

1) Requirement engineering is the process of gathering, analyzing, documenting, validating, and managing the requirements of a software system. it ensures that the final software product meets the needs and expectations of stakeholders.

Stages:

- 1) Requirements Elicitation
- 2) Requirement Analysis
- 3) Requirement Specification
- 4) Requirement Validation
- 5) Requirement Management

2) 1) Elicitation :- collecting needs from users, stakeholders, domain experts

2) Analysis :- Resolving conflicts, prioritizing and ensuring feasibility of requirements.

3) Specification :- creating structured documentation

4) Validation :- checking for correctness, completeness

5) Management :- tracking & managing changes

3) User → UI → Reservation System → Database

login()	verify(login)	fetchUser()
search()		userDetails
	searchTrain()	queryTrainData()
bookTicket()		trainDetails
	book()	saveBooking()
← confirmation()		bookingConfirmed

- 4) 1) Interviews
2) Questionnaires
3) workshops / focus groups
4) Observation
5) Prototyping
6) Document Analysis
7) Brainstorming
8) Use Cases & Scenarios

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