CSSE1001

Semester 2, 2009
Assignment 3 - ADVANCED
40 marks

Initial Proposal before Friday 18 September, 2009
Initial Design Document before Friday 25 September, 2009
Completed Assignment due Friday 23 October, 2009, 5pm
Demonstration during Week 13

1 Introduction

This is a project of your choosing and is aimed at students looking at getting a high grade for the course - see the course profile for how final grades are calculated.

It is important you carefully read the document `a3_recommendation.pdf`. This document provides details on what is required and guidelines on how you should approach the assignment.

Your tasks for this assignment are summarized below.

- **Select a topic for your project.** The topic is of your own choosing. Some of you will already have some ideas - you might have a hobby that could provide inspiration or you might think of something that could be useful for your workplace. Others will be searching for project ideas. The document `a3_recommendation.pdf` has some ideas and some other ideas may be added to the Assignments page later in the semester. I am happy to discuss ideas with you. If you can't think of anything to do, how about an implementation of Scrabble or one of its variants.
- **Submit an initial proposal.** This is the start of the process and provides an initial opportunity for me to give you feedback. If you wish, you can skip this step, but in that case the initial design document must be submitted by 18 September.

- **Submit an initial design document.** This gives you a chance to think more carefully about what will be required for your project. I will give you feedback on this document - is it too small or too large?
- **Write the code.** This is the most challenging task of the project. You will find yourself searching for resources - e.g. libraries, tutorials, doing lots of testing and perhaps rethinking some approaches.
- **Write a final design document.** The ideas provided in the initial design document will almost certainly evolve over the lifetime of the project. The final design document should reflect the finished product and will probably include screen shots and other details not in the initial document.
- **Write a reflection document.** This gives you a chance to reflect on your project - for example what worked well and what didn't.
- **Write installation notes.** This document describes how to install and run your program.
- **Give a demonstration.** You are required to demonstrate your product to me and to answer some questions about your code and your documentation.

2 Initial Proposal

This is a short document (a few paragraphs) to let me know what you intend and so I can provide quick feedback. The aim of this step is to provide an entry point for those who are not confident of their skills or their project idea.

Submission details are given later.

3 Initial Design Document

This task is designed for me to assess the scope of the project. Your initial design document needs to convince me that you are capable of producing high

quality Python code for your chosen project. I will provide feedback by giving your project a ranking between 0 and 5 which indicates our appreciation of the complexity of the project. See the section on Marking Criteria for how the ranking relate to marks.

If your initial design document is of suitable quality then you can proceed to write the code for the project. The quality of your project will be assessed on the code itself, accompanying documentation and your ability to give a demonstration of your project.

The initial design document should clearly state the objectives of the project and a top-level design describing how you expect to achieve the objectives. You should also list the Python modules that you expect to make use of. For example, if your project involves a GUI then you should state which GUI library you intend to use.

Some of you might be contemplating interfacing Python to other languages or using other versions of Python (such as Jython). This is fine, but you need to provide details on how you intend to do the interfacing. I need to be convinced that you are capable of coding the interface.

This document will be used to determine if the project is of a suitable size and if you have demonstrated the ability to produce a high quality final product.

The file `design_template.pdf` is a template to guide you in writing this document. Hopefully, this template will be suitable for the majority of projects but if you feel your project does not fit the template please discuss with me.

Submission details are given later.

4 The Code

This is an advanced assignment and will typically require much more knowledge of libraries and techniques than is discussed in lectures. It is your responsibility to look ahead in the course notes and search for libraries that might be useful for your project. You will also find yourself reading lots of documentation and on-line tutorials. If you get stuck I may be able to provide guidance.

Note: This is a Python course and so the vast majority of the code must be written in Python. If your project requires some non-Python code then please come and discuss with me.

The marks awarded for your code will be based on scope and quality.

5 Final Documentation

The main document you need to write is a final design document. This should reflect your final product. It will typically describe what the product is and what it does, details of its functionality, the GUI (if it has one) and any classes or modules.

The marks awarded for your design document will be based on how well it describes the product itself and details of the implementation.

The reflection document should look back at the project and discuss how the project went including such things as what worked and what didn't, known bugs and time management.

The marks awarded for your reflection document will be based on your ability to critically analyze how the project went.

The installation document describes what is needed to install and run your software. This might include a requirement to download a support library from the Net. The marks for this document is based on completeness of the information.

6 Demonstration

The demonstration gives you a chance to show off your product. It also gives me a chance to judge if your project is your own work and to provide feedback on all aspects of your project.

The marks awarded for your demonstration will be based on how well you show off the features of your product and how well you respond to our questions.

Note: You must give a demonstration. No marks will be awarded for your

project without it.

7 Marking Criteria

Because each student chooses their own project, it is difficult to be prescriptive about the marking scheme. I therefore urge students to consult with me about any aspects of the marking scheme or the marks that are awarded.

As mentioned earlier, I will rank your initial proposal with a number between 0 and 5 based on the table below. It is likely your final product will be different from what you promised in your initial design document. For example, you might find yourself under time pressure and decide to ditch some functionality. Alternatively, you might get stuck in and add some extra functionality or other "bells and whistles". In either case I will reconsider the ranking of the project when I see the final product.

Ranking	**Criteria**
5	an outstanding project that clearly has the "wow factor"
4	high quality project overall and a strong scope
3	reasonable quality and scope
2	straightforward project with limited scope
1	very straightforward - similar scope to assignments 1 and 2
0	low quality and very restricted scope

The following table provides a rough guide to the maximum number of marks you would typically expect for projects of different ranks. This is only a guide – for example, I might rank your project as level 3 but you might do an outstanding job of writing your code and so I might consider giving you more than the expected maximum marks for coding.

For each component your mark will be based on how well you carried out the task.

Rank	Code(20)	Design Doc(4)	Reflection(5)	Install(2)	Demo(9)
5	20	4	5	2	9
4	16	3	4	2	8
3	12	3	4	2	7
2	8	2	3	2	7
1	4	2	3	2	6
0	0	1	2	2	5

8 Submission

8.1 Initial Proposal Submission

You should send your initial proposal document as an attached PDF file in an email to `pjr@itee.uq.edu.au` by the due date. **NOTE: I accept only PDF files.** I will not accept, for example, doc files.

If you choose, you can skip this step, but if you do so then your initial design document needs to be submitted by the due date for the initial proposal.

8.2 Initial Design Document Submission

You should send your design document as an attached PDF file in an email to `pjr@itee.uq.edu.au` by the due date. **NOTE: I accept only PDF files.**

8.3 Project Submission

You must submit your completed assignment electronically through the website: `http://submit.itee.uq.edu.au`

Please read `http://submit.itee.uq.edu.au/student-guide.pdf` for information on using electronic submission.

You should electronically submit the zipped file `assign3.zip` containing the code and all required documentation. The design and reflection documents

are to be in PDF format. The installation notes can be either plain text or in PDF format.

You may submit your assignment multiple times before the deadline - only the last submission will be marked.

Late submission of the assignment will not be accepted. In the event of exceptional personal or medical circumstances that prevent you from handing in the assignment on-time, you should contact the lecturer in charge and be prepared to supply appropriate documentary evidence. You should be prepared to submit whatever work you have completed at the deadline, if required.

8.4 Demonstration

The demonstration is compulsory - you will not obtain any marks for the assignment without giving your demonstration

Late in the semester a signup sheet will be made available (announced on the newsgroup) for you to book a timeslot in which to give your demonstration. Your demonstration will be in the last week of the semester.