HEXAWARE

Software Development Life Cycle

Session Objective

- Introduction to SDLC
- Types of Model
  - Waterfall model
  - Iterative model
  - Spiral model
  - V-model

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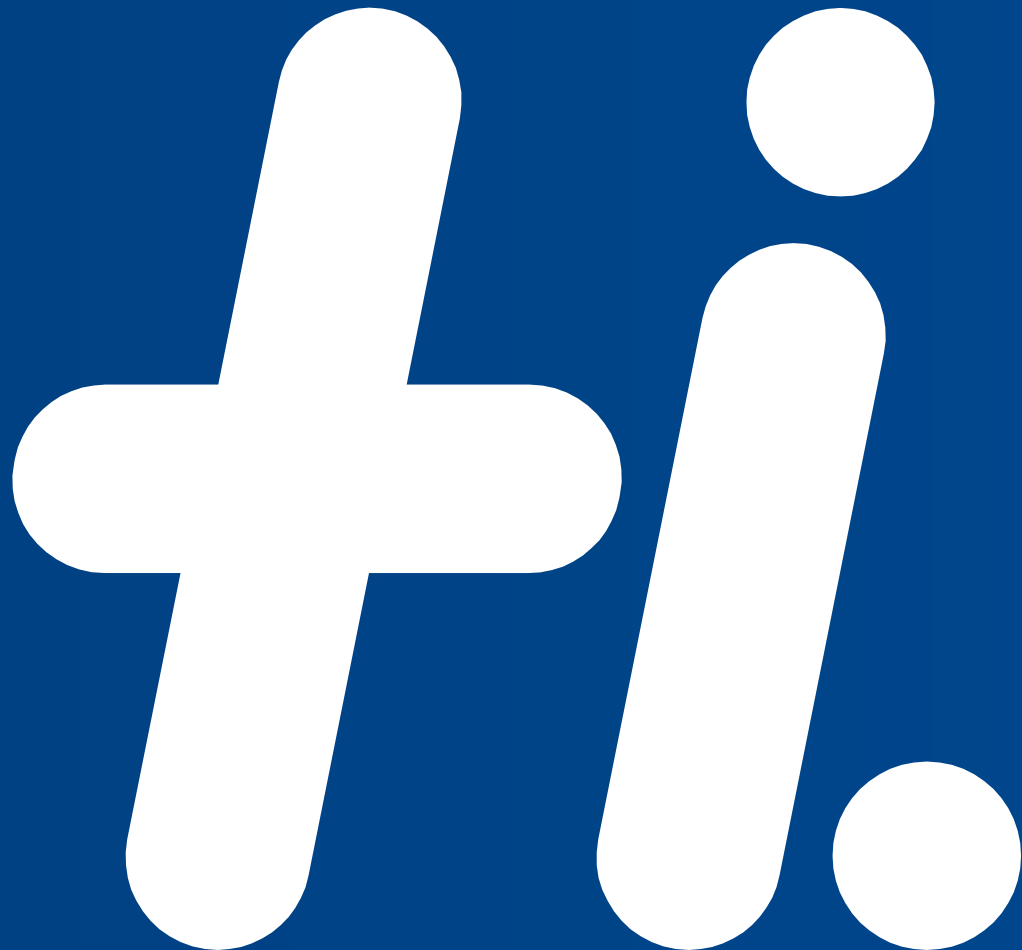
Introduction to SDLC



SDLC

- Software Development Life Cycle (SDLC) is a process used by the software industry to design, develop and test high quality software.
- The SDLC aims to produce a high-quality software that meets or exceeds customer expectations, reaches completion within times and cost estimates.

