

**COSC 565: Software Engineering I**  
**Assignment 2**  
**Due: 17<sup>th</sup> November, 2010**

- 1) When emergency changes have to be made to systems, the system software may have to be modified before changes to the requirements have been approved. Suggest a model of a process for making these modifications that will ensure that the requirements document and the system implementation do not become inconsistent. Draw a diagram shows a change process that may be used to maintain consistency between the requirements document and the system
- 2) How might you use a model of a system that already exists? Explain why it is not always necessary for such a system model to be complete and correct. Would the same be true if you were developing a model of a new system?
- 3) Develop a sequence diagram showing the interactions involved when a student registers for a course in a university. Courses may have limited enrolment, so the registration process must include checks that places are available. Assume that the student accesses an electronic course catalog to find out about available courses.
- 4) Using the basic model of an information system as presented in Figure 6.16, in chapter 6 (page 168), suggest the components that might be part of an information system that allows users to view information about flights arriving and departing from a particular airport.
- 5) A small company has developed a specialized product that it configures specially for each customer. New customers usually have specific requirements to be incorporated into their system, and they pay for these to be developed. The company has an opportunity to bid for a new contract, which would more than double its customer base. The new customer also wishes to have some involvement in the configuration of the system. Explain why, in these circumstances, it might be a good idea for the company owning the software to make it open source.
- 7) Write a program that's draws the picture of a house. It could be as simple as the figure below or if you like, make it more elaborate (3-D, skyscraper, marble columns in the entry way, etc.).

