SE CHEAT SHEET

Classic waterfall model:

Classic Waterfall model in Software Engineering
285,349 views • Dec 6, 2020

Iterative Waterfall Model:
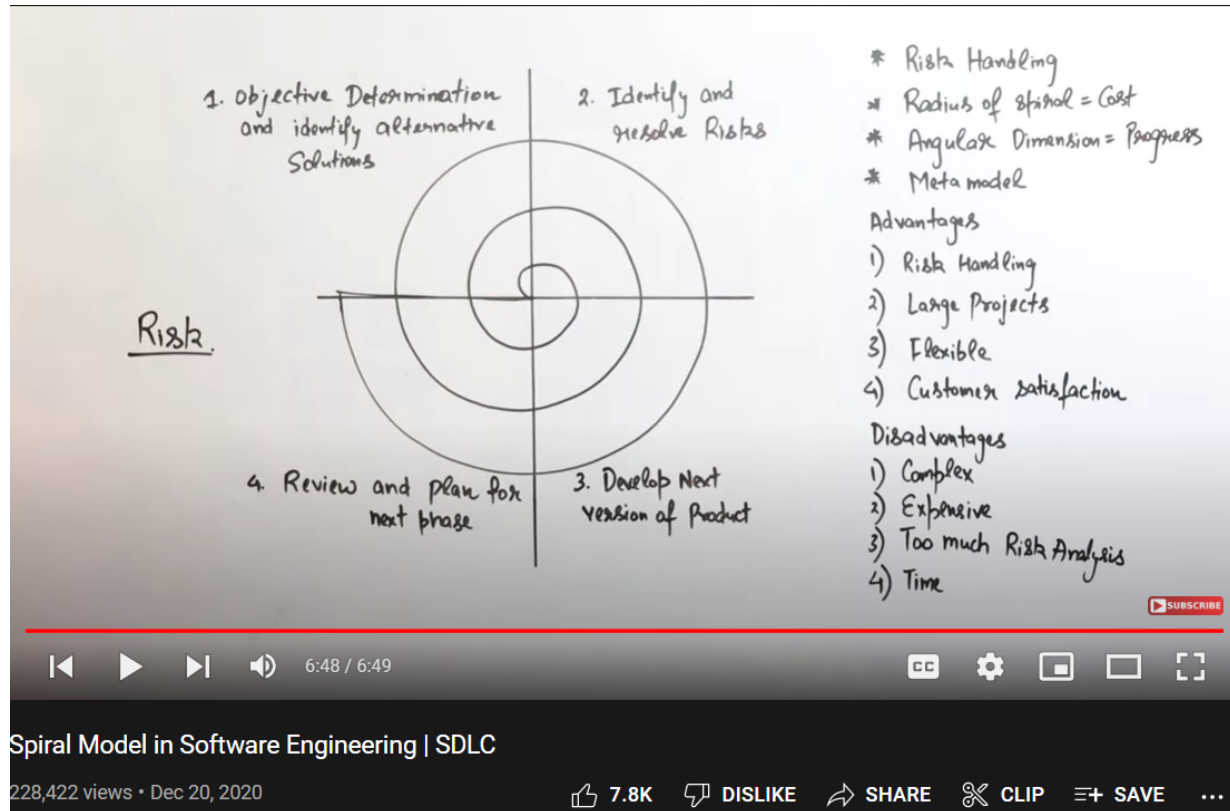
Iterative Waterfall Model with example in Hindi
143,490 views • Dec 9, 2020

Spiral model:

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

* 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

6:48 / 6:49

Spiral Model in Software Engineering | SDLC

228,422 views • Dec 20, 2020   7.8K   DISLIKE   SHARE   CLIP   + SAVE   ...

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	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

Req Lock

9:25 / 9:26

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

136,492 views • Jan 4, 2021   4.5K   DISLIKE   SHARE   CLIP   + SAVE   ...

Agile model:

"Agile" (Move Quickly)

Large Projects

Small Chunks (Iterations)
↓
Release
↓
feed back
↓
Enhance
↓
Re-release

Advantages: 1) Frequent Delivery
2) Face to face Communication with client
3) Changes
4) Time
Disadvantage: 1) Less documentation
2) Maintanance Problem

8:00 / 8:01

Agile in Software Engineering

191,490 views • Jun 9, 2021   6.6K   DISLIKE   SHARE   CLIP   SAVE   ...

