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The Spiral Model

The spiral model is an evolutionary software process model that couples the iterative nature of prototyping with the controlled and systematic aspects of the linear sequential model.

A spiral model is divided into a number of framework activities, also called task regions.

→ Customer communication: tasks required to establish effective communication between developer and customer. Initial requirements are established using an effective communication.

→ Planning: tasks required to define resources, timelines and other project related information.

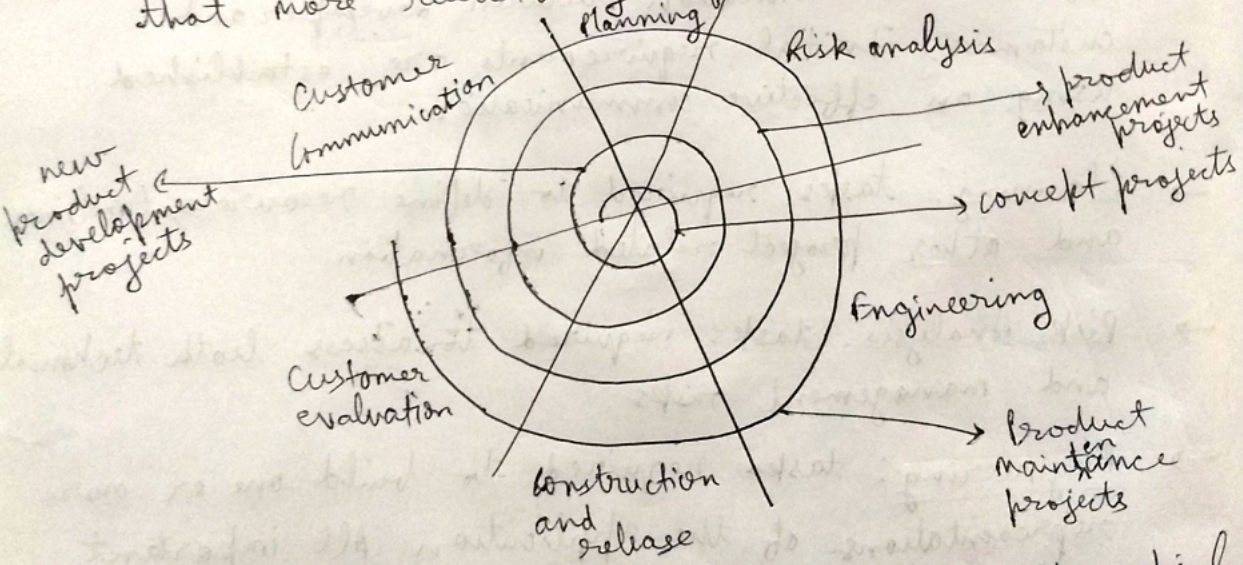
→ Risk Analysis: tasks required to assess both technical and management risks.

→ Engineering: tasks required to build one or more representations of the application. All important tasks are detailed on paper.

→ Construction and release: tasks required to construct, test, install, and provide user support, ex: documentation and training. Testing is also carried out in this region like alpha testing.

→ Customer evaluation: tasks required to obtain customer feedback based on evaluation of the software representations created during the engineering stage and implemented during the installation stage. A realistic approach for the development of large scale systems and software.

The spiral model maintains the systematic stepwise approach suggested by the classic life cycle but incorporates it into an iterative framework that more realistically reflects the real world.



The S/W engineering team moves around the spiral in a clockwise direction. The first circuit might result in a product specification; subsequent passes around the spiral might be used to develop a prototype and then more sophisticated software. Each circuit passes through six phases.

Disadvantages:

→ Difficult to convince customers that the evolutionary approach is controllable.

→ Demands risk assessment expertise and relies on this expertise for success.

→ If team fails to eliminate a major risk, problems may occur in later stages.