

Problem Class 1.

Requirements Analysis

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An Email System

PART 1

Requirements (Reminder)

- **Functional requirements** are things the product must do or provide if it is to be useful to its users, e.g.,
 - Shall allow user to check-in
- **Nonfunctional requirements** are the qualities the product must have, e.g.,
 - Shall respond within 2 seconds
 - Can handle 5,000 simultaneous requests
- **Design requirements** describe **how** the desired system will be designed and implemented

Q1. Requirements Classification

- Classify the requirements as Functional, Non-Functional, or Design requirements.
- Read slides 14—20 of the lecture “Requirement Gathering 1”
- Use this MS Forms to answer <https://forms.office.com/r/J1VfdV9CqM>

A Train Ticket System

PART 2

Description

A system must be specified for the automated purchase of train tickets from a ticket distributor. It is possible for the traveller to buy single or return tickets to available destinations, as well as weekly and monthly season tickets. The traveller will interact with the machine to specify ticket type, select destination, select payment mode (cash or credit card). A ticket purchase transaction may fail for various reasons: the distributor is out of change, out of ticket paper, credit card fails to validate, etc.

Q2. Defining Scope

- Need: ...
- Goals: ...
- Business Case: ...
- Stakeholders: ...
- High-level operational concepts: ...
- Read slides 8—11 of the lecture “Requirement Gathering 1”

Q3. Operational Scenarios

(One Successful/ One Fail Ticket Purchase)

- Alice selects “Buy weekly card” and is taken to the “Select destinations” screen.
- ...
- Read slides 21—23 of the lecture “Requirement Gathering 2”

Q4. Writing Requirements

- FUN1: The system shall provide a “Select ticket-type” screen with the options for one-way, return, weekly, monthly tickets.
- Read slides 24—25 of the lecture “Requirement Gathering 2”