Worksheet 2: Functional Requirements

Updated: 07th March, 2022

Attempt this worksheet individually.

1. Actors

For each of the following systems, identify the actors, both human and non-human:

(a) A word processor.
(b) An online retail website.
(c) A class registration system.
(d) An online mapping application.
(e) A set of traffic lights.

Note: You should find multiple human actors for most of these systems. For non-human actors, consider what other systems – software or hardware – might need to access the same data.

2. User Stories

For each of (b), (c) and (d) above, suggest four or more important user stories. Consider various human actors.

For this purpose, pick user stories that each relate to a single *functional* requirement. (In general, user stories could relate to *any* requirement, but we'll focus on functional requirements for now.)

Note: Remember that a user story is a single sentence of the form:

"As a_____ I want to_____ so that_____."
[actor name] [ability/functionality] [benefit/rationale]

All three parts must be present, and they must be meaningful.

3. Use Case Diagram

Pick one of (b), (c) and (d) from part 1 and identify significant use cases and all actors of the selected system and show them in an actor-goal list. Then draw a use case diagram for the whole system.Your diagram should show all actors and significant use cases. You may not consider «include» relationships.
Drawing your diagrams by hand is sufficient for this exercise. You may try digital tools such as Visio /on-line tools also.

Note: Use case diagrams are a very broad picture of a system. They don't show any details of a use case other than its name and the actors involved. For instance, the use case flow of events is not shown here.

Any «include» relationships (arrows between use cases), if they exist at all, do not represent time or order. Do not confuse use case diagrams with activity graphs.

4. Use Case Description

Pick two of your user stories identified in part 2 above for different systems and convert/expand them into complete use case descriptions.

First you can look at your user stories to identify the goals and actors. Then start producing the full description (system-scope, user-goal-level).

Note: Use case descriptions would have a header, flow of events and alternative flow of events sections. You can create a template of use case description with all required sections with headings as a table in a document and use it to develop use case descriptions.

End of Worksheet