Requirement Engineering
Functional Requirements

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1. A user shall be able to search the appointments lists for all clinics

2. The system shall generate each day, for each clinic, a list of patients who are expected to attend appointments that day

3. Each staff member using the system shall be uniquely identified by his or her eight-digit employee number

Ambiguity in Functional Requirement

- Imprecision in the requirements specification is the cause of many software engineering problems

- It is natural for a system developer to interpret an ambiguous requirement in a way that simplifies its implementation, but this is not what the customer wants

- New requirements have to be established and changes made to the system

- This delays system delivery and increases costs

- **Example:** Search the appointment list for a patient in MHC-PMS

Completeness and Consistency of Functional Requirements

- Functional requirements specification of a system should be both complete and consistent

- **Completeness:** All services required by the user should be defined

- **Consistency:** Requirements should not have contradictory definitions

- For large, complex systems, it is practically impossible to achieve requirements consistency and completeness

Sources of Incompleteness and Inconsistencies

- It is easy to make mistakes and omissions when writing specifications for complex systems

- There are many stakeholders in a large system. Stakeholders have different and often inconsistent needs

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