

## LAB 3

### Spring 2011, BESE 15

### Use Case Specification

#### Objective

The aim of this lab is to introduce students to the concept of UML use cases. The lab is a continuation to the previous lab where the students were given use case diagrams to draw. Today they shall be taught how to write the specification of use cases. They will be introduced to the various types of specifications and each of these will then be practiced.

#### Submission Requirements

You are expected to complete the assigned tasks within the lab session and show them to the lab engineer/instructor. You need to submit the report even if you have demonstrated the exercises to the lab engineer/instructor or shown them the lab report during the lab session.

You are allowed to complete today's task in pairs.

#### Use Case Specification:

A use case in software engineering and systems engineering is a description of a potential series of interactions between a software module and an external actor, which lead the actor towards something useful. Uses cases are used as a software modeling technique that helps developers determine which features to implement.

#### Types of use cases:

There are three levels of detail in writing use cases:

**Brief use case** -- consists of a few sentences summarizing the use case. It can be easily inserted in a spreadsheet cell, and allows the other columns in the spreadsheet to record priority, duration, a method of estimating duration, technical complexity, release number, and so on.

**Casual use case** -- consists of a few paragraphs of text, summarizing the use case.

**Fully dressed use case** -- a formal document based on a detailed template with fields for various sections; and it is the most common understanding of the meaning of a use case. Fully dressed use cases are discussed in detail in the next section on use case templates.

#### TASK 1:

Create fully dressed use case descriptions for one use case for the given scenario as were identified in the previous lab:

Hurry's require a new point of sale and stock control system for their many stores throughout the UK to replace their ageing mini based systems.

A sales assistant will be able to process an order by entering product numbers and required quantities into the system. The system will display a description, price and available stock. In-

stock products will normally be collected immediately by the customer from the store but may be selected for delivery to the customer's home address for which there will be a charge. If stock is not available the sales assistant will be able to create a backorder for the product from a regional warehouse. The products will then either be delivered direct from the regional warehouse to the customer's home address, or to the store for collection by the customer. The system will allow products to be paid for by cash or credit card. Credit card transactions will be validated via an online card transaction system. The system will produce a receipt. Order details for in-stock products will be printed in the warehouse including the bin reference, quantity, product number and description. These will be collected by the sales assistant and given to the customer. The sales assistant will be able to make refunds, provided a valid receipt is produced. The sales assistant will also be able to check stock and pricing without creating an order and progress orders that have been created for delivery.

The store manager will be able at any time to print a summary report of sales in the store for a given period, including assignment of sales to sales assistants in order to calculate weekly sales bonuses.

The stock manager will be able to monitor stock levels and weekly run-rates in order to set minimum stock levels and requisition products which fall below the minimum stock levels or for which demand is anticipated. When the stock arrives it will be booked in by the warehouse person. Stock that has been backordered for collection from the store is held in a separate area and the store manager advised of its arrival.

The catalogue of available products will be maintained remotely by marketing from head office. Marketing will also be able to access sales information from each store system.

## **TASK 2:**

Create one casual use case description and one fully dressed use case description for the database project completed in previous semester.