

# SE CHEAT SHEET

Classic waterfall model:

"Classical Waterfall Model"

- \* Feasibility study
- \* Requirement Analysis and Specifications
- \* Design
- \* Coding and Unit testing
- \* System testing and Integration
- \* Maintenance

* Advantages	* Disadvantages
* Base Model	* No feedback
* Simple and Easy	* No Experiment
* Small Projects	* No Parallelism
	* High Risk
	* 60% Efforts Maintenance

Classic Waterfall model in Software Engineering

285,349 views • Dec 6, 2020

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Iterative Waterfall Model:

"Iterative Waterfall Model"

- \* Feasibility study
- \* Requirement Analysis and Specifications
- \* Design
- \* Coding and Unit testing
- \* System testing and Integration
- \* Maintenance

Advantages

- \* Base Model
- \* Simple and Easy
- \* Small Projects
- \* Feedbacks

Disadvantages

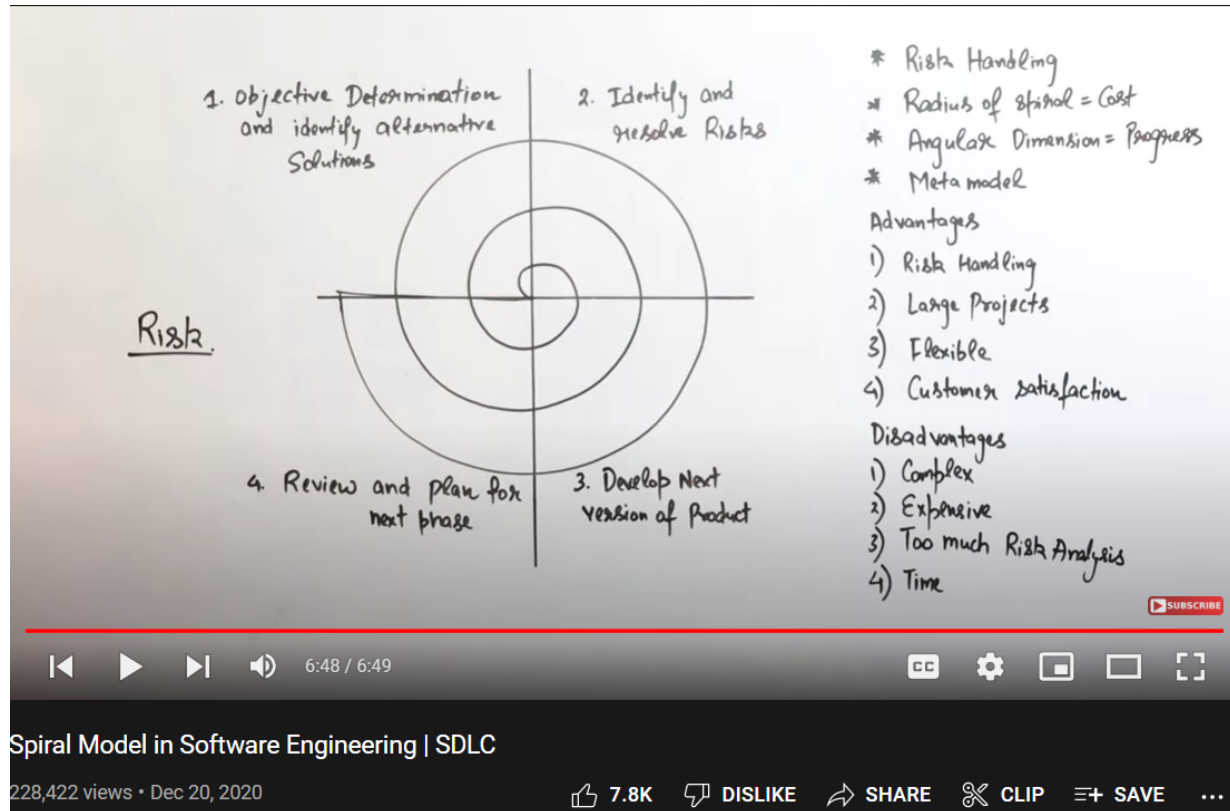
- \* No phase overlapping
- \* No Intermediate Delivery
- \* Rigid (No changes)
- \* Less Customer Interaction

Iterative Waterfall Model with example in Hindi

143,490 views • Dec 9, 2020

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## Spiral model:



Risk

1. Objective Determination and identify alternative Solutions
2. Identify and resolve Risks
3. Develop Next version of Product
4. Review and plan for next phase

- \* Risk Handling
- \* Radius of spiral = Cost
- \* Angular Dimension = Progress
- \* Meta model

Advantages

- 1) Risk Handling
- 2) Large Projects
- 3) Flexible
- 4) Customer satisfaction

Disadvantages

- 1) Complex
- 2) Expensive
- 3) Too much Risk Analysis
- 4) Time

Spiral Model in Software Engineering | SDLC

228,422 views • Dec 20, 2020

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## Comparison between various models:

