

Chapter 8 (Requirements)

Requirements engineering process can be described in seven distinct points:

- ✦ **Inception:** ask a set of questions that establish “basic understanding of the problem, who wants the solution and the nature of the solution, effectiveness of communication and collaboration between the customer and developer”.
- ✦ **Elicitation:** elicit requirements from all stakeholders
- ✦ **Elaboration:** create an analysis model that identifies data, function and behavioral requirements
- ✦ **Negotiation:** agree on a deliverable system that is realistic for developers and customers
- ✦ **Specification:** can be (written document, set of models, formal mathematical, collection of user scenarios (use-cases) or prototype).
- ✦ **Validation:** a review mechanism that looks for (errors in content or interpretation, areas where clarification may be required, missing information, inconsistencies (a major problem when large products or systems are engineered), conflicting or unrealistic (unachievable) requirements).
- ✦ **Requirements management.**

A Use case represents the functionality of the system.

A collection of user scenarios that describe the thread of usage of a system.

The Elements to build analysis model:

- 1- Scenario-based elements: Functional, Use-case
- 2- Class-based elements: Implied by scenarios
- 3- Behavioral elements: State diagram
- 4- Flow-oriented elements: Data flow diagram

Negotiating Requirements:

- 1- Identify the key stakeholders: These are the people who will be involved in the negotiation
- 2- Determine each of the stakeholders “win conditions”: Win conditions are not always obvious
- 3- Negotiate: Work toward a set of requirements that lead to “win-win”