

Software Engineering Workshops

Worksheet 2: Working with Requirements–Use Case Diagrams

Objectives

The objective of today's session is to get an introduction to the use case diagram, which is the type of diagram often used to model system requirements. Through the provided materials in the workshop and the exercises in this sheet, you will: 1) Understand the role of the use case diagram and where it fits within the software development processes. 2) Learn about the different graphical notations used in use case diagrams. 3) Learn how to map client's textual/oral requirements into a use case diagram.

*Please revise the slides and your notes before attempting any of the exercises below (5-10 minutes should be enough). Note that some of the questions might be beyond what is given to you in the slides and would rather need you to employ your own *thinking*.*

Exercise 1:

Suppose you want to develop an application that allows parents to track the location of their children.

1.A. Provide the use case diagram of this application. (hint: it's simple, do NOT complicate things!)

1.B. What is the main purpose of use case modeling?

1.C. In which phase(s) of the software development would you use use case diagrams?

1.D. Can you think of any non-functional requirements for this software?

Exercise 2:

What is the difference between a use case and a scenario?

Exercise 3:

Imagine that you have been assigned into a team that will be developing a Library Administration System for Taibah University. As a part of the project startup, your manager has asked you to specify the system requirements during the requirements specification phase. You have been given the written description of the system as follows:

“The system shall allow the librarian to make new memberships, cancel memberships, and add books. The library patron (i.e. user) should be able to check out (borrow) and check in (return) books and pay fines for overdue loans. The functionalities offered for the user should be also available to the librarian in case the user is not able to complete them so the librarian can do them on behalf of the user”.

Depending on this written description, draw up a use case diagram for the Library Administration System.