

APSI105 – Computer Fundamentals

Project: Do Something Interesting

Winter 1999

(Preliminary proposal to be completed for your lab period March 22-23; final proposal to be submitted in class on March 26; project and report to be completed for your lab period April 5-6. Late work will not be accepted, *no extensions*.)

Objective: To do something interesting.

1 Requirements

You must invent an idea for an interesting program that you would like to write. The program should be of reasonable size, at least 3000 lines of code, and not more than 2000 lines, including comments. The intent is for you to write something that is significantly longer than the lab assignments.

For your lab period next week you should write a preliminary proposal that outlines your project. The preliminary proposal should be roughly one page of prose (point form is okay) and can be accompanied by sketches, diagrams and pseudocode as appropriate. Make two copies of your preliminary proposal and bring both copies to your lab period March 22-23 for discussion with a TA. The TA will keep one copy of the preliminary proposal for future reference. After your discussion with the TA, you should finalize your project proposal and submit it to the instructor at the start of class on March 26. *Be sure to note the name of the TA who reviewed your proposal and include it on the front of the finalized proposal.* Keep a copy of the finalized proposal for yourself. Be sure to put your name and student number on the front of both the preliminary and final project proposal.

You should be prepared to demonstrate your completed project by the start of your April 5-6 lab period. It is better to demonstrate a small part that works than a large program that doesn't. At the time of your demo, you will be required to submit a final report describing your project. The report follows the outline given below, and include a hardcopy of your program. Your final mark will be based on the demonstration, the code, and the writing of the report.

2 Topic Choice and Negotiation with the TA

The choice of topic is up to you; however you must negotiate the scope of the project with a TA. The purpose of the negotiation is to ensure that the project is not too much work, nor too little work. It is often very difficult to judge the amount of work required for a particular idea. The TA will help you make this judgement.

Your preliminary project proposal (for March 22-23) should include enough detail, in the form of things like diagrams and pseudocode, to show you have done sufficient planning and design to be able to implement your project. If you're planning something that might be considered challenging, you should try to have some key pieces working to demonstrate that you have the technical understanding necessary to complete the project.

Within the context of the class, you are required to come up with something that is original. This can be some kind of game, calculation related to a real world simulation, or some version of the many things computers are currently used to do or may be used for in the future. Use your imagination!

3 Project Report Outline

On the front of your report, be sure to put:

- Your Teaching Assistant's name. This should be the TA who reviewed your project and saw your demo. If you don't put the right TA's name, your project will not be marked.
- Your lab day (Monday or Tuesday).
- Your name and student number.

The total length of your report should be no more than 2000 words, per person. Shorter is OK, as long as you feel you've said what needs to be said. Your report should have three sections and an appendix, as described below:

1. **Introduction and Motivation.** What you're doing and why it is interesting, worthwhile, and/or provides a good learning experience.
2. **Design.** Describe how your programs works - the major procedures and their function and how they interact.
3. **Conclusions.** Summarize your project in a few words, and say what you would do differently if you were going to do it all over again.
4. **Appendix.** Include a printed copy of your code, with comments.

4 Marking

The project is worth 10% of your final mark. It will be marked out of 20, broken down the following way:

Design/Implementation	8
Completeness	4
Comments and Coding Style	4
Report Writing Quality	4
Total	20