

# Spiral Model in Software Development Life Cycle

March 13, 2017 by Rajkumar

Before starting Spiral Model in Software Development Life Cycle, I would suggest you to check this post "[Software Development Life Cycle](#)" You could see different types of Software Development Methodologies in that post. I have mentioned Spiral Model as one of the Software Development Methodologies over there.

Let's see what is Spiral Model in SDLC and its advantages and disadvantages in detail.

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## Spiral Model:

Spiral Model was first described by [Barry W. Boehm](#) (American Software Engineer) in 1986.

Spiral model works in an iterative nature. It is a combination of both Prototype development process and Linear development process ([waterfall model](#)). This model place more emphasis on risk analysis. Mostly this model adpots to the large and complicated projects where risk is high. Every Iteration starts with a planning and ends with the product evaluation by client.

Let's take an example of a product development team (like Microsoft). They know that there will be a high risk and they face lots of difficulties in the journey of developing and releasing the product and also they know that they will release next version of product when the current version is in existence. They prefer Spiral Model to develop the product in an iterative nature. They could release one version of the product to the end user and start developing next version which includes new enhancements and improvements on previous version (based on the issues faced by the user in the previous version). Like Microsoft released Windows 8 and improved it based on user feedback and released the next version (Windows 8.1).

Spiral Model undergoes 4 phases.

**Planning Phase** – Requirement Gathering, Cost Estimation, Resource Allocation

**Risk Analysis Phase** – Strengths and weaknesses of the project

**Design Phase** – Coding, Internal Testing and deployment

**Evaluation Phase** – Client Evaluation (Client side Testing) to get the feedback

**Advantages:**

- It allows requirement changes
- Suitable for large and complicated projects
- It allows better risk analysis
- Cost effective due to good risk management

**Disadvantages:**

- Not suitable for small projects
- Success of the project depends on risk analysis phase
- Have to hire more experienced resource especially for risk analysis