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

Prototyping Model:

Requirement Gathering
↓
Quick Design
↓
Build Prototype
↓
Customer Evaluation
↓ Acceptance.
Design
↓
Implement
↓
Test
↓
Maintain

Prototype Development
Refinement Suggestion incorporating
Iterative Development

* Customer Not clear with idea
* Throwaway Model
* good for technical and requirement mistake
* Increase in Cost of Development.

4:51 / 4:51

Prototyping Model in Software Engineering

4:28 / 5:53

Incremental Model in Software Engineering | SDLC

▶ Incremental Model in Software Engineering | SDLC

Testing:
▶ What is Testing? full Explanation | Software Engineering

SCRUM:

Scrum is the type of **Agile framework**. It is a framework within which people can address complex adaptive problem while productivity and creativity of delivering product is at highest possible values. Scrum uses **Iterative process**.

Silent features of Scrum are:

- Scrum is light-weighted framework
- Scrum emphasizes self-organization
- Scrum is simple to understand
- Scrum framework help the team to work together
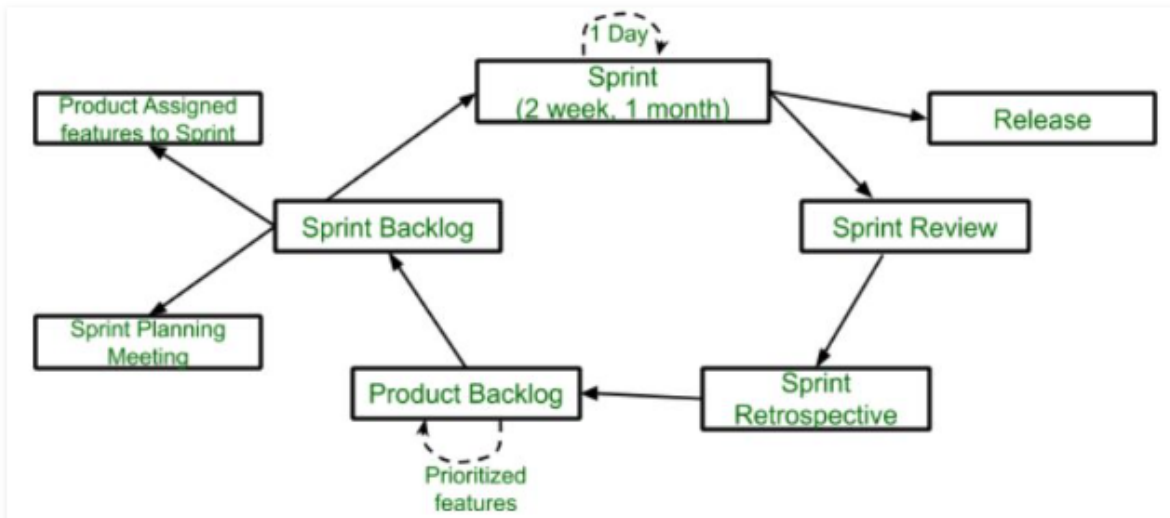
Sprint:

A Sprint is a time-box of one month or less. A new Sprint starts immediately after the completion of the previous Sprint.

Release:

When the product is completed then it goes to the Release stage.

Sprint Review:

If the product still have some non-achievable features then it will be checked in this stage and then the product is passed to the Sprint Retrospective stage.

Sprint Retrospective:

In this stage quality or status of the product is checked.

Product Backlog:

According to the prioritize features the product is organized.

Sprint Backlog:

Sprint Backlog is divided into two parts Product assigned features to sprint and Sprint planning meeting.

Advantage of using Scrum framework:

- Scrum framework is fast moving and money efficient.
- Scrum framework works by dividing the large product into small sub-products. It's like a divide and conquer strategy
- In Scrum customer satisfaction is very important.
- Scrum is adaptive in nature because it have short sprint.
- As Scrum framework rely on constant feedback therefore the quality of product increases in less amount of time

Disadvantage of using Scrum framework:

- Scrum framework do not allow changes into their sprint.
- Scrum framework is not fully described model. If you wanna adopt it you need to fill in the framework with your own details like Extreme Programming(XP), Kanban, DSDM.
- It can be difficult for the Scrum to plan, structure and organize a project that lacks a clear definition.
- The daily Scrum meetings and frequent reviews require substantial resources.