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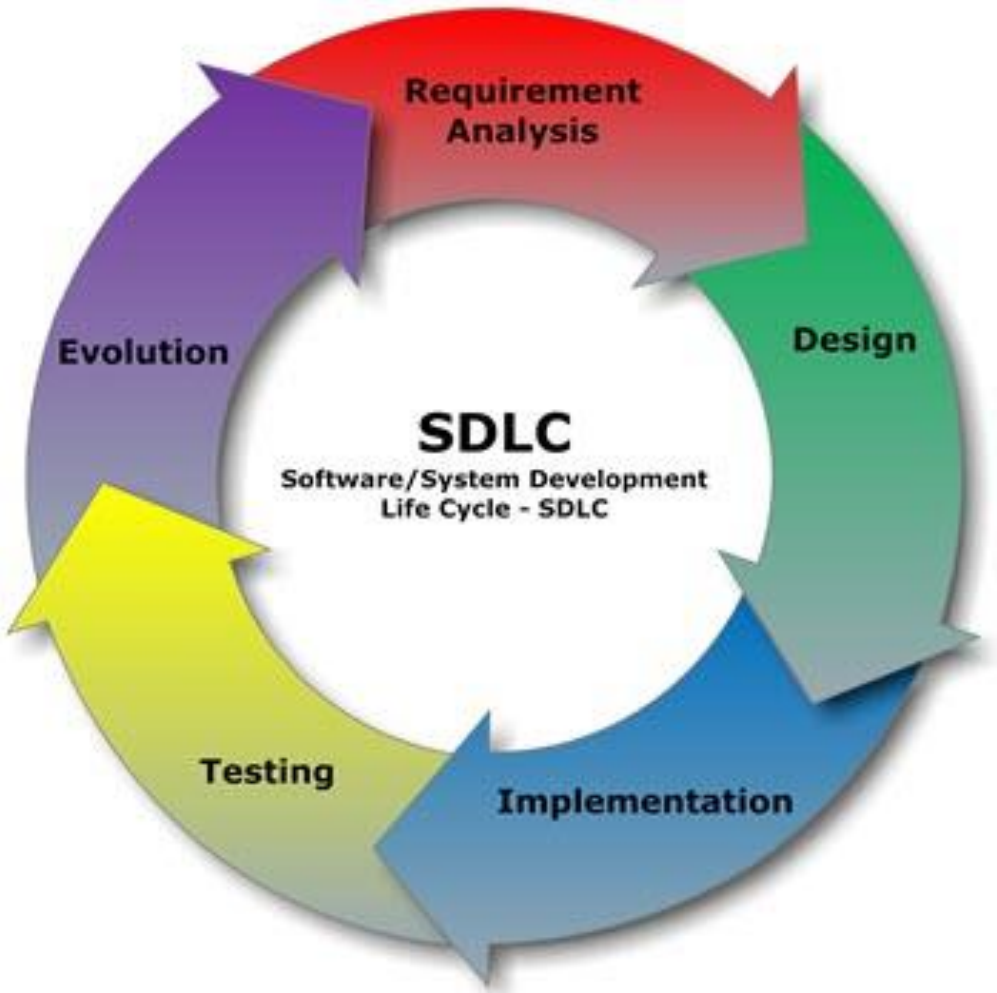
SDLC – Life Cycle



