

Each cycle of a spiral model contain six measure activities

- 1. Customer communication- The customer communication task and developer.
- 2. Planning- The determination of objectives alterative constant.
- 3. Risk Analysis- Identification of both technical and management risk.
- 4. Engineering- Development of the next level of product.
- 5. Construction & Release- To construct test, install, and provided to user supports.
- 6. Customer Evaluation- Assessment of the result of reengineering &Customer feedback).

SRS (Software Requirement and Specification)

- * It is set of document that contains the consign (step by step) and clear specification of the functional, performance, design and interface requirement of the perpase system.
- * SRS established the basis for agreement between the client & developer through SRS client clearly specifies the capabilities to be provided by the software developer understand what capabilities to be built to the software.
- * Developer can use SRS to convenience the client that software provides all the specified capabilities.
- * A high quality SRS means to high quality software.
- * A good quality SRS reduces the project cost.

Components of SRS

- 1. Functional Requirement- It should specify the given input operation condition to be performed and corresponding output of operation.
- 2. Performance Requirement- There two type of performance requirement.
 - 1) Static
- 2) Dynamic
- 1) Static Requirement- Static requirement include number of computers numbers of users number of files and sizes to be supported.
- 2) Dynamic Requirement- It include behavior of the system the response time, expected time and term round time.
- 3. Design Requirement/ constants- It includes specification of operating in environment (firm) security and resource limit.
- 4. External Interface Requirement- All possible interaction of the software and hardware with the user clearly specified.

Characteristics of SRS

The based objectives of SRS to specify the important requirement to the purpose system. That are gather, during the system analysis some desirable characteristics of SRS are-

- 1) Correctness
- 2) Completeness
- 3) Un-ambiguous
- 4) Verifiable
- 5) Consistent
- 6) Modifiable
- 7) Traceable
 - 1. Correctness- Every requirement in the SRS must be true requirement of the system.
 - 2. Completeness- SRS should contain all the short of input and it provided the features. The handling all function of the system.
 - 3. Un-ambiguous- Every requirement specified in SRS document should have only one interpretation.
 - 4. Verifiable- SRS in verifiable if and only if there exist some cost effective process that can check weather the final product meet the requirement.
 - 5. Consistent- SRS should show use consistent terminology so that there is known requirement conflict with other.
 - 6. Modifiable- The structure and style should be such that any necessary change can be made easily.

 While maintaining its

completeness and consistency.

7. Traceable- The origin of each requirement in a SRS most be cleared.

System Analysis

- An analysis is a detailed study of the various operation performed by a system and their relationship with in the outside of the system.
- Analysis is a study of processes of the system.
- A key question what should be done to show the problem.
- It is the planning of software that is to be developed.
- During analysis data are collected on the available, files, decision making, decision point, and transaction handed by the presents systems.
- > System analysis is based on structure analysis there are several tools and techniques use in the system analysis including the following.
 - a. DFD
- b. ERD
- c. DD

- a) DFD(Data flow diagram)-
 - * It is an important tool used by an analysist.
 - * DFD is first time develop by "Lary Constiane".
 - * It is a way of expressing system requirement in graphical thought.
 - * It is based on structure analysis of the system.
 - * It is also known as Bubble chart.
 - * A DFD consist of series of bubble joint by line.
 - * Bubble represent the data transformation of process and line represent the data flow in the system.
- Symbol used in Data Flow Diagram (DFD)-



Unit Price To represent the data flow.

- * Customer To represent the name of rectangular entity or external interface.
- * Cost file To represent the data store or File parallel line.

Data flow can take Place

1) Between Process

- 2) File to process = \longrightarrow
- 3) Process to file
- 4) External Entity to process
- 5) Process to External Entity
- Process
 - * Process so that what system do.
 - * Each process as one or more inputs and produce one or more output.
 - * Each process has a unique name or number.
- File
 - * A file and data store is a repository of data they contain data i.e; written in the system. Process can enter data into the a data store or retrieve data from the data store.

There are two type of DFD.

- 1. Context Diagram
- 2. Top Level Diagram
- 1. Context Diagram-
 - > On entire system is deprecated/represented by one DFD, which gives a system as over view, it is called context diagram.
 - Context diagram tries/treats entire system as a single process will all its inputs, outputs linked and source are identified.

Example- The context diagram for budget main tracing system diagram.

