

# **IS52018C Software Projects: Project Proposal v2**

## **Computer Science and Business Computing Group Coursework Term 1 2018-19**

The first term will be spent working towards the submission of your project proposal. This report is worth 25% of the unit's assessment. It will take the form of a 2500-3000 word description of the proposed project.

Think of this report in this way: Your company has commissioned your team to explore a project concept that could lead to a new product for your company. Your team has been doing the initial exploration and will pitching what you have learned at a presentation and in this report. The intention is that your company is impressed and extend your commission to include an initial version of the product that you would be expected to validate as meeting the stakeholders' requirements. This report is your chance to impress with the concept and the work to demonstrate that this concept is viable.

As well as describing all that you have learned that gives you the confidence to recommend that the company proceeds with this project, the proposal should describe and justify what and how you plan to implement and evaluate the system in term 2. At this stage you should NOT have spent time implementing the final system. Any prototype systems you have so far implement should directly support this proposal.

Attention should be given to the clarity and structure of your report. It should contain the following sections:

### **Concept Introduction & User Needs**

This should explain your project idea. You can presume that the reader has a basic level of technical knowledge but not specific knowledge of your particular area, so communicate your ideas clearly.

### **Stakeholder Requirements**

You should identify the stakeholders of any software you are developing and reason that they have an interest in your concept.

### **Prior Knowledge**

You should describe how you gathered relevant information for credible sources, summarised and analysed that data, and how that information altered the proposed concept.

Business Computing: you should present a business case for your proposed application, satisfying the programme learning outcome “Understand and apply business computing theories and approaches to real-world scenarios”. Computer Science: you should explain the computer science problems presented by your project, satisfying the programme learning outcome “Apply computational thinking to the design and implementation of moderately complex computing systems”.

### **Design:**

The design should be based on a UML use case, sequence and activity analysis covering the interest of the various stakeholders who would be involved in the use and deployment of your concept. The key interactions employed by users of your system should be identified.

### **Prototyping:**

Describe the prototyping you did, and what you learned from this, particularly the low fidelity interaction prototypes, any technical prototypes to explore technical feasibility of the solution, and the functional digital prototypes that you used with users to validate that what you are developing meets the expectations of users.

### **Functional Specification:**

The essential functional elements should be defined and described, including data paths. This functional specification should not assume any specific technologies, only functional technologies (e.g. short range wireless technology is a functional statement whilst Bluetooth is a specific technology)

## **Technical Architecture:**

Having validated the proposed solution with users and answered any open technical or feasibility questions, attribute specific technologies to the functional architecture and present this as a technical architecture. Justify your choice of technologies with reasoned arguments for rejecting or retaining alternative technologies.

## **System Requirements Specification**

This bring summarise and bring together all the previous section into a specification that should be fully expanded in the appendix with the following points, in providing what is known as the System Requirements Specification (SRS). This collects various information that you have previously agreed and worked on such as the UML diagrams.

SRS contents:

1. Purpose
2. Scope
3. System Overview
4. References
5. Definitions
6. Use Cases
7. Functional requirements
8. Non-functional requirements.

## **Ethical audit:**

You should detail any issues of privacy, data protection or intellectual property rights that may arise, and how you will manage them. You should confirm that you will not be working with minors or vulnerable adults.

## **Evaluation Plan**

How you intend to test and evaluate your software during and after development. It may be useful to specify individual test cases.

## **Project management**

How you will manage the development process: milestones, Gantt charts, roles, development methodology etc.

## **Conclusion**

Summarise your proposal, including the key points from the previous sections.

## **Bibliography**

A list of published sources referenced in the proposal.

## **Appendices**

The appendix or appendices should contain your group meeting minutes and any additional raw material that is referred to in the text (e.g. data from requirements gathering, paper prototypes etc.)