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SDLC – Watch out

- A video to understand the SDLC process with example

https://www.youtube.com/watch?v=i-QyW8D3ei0

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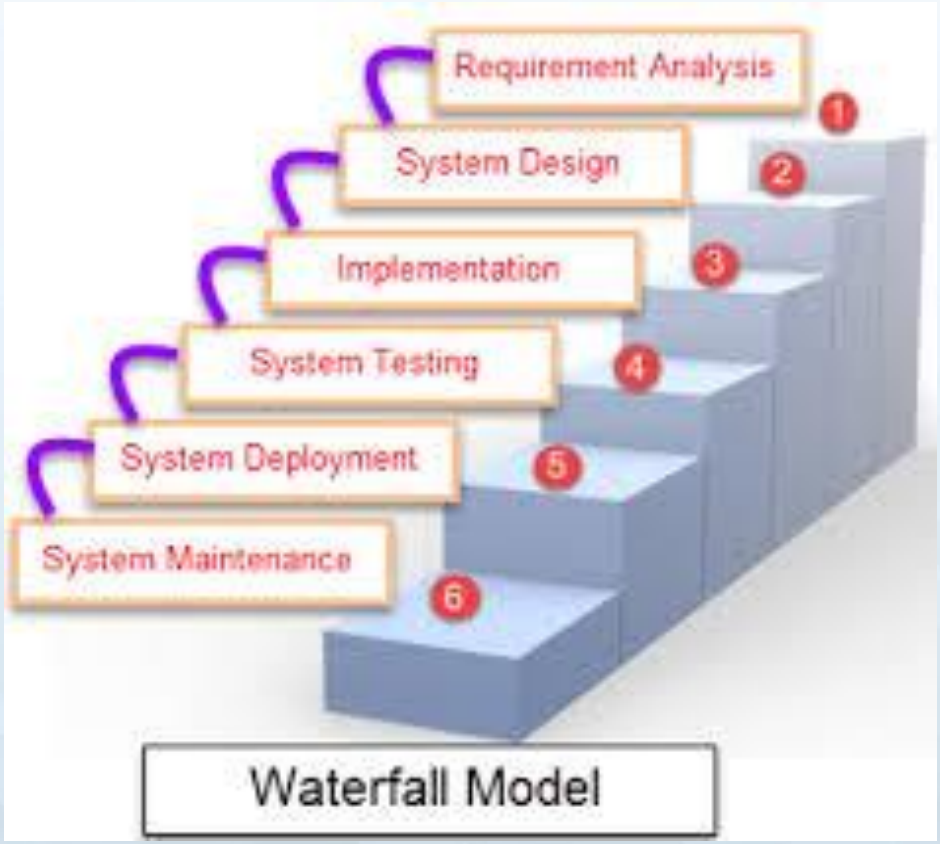
Types of SDLC Model

Waterfall Model

The **waterfall Model** illustrates the software development process in a linear sequential flow. This means that any phase in the development process begins only if the previous phase is complete.



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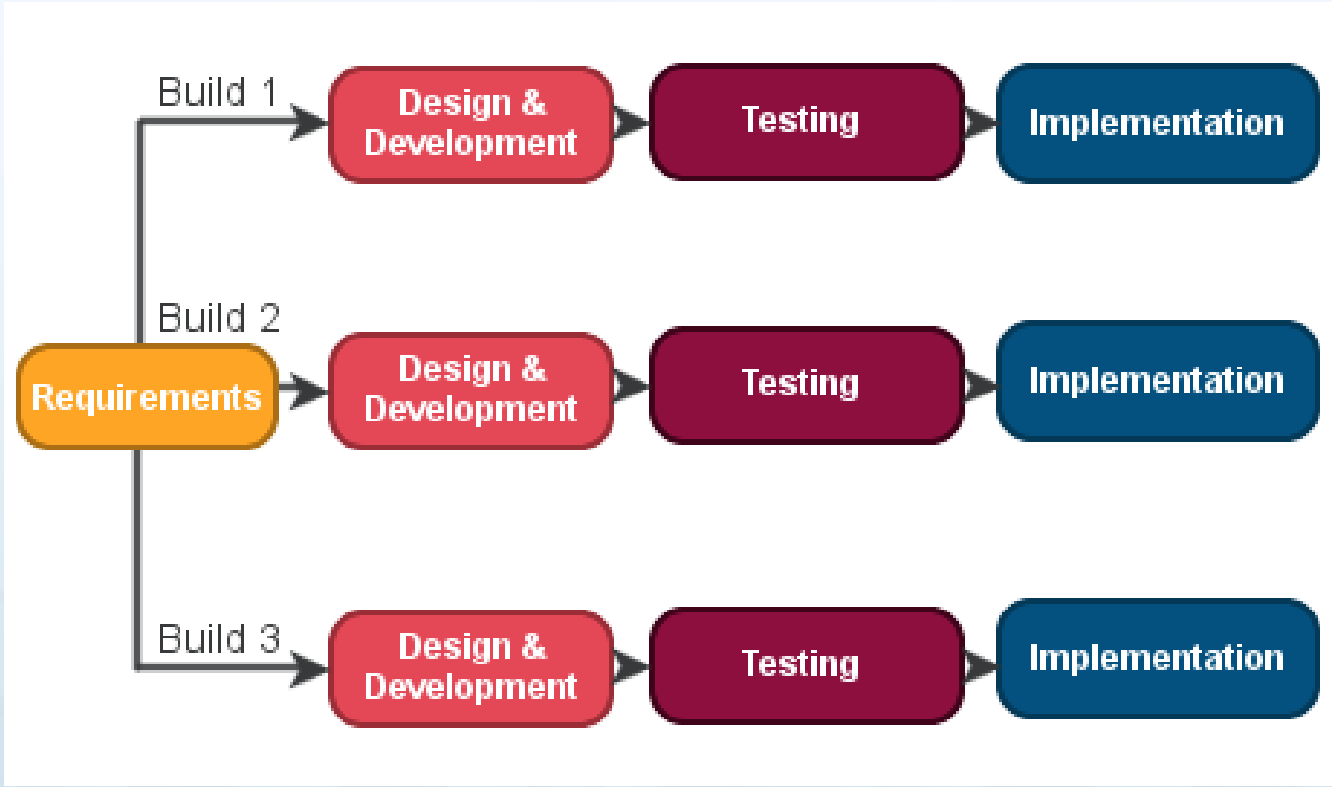
Iterative & Incremental Model