Classical Waterfall	Iterative Waterfall	Prototype Model	Incremental Model	Evolutionary Model	RAD Model	Spiral Model	Agile Model
Basic, Rigid, Inflexible, Not for Real Project	Basic, Problem is well understood	User Requirement Not clear, Costly, No Early lock on Requirements → High User Involvement → Reusability	Module by Module Delivery, Easy to test and debug Req. Lock	Large Projects	Time and Cost Constraint, User at all levels → Reusability	Risk, Not for Small Projects, No Early lock on Requirements, Less Experience can work	Flexible, Advanced, Parallel, Process divided into Sprints

Comparison of Various SDLC Models | Waterfall to Agile | All Imp Points

136,492 views • Jan 4, 2021

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Agile model:

The diagram illustrates the Agile model. At the top, it says "Agile" (Move Quickly). Below this, a box labeled "Large Projects" has four arrows pointing down to "Small Chunks (Iterations)". From "Small Chunks (Iterations)", a vertical flow of arrows points down through "Release", "feedback", "Enhance", and finally "Re-release". To the right of the diagram, the advantages and disadvantages are listed.

Advantages:

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

Disadvantage:

- 1) Less documentation
- 2) Maintenance Problem

Agile in Software Engineering

191,490 views • Jun 9, 2021

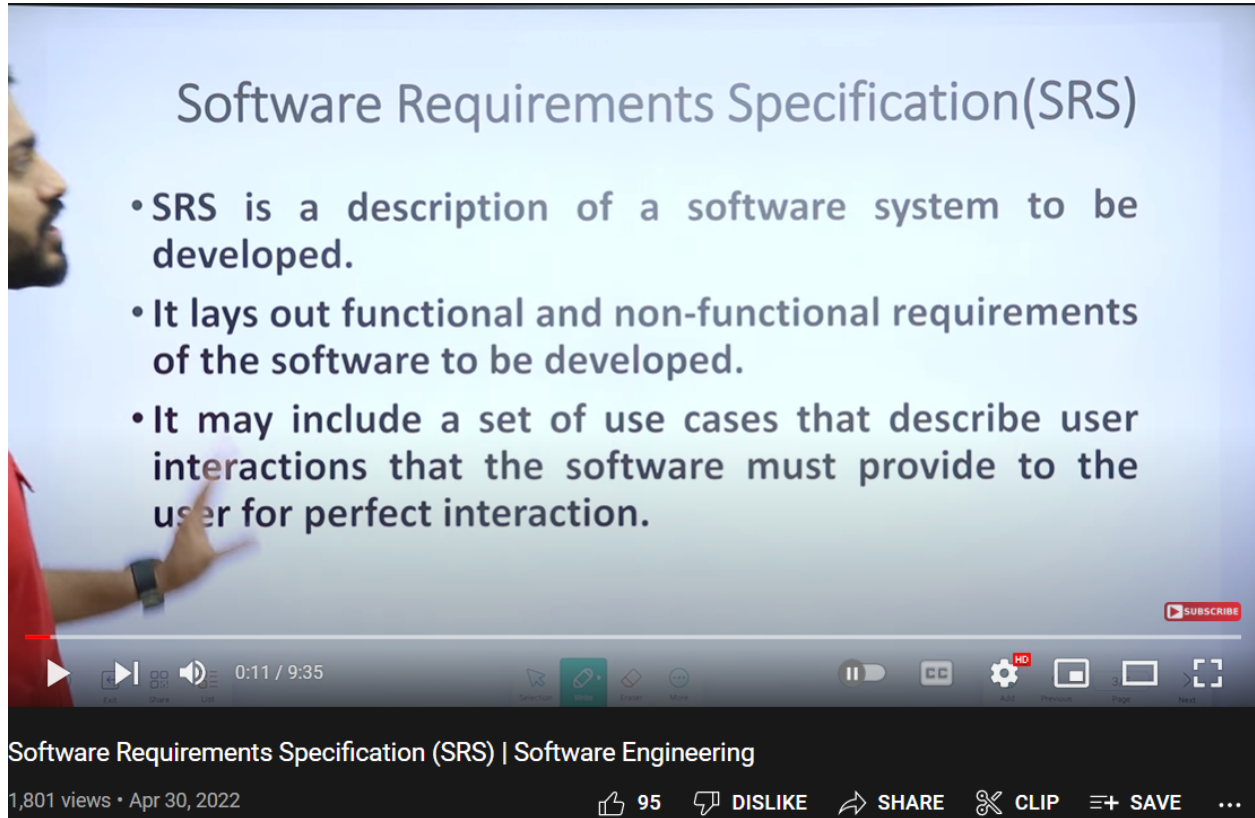
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Software engineering is defined as a process of analyzing user requirements and then designing, building, and testing software applications which will satisfy those requirements.

