# Human-Centred Systems Design Group Project

## 1. Overview

This group project is designed to integrate everything you have learned over the semester. You will work in teams of four to develop an information system for a customer. You will develop a number of UML diagrams to capture the requirements and design of the system. You will develop a relational database in MySQL to store the necessary data. You will design suitable user-interfaces for the different end-users of the system.

- Postgraduates (PG): will also develop more detailed formal design models in UML
- Undergraduates (UG): will also develop a prototype Java implementation

### 1.1 Submission

The project period is six weeks long; at the end you will submit one hardcopy report per team to the DCS post-box; and then a backup copy of this and any software (zipped), to MOLE. The deadline is 3pm on the due date - please refer to MOLE.

### 1.2 Team Building

Project teams will be formed in the following way. Use the sign-up form on Dr Simons' module page to register yourself and a preferred friend, by the end of week 3. Teams of four will be randomly formed from these pairs, every few days. Team lists (separate UG, PG lists) can be viewed from the module page - refresh your browser regularly. We will deal with odd-men-out at the end.

### 1.3 UML Tools

Many free "UML tools" do not comply with the UML standard! They add non-UML, or draw diagrams incorrectly (missing features, wrong box style, wrong arrowhead). You could investigate the better free tools by Papyrus, Astah, Modelio, or UMLet. In the end, any good drawing package will do. Make sure your solutions are UML2.x compliant (the latest version is 2.5). Our UML lecture slides show the standard to follow.

### 1.4 Database Tools

The department offers MySQL as a database server. Your properly-constituted team may email Dr Simons for a MySQL group account (accounts are created by DCS support). There are many free MySQL clients for use in Linux, and in Windows. Some run inside IDEs like Eclipse. Postgraduates will only develop a MySQL client-based solution; undergraduates will also develop a Java Swing front-end.

### 1.5 Java Tools

Undergraduates will build a prototype in Java. We assume the Eclipse IDE and Java development tools. Other tools like NetBeans and IntelliJ are also OK. You may have access to a Java Swing interface designer tool - if so, you will need to understand how to adapt the generated Java code

(we assume knowledge of Java Swing). You will need to download and install the Connector/J package to obtain the Java database driver for MySQL (see lecture).

## 1.6 Team Working Rules

You may collaborate within your team to develop your solution; but you *may not collaborate across teams* - this will result in unfair means investigations and mark deduction. Students will describe their individual contribution to team reports at the end.

## 1.7 Project Report

You will create a team report that whose main content is no longer than 20 sides. A detailed description of what is expected will be given. It will include: a number of UML models (one per page); some screenshots of your UIs; some screenshots showing evidence of your system working. It will have an introduction and a conclusion, and will present two tables describing individual contributions in two different ways. This must be signed off by the team.

## 1.8 System Testing

You will individually be asked to test another team's work, and submit an online web-form with your evaluations. This will count towards your own individual mark for the project. You will be automatically assigned to test a particular team. Testing will be made available for five days, starting on the code hand-in day.