In this method of software development the product is designed, implemented and tested incrementally (a little more is added each time) until the product is finished.



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Waterfall Vs Incremental

S.No	Iterative Waterfall Model	Incremental Model
1	This model is used for implementing, the [12] software product when the requirement is clearly defined.	When there is always a possibility of changing the requirement, we prefer this model.
2	Customers do not interact with the software until the final phase is [13] not accomplished. (customer evaluation after the final stage)	There is a core (baseline) product which is created after each increment. So, the clients are able to take review before executing the final phase (customer evaluation in each increment)
3	The Human resource is dependent on the requirements of clients.	Less human resource is required when the increments are small
4	The Project failure risk will be high.	The Project failure risk will be low.

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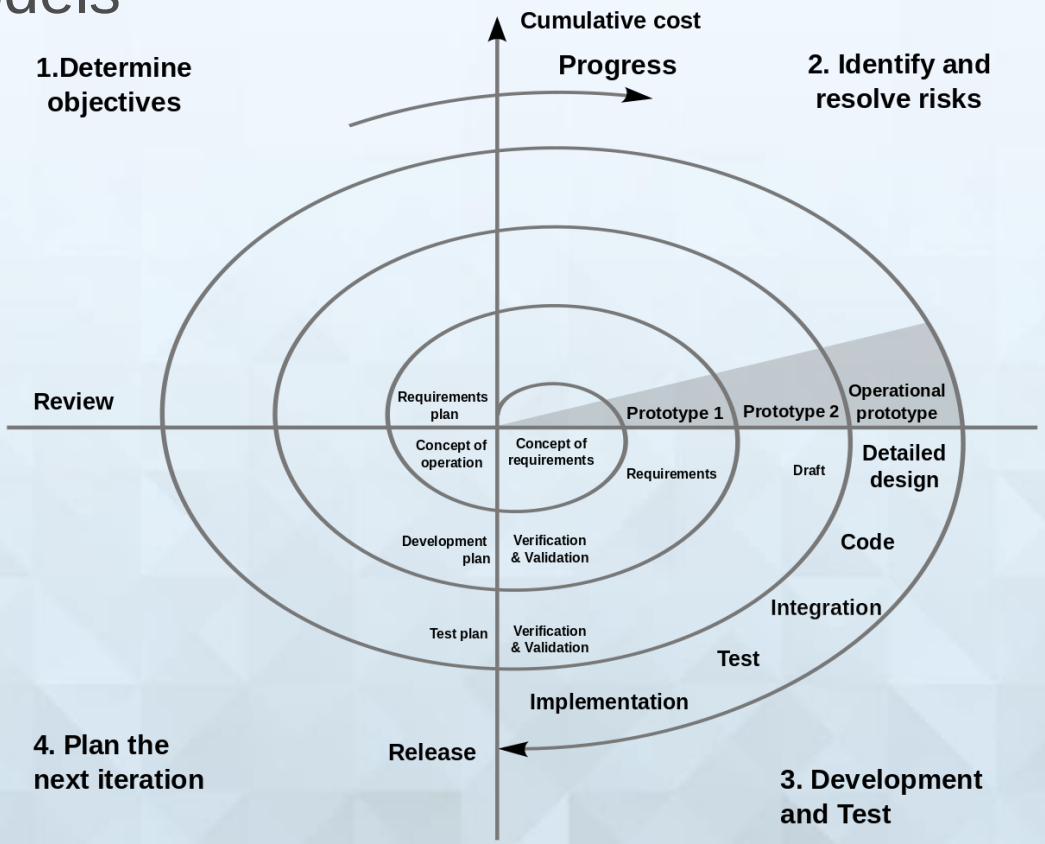
Spiral Model

