

# University of Tasmania

School of ICT

## KIT506 Software Design and Development

### Assignment 3 System implementation 20%

Due date/time: Please submit your assignment to MyLO by 11.55pm Thursday of week 11. Late submissions will receive a 5% penalty on the assignment marks for each day (or part thereof) late.

#### 1 Background

Your small development team of (ideally) four people has been asked to develop the system prototype and implement a desktop application based on your design specification. Your software product will be a database-backed desktop application with graphical front end.

Whilst a real-world system would have a wide range of operations, this assignment asks you to focus only on the operations included in your design document.

##### 1.1 Learning outcomes

This assignment will contribute towards the achievement of the following unit learning outcomes.

- 1.1.1 Develop a data driven, human-centred software implementation which contains a GUI; and
- 1.1.2 Collaborate on a project across the software development lifecycle from design to testing as an effective team member and project manager; and

##### 1.2 Requirements

- 1.2.1 You are recommended to work in the same groups as for assignment 1.
- 1.2.2 Seek clarification on assignment details if there is something you do not understand and ask any questions your group has. (This should be done in consulting time)

- 1.2.3 Discuss the skill and knowledge strengths of each member and delegate tasks as appropriate for each person. Ensure that all tasks are divided equally. Develop a timeline and meeting schedule for assignment work.
- 1.2.4 Watch all video lecturates and develop the system prototype and a desktop application based on your assignment 1 .
- 1.2.5 Combine group and individual work into the application implementation, proofread and check formatting consistency, then submit to the System implementation drop box under the Assignments tab on the MyLO unit page. Only 1 person from each group should submit.

## 2. Software implementation Deliverables

### 2.1 System prototype (Group)

You should submit a single PDF document include low-fidelity (lo-fi) prototypes of the UI views (hand-drawn or simply-sketched on a computer) based on your assignment 1 design specification. The PDF document should include a title page that identifies the system being tested and its authors (any student that is not listed on a title page will not receive a grade for the submission).

### 2.2 Software application (Group & Individual)

The implemented application should include the following deliverables:

- A zipped software project that contains the desktop application that must be submitted to the assignment folder, accompanied by an introduction in PDF, which presents a tabular representation of the implementation details and the responsible developer (group member name and ID), and must also be submitted to the assignment folder.
- The Visual Studio project and any precursor console application projects must be available in your group's GitHub repository.
- Screenshots from your GitHub repository Insights

#### 2.2.1 Software project

The final application is recommended to use the C# language, including how to communicate with a database and how to design and construct GUIs, and these topics are based on the prototyping design to the development of this application.

However, you can use another language/platform if you wish but you will not be able to receive helps from the teaching team.

The main view of your application needs the group work, then each group member should implement at least one of the operations in your design specification.

Note that your software project can include extension implementations for more operations for individual grading, please list all implementation details in the induction PDF document.

#### 2.2.2 Use of GitHub as source control

You are required to use GitHub as source control for this project.

We recommend that your repository (hence, your working directory) be a folder that contains one or more Visual Studio projects related to the assignment, one of which will be your final desktop application. In this way you can use the repository to manage any early prototype console application projects as well, and we can see that team members have committed changes to those.

### 2.2.3 Database access

Each group will use a single account to connect the database. The account details (including Database name, user id, password) will provide during your tutorials. The data source is <http://alacritas.cis.utas.edu.au>.

You can also browse the data via phpMyAdmin (append that to the end of the server name). As the database is shared it will not appear in your own list of databases on alacritas if you log in under the provided account. An ER Diagram for the database plus some details on enumerated value columns accompanies this document.

The database is currently live and contains fictitious data.

### 2.2.4 References

List any references, e.g. lecture notes, papers, books, and web sites consulted.

## 3. Assessment

### Grading

The assessment criteria for the final submission are available on MyLO.

### Submission

Submissions should include a 'pdf' of system prototyping and a zipped software project including source coding and introduction document. Submissions of your final group document must be in the relevant submission box by 11.55pm Thursday Week 11. Table 1: Marking scheme (65% group; 3% individual)

|  | Marks      |
|--|------------|
| <b>System prototyping (group)</b>                            |            |
| Layout, Language, and consistency                            | 50.0       |
| <b>System application (group &amp; individual)</b>           |            |
| 2.1 System main view implementation and introduction (group) | 15.0       |
| 2.2 Operation implementation and introduction (individual)   | 35.0       |
| <b>TOTAL</b>   | <b>100</b> |

**Authors for each section must be provided in section 2.2.1 to facilitate marking of individual contribution.**

Students must submit their own work. Any work of others in the submission must be properly acknowledged. Work by others must not be presented or claimed as students' own work.

If a group finds that they have an incomplete implementation due to the failure of a member to complete their assigned tasks, this should be noted in the induction document appropriately and the incomplete application submitted. Any group member who for medical or compassionate grounds finds that they are unable to complete their contribution should let the rest of the group and the unit coordinator know as soon as possible.

Every group member must submit an individual declaration (provided in a separate document) and must be able to evidence your contribution to the group submission. If you do not submit No individual declaration will result in zero marks.

## 4. Group-work Guidelines

While effort will be made to accommodate personal preferences, students should note that the project groups are about learning to work as part of a professional team not a social club. In fact employers want employees who can work productively with a broad range of personalities, and employees who do an appropriate (i.e. not excessive in either direction) share of the work. The project assessment will be structured as far as possible to focus on individual contribution to group deliverables and operation.

### 4.1 Group Member Responsibilities

Within the context of the project group, students are expected to exercise their responsibilities as covered by various University regulations. Each group member is responsible for:

- a professional approach to the project and to the other members of the project group;
- doing the tasks allocated at the group meetings by the specified date;
- keeping the group members informed, particularly where allocated tasks are taking longer than planned, so schedule slippage can be managed;
- keeping all appointments with the project supervisor and other team members, or putting in an apology if unable to attend;
- keeping their logbook as a fair and true record of their contribution to the group's submission and operation, and
- ensuring that all group members are given a fair chance to make an equitable contribution to the group.

Each group will function as a small project team. Several styles of interaction exist, and groups should select an appropriate style for their group (and this style may be changed during the course of the project, as necessary);

- one person acts as a project leader for the duration of the project;
- a different person acts as the project leader for some specified time, e.g. for a specified number of weeks, or for each phase, or
- the group acts democratically, with every group member participating in decisions and in the allocation of work.

The project group tutors will guide the relevant groups through the project process. They will offer advice, help with difficulties and as far as is reasonable attempt to ensure that the group is on the right track. The tutor will not do project nor group work. The lecturer will have consulting times in which students, individually and collectively, can seek assistance with the project.