

Exercise Sheet 3

(Requirements Engineering)

Submission until: 15.11.2025 23:59h

Presentation: 17.11.2025

Introduction

In this task sheet, we will start to engineer “Requirements” of our software in teams.

Based on the intermodal mobility scenario as per Exercise Sheet 2, complete the following tasks.

Task 1 — System Context

Draw a graphical representation of the system context for your intermodal mobility app. Follow the steps from the lecture slides and consider the following aspects:

- Technical or organizational processes
- System border
- “Around-Systems” with interfaces
- Documents (e.g. laws, standards, system documentation)

Task 2— Use-Cases Documentation

a- Use Case Diagram

Develop in this task a Use-Case Diagram for your intermodal mobility app.

Don’t use GUI Prototypes!

b- Use Cases Definition:

For the **10** Functional requirements identified in “Exercise Sheet 3” for intermodal mobility app, develop a **complete use case documentation**.

Given below is a basic template with the example for a primitive **User Login**. You can modify the template or the template shared in the lectures as needed. Describe each of use case in complete detail. Try not to miss any relevant aspect.

Field	Description
Use Case ID	UC-01
Use Case Name	User Login
Description	Allows registered users to log in
Actors	User, Authentication System
Trigger Event	User selects the "Login" option on the system interface
Input Data	Username and password credentials entered by the user
Preconditions	User account exists
Postconditions	User gains access to dashboard
Essential Steps	1. User enters credentials → 2. System validates → 3. Dashboard loads
Alternate Flow	Invalid credentials → Show error
Assumptions	Internet connectivity present

Submission hints:

- Create a solution **PDF document** that you can upload to the submission area.
- Please write all names of the team that participated in the solving process of this task.
- All team members must be present for a certificate in the following presentation. For successful acceptance, the proposed solution must be explained by all team members.