Testing:

▶ What is Testing? full Explanation | Software Engineering

SRS:



The image shows a YouTube video player. The video content is a presentation slide titled "Software Requirements Specification(SRS)". The slide lists three bullet points: "SRS is a description of a software system to be developed.", "It lays out functional and non-functional requirements of the software to be developed.", and "It may include a set of use cases that describe user interactions that the software must provide to the user for perfect interaction." The video player interface includes a play button, a progress bar at 0:11 / 9:35, and various control icons. Below the video, the title "Software Requirements Specification (SRS) | Software Engineering" is displayed, along with "1,801 views • Apr 30, 2022" and interaction buttons for likes (95), dislikes, share, clip, save, and a menu icon.

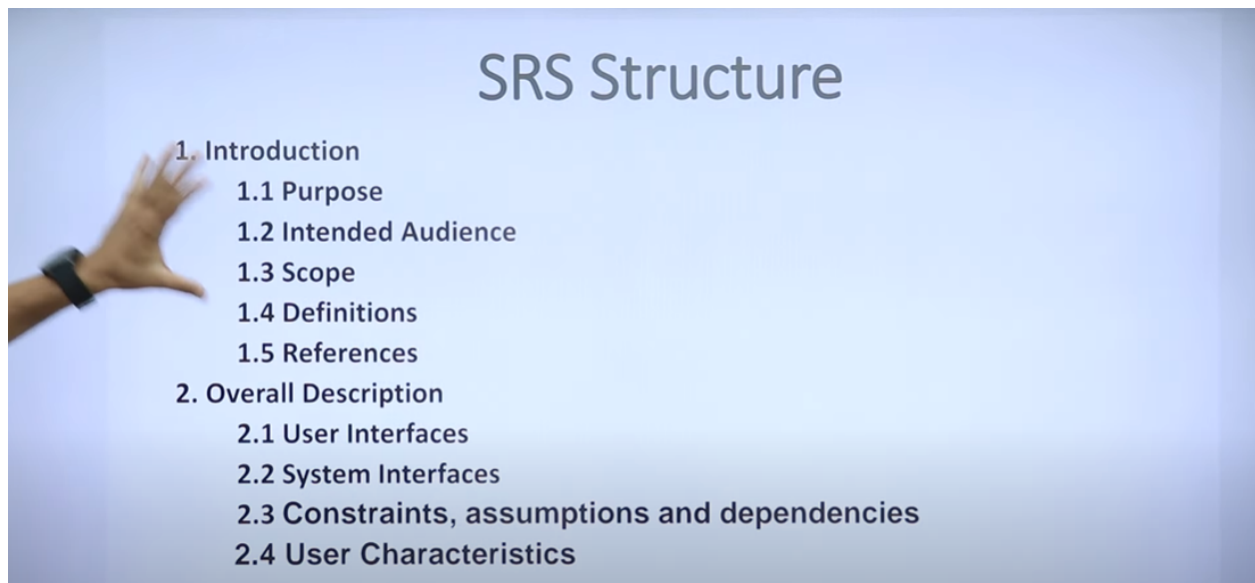
## Software Requirements Specification(SRS)

- SRS is a description of a software system to be developed.
- It lays out functional and non-functional requirements of the software to be developed.
- It may include a set of use cases that describe user interactions that the software must provide to the user for perfect interaction.

Software Requirements Specification (SRS) | Software Engineering

1,801 views • Apr 30, 2022

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The image shows a YouTube video player. The video content is a presentation slide titled "SRS Structure". The slide lists two main sections: "1. Introduction" and "2. Overall Description". Under "1. Introduction" are sub-points: "1.1 Purpose", "1.2 Intended Audience", "1.3 Scope", "1.4 Definitions", and "1.5 References". Under "2. Overall Description" are sub-points: "2.1 User Interfaces", "2.2 System Interfaces", "2.3 Constraints, assumptions and dependencies", and "2.4 User Characteristics". The video player interface is the same as the one above.

## SRS Structure

1. Introduction
  - 1.1 Purpose
  - 1.2 Intended Audience
  - 1.3 Scope
  - 1.4 Definitions
  - 1.5 References
2. Overall Description
  - 2.1 User Interfaces
  - 2.2 System Interfaces
  - 2.3 Constraints, assumptions and dependencies
  - 2.4 User Characteristics

### 3. System Features and Requirements

#### 3.1 Functional Requirements

#### 3.2 Use Cases

#### 3.3 External Interface Requirements

#### 3.4 Logical database requirement

#### 3.5 Nonfunctional Requirements

### 4. Deliver for Approval

UML Use Case Diagram:

[▶ UML Use Case Diagram Tutorial](#)

Data Flow Diagram:

[▶ What is DFD? full Explanation | Software Engineering](#)