

Inf2C tutorial SE1: Requirements

1 Prerequisites

To get the most out of this tutorial you need:

- to have reviewed the lecture notes for the three software engineering lectures;
- to have done the associated required reading;
- to have (at least) made a provisional choice of system for the software engineering assignments.

This tutorial contains a number of questions to be answered about the system that you will work on for the assignments. In the tutorial, you will each explain your answers to the group and the group will discuss any issues that arise.

2 Requirements

Review the following concepts and consider how they apply to your system, and/or to an organisation that might use and possibly extend your system:

1. stakeholders;
2. functional and non-functional requirements;
3. user and system requirements.

Next recall the basics of UML use cases:

1. What are they good for?
2. Define the main elements of this kind of diagram.
3. What are the main steps to be followed in order to produce this kind of diagram?
4. What are their limitations?

Develop a use case diagram for your system, showing only the functionality it has now. Issues to discuss:

- the differences and similarities between *stakeholders* and *actors*
- the granularity at which use cases may be useful in development;

- how a use case diagram might be connected to further documentation of the requirements: what information is essential, beyond the diagram? How does this depend on the context, e.g., the use to which the documentation is to be put?

Next, imagine that you are a potential user who wants the system extended with some more functionality. Write a *user story* to describe the simplest possible extension that would be of value to you.

Issues to discuss:

- the differences and similarities between use cases and user stories;
- what makes a good user story;
- how long you think it would take to implement this user story. How does your estimate, based on at least a little knowledge of the system, compare with what other members of the tutorial group would expect just listening to the story?

3 Usability (if time permits)

Recall the main usability principles discussed in the lectures. Consider the usability of your system.

Issues to discuss:

- Who are the (intended) users of your system and what are they like? How much does this matter, i.e., to what extent are different systems more or less usable to different groups of users?
- What's good about the usability of your system?
- What could be improved?
- Why do you think those things haven't been improved? Can you see technical hurdles? Disadvantages that would arise if you made the obvious changes? Or is it simply that it's easy to see a problem but harder to see how to fix it?
- The title of this section is intended as a wry joke. Why?