The spiral model is a risk-driven software development process model. Based on the unique risk patterns of a given project, the spiral model guides a team to adopt elements of one or more process models



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Spiral Pros & Cons

Pros	Cons
▪ Changing requirements can be accommodated. ▪ Allows for extensive use of prototypes ▪ Requirements can be captured more accurately. ▪ Users see the system early. ▪ Development can be divided into smaller parts and more risky parts can be developed earlier which helps better risk management.	▪ Management is more complex. ▪ End of project may not be known early. ▪ Not suitable for small or low risk projects and could be expensive for small projects. ▪ Process is complex ▪ Spiral may go indefinitely. ▪ Large number of intermediate stages requires excessive documentation.

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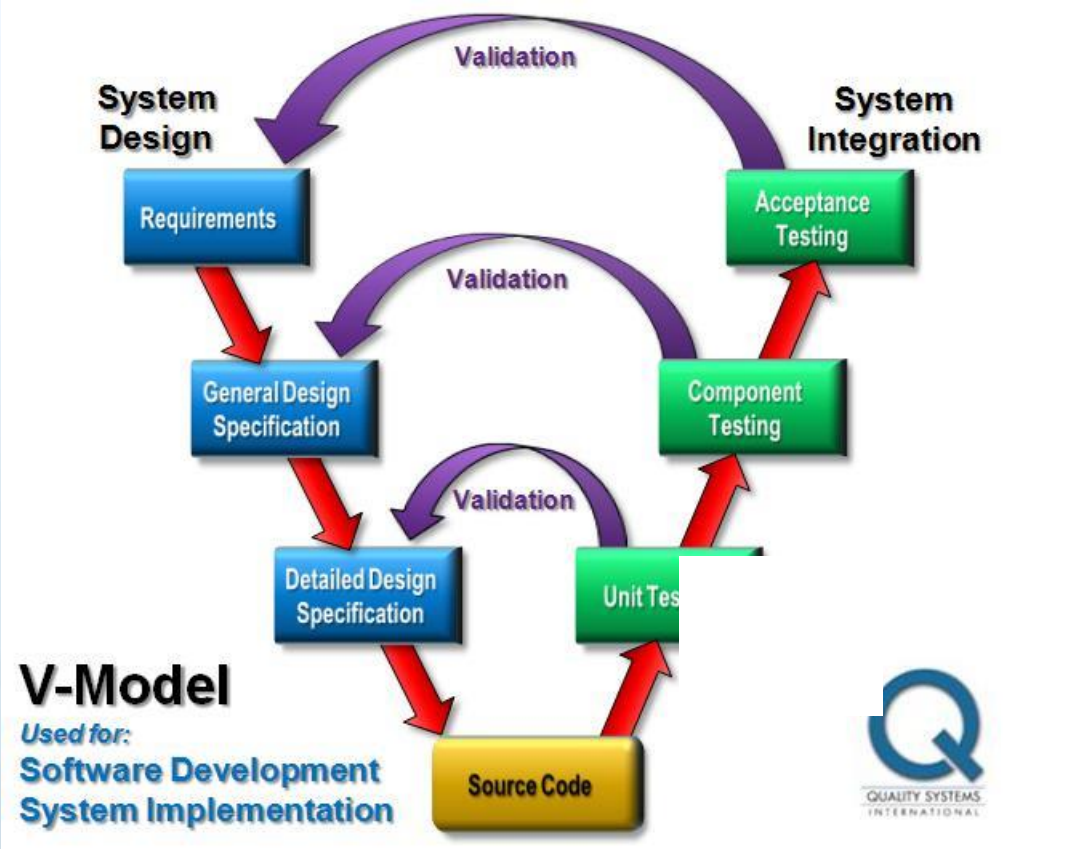
V-Model

