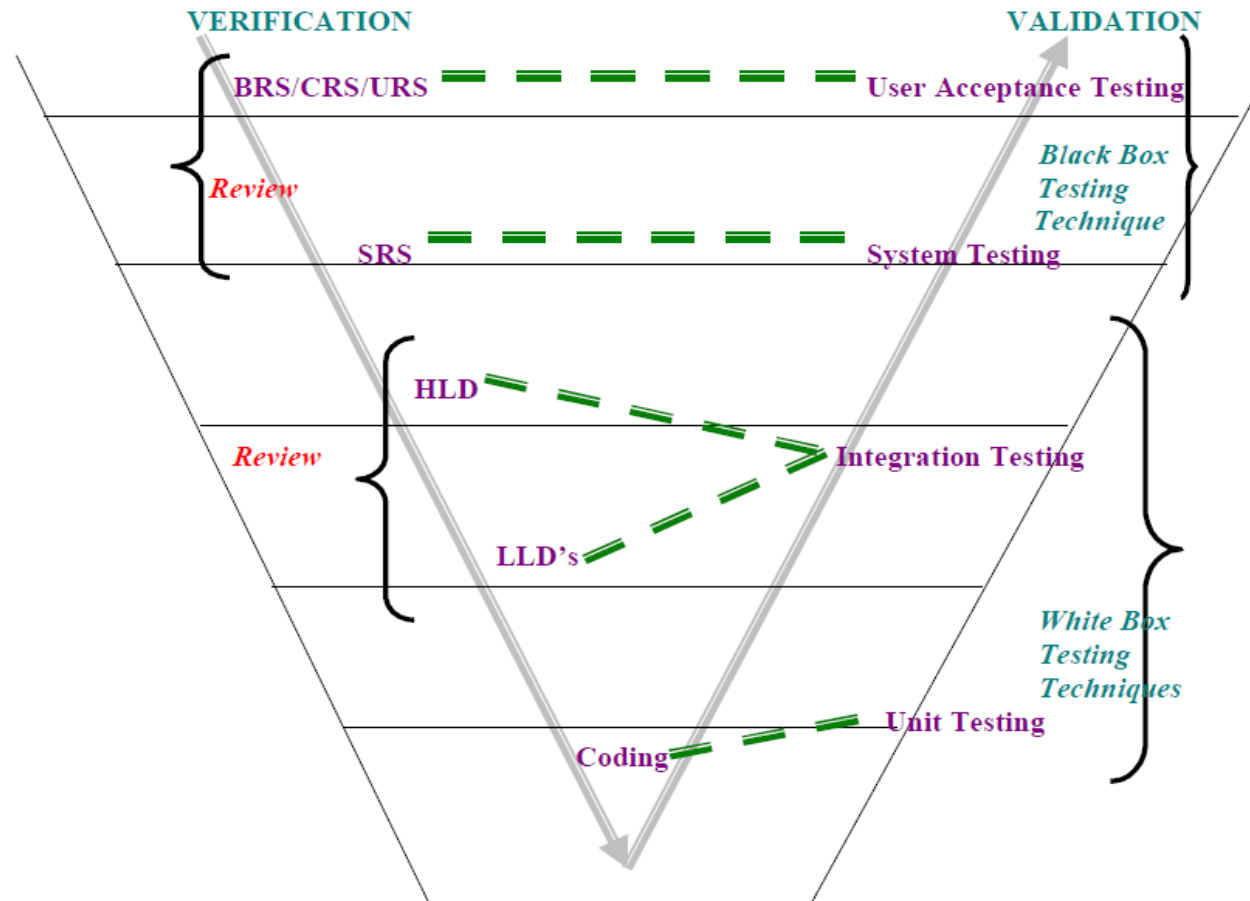# Spiral Model (Advantages & Disadvantages)

- **Advantages of Spiral Model**

  - Testing is done in every cycle, before going to the next cycle.

  - Customer will get to use the software for every module.

  - Requirement changes are allowed after every cycle before going to the next cycle.

- **Disadvantages of Spiral Model**

  - Requirement changes are NOT allowed in between the cycle.

  - Every cycle of spiral model looks like waterfall model.

  - There is no testing in requirement & design phase.

V-Model

Advantages and Disadvantages of V-Model

- **Advantages**
  - Testing is involved in each and every phase.
- **Disadvantages**
  - Documentation is more.
  - Initial investment is more.

Verification V/S Validation

- Verification checks whether we are building the **right product**.

- Focus on Documentation

- Verification typically involves.
  - Reviews
  - Walkthroughs
  - Inspections

- Validation checks whether we are building the **product right.**

- Takes place after verifications are completed.

- Focus on Software

- Validation typically involves actual testing.
  - Unit testing, integration, system testing, UATtesting

Static V/S Dynamic Testing

- **Static testing** is an approach to test project documents in the form of Reviews, Walkthroughs and Inspections.

- **Dynamic testing** is an approach to test the actual software by giving inputs and observing results.