Case Studies

Software Process Models

The set of *activities* and *associated results* that produce a software product.

Four fundamental process activities

- Software Specification
- Software Development
- Software Validation
- Software Evolution

Organized differently by different Software process models having different levels of detail

1. Software Specifications

Customers and Software Engineers define the software to be produced and the constraints on its operations. Typical Stages are,

Feasibility Study:

- Is it possible with the current technologies + within budget?

Domain Analysis:

- What is the background for the software?

Requirements Gathering and Analysis:

- What is it that the user wants?

Requirements Specification:

- Formal documentation on *User* and *System* requirements.

Requirements Validation:

- Check for realism consistency and completeness , consistency, and completeness.

Requirements Gathering

1. Interviews
2. Questionnaires
3. Surveys
4. Observation

Types of Questions: Open ended, Close ended

Observations: Informed or Uninformed

Activity 1: Requirements Gathering, Specification and Validation

List down the requirements in the system

- Identify all the verbs
- What are the associated nouns and constraints if any

Write each requirement as a separate point

- There should be no duplicate requirements
- There should be no contradictory requirements
- The requirements must be clear and consistent

Case study 1: Cooking App

Just like other cooking apps, it will advise the recipe of cooking food, but, not tell you the ingredients. In fact, it will first ask the users about the available ingredients and will come up with a dish that can be made with those ingredients on its own, so that the user won't have to rush for other additives.