The V-Model is an extension of the waterfall model and is based on the association of a testing phase for each corresponding development stage. This means that for every single phase in the development cycle, there is a directly associated testing phase.



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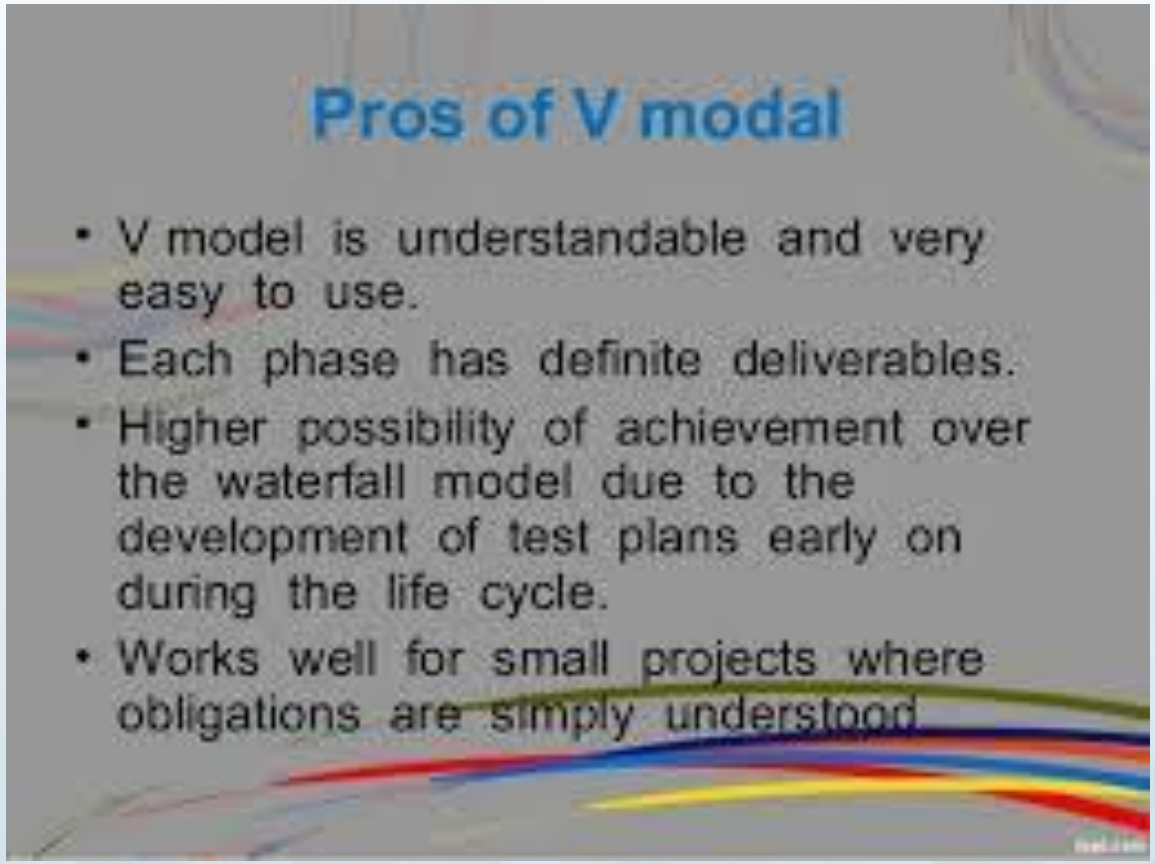
V-Model Pros



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Gamification – Waterfalls Vs Agile

Waterfall Vs Agile game

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