UNBC **CPSC 101** Team Term Project Winter 2007

Teams: The list of teams and members will be distributed later this week. It is each team's responsibility to distribute work amongst itself and find appropriate times to meet.

Project: *Design* and *implement* Score 4 game playing programs using the techniques of object-oriented programming in C⁺⁺. The specifications and the problem statement are attached.

Design (30%): Read the "Thinking about Objects" sections of Chapters 2, 3, 4, and 6. As a group, discuss how you might apply these concepts to your Score 4 programs, instead of the elevator simulator. Submit a design document that includes

- a list of nouns,
- precisely worded paragraphs describing each noun,
- a list of facts,
- a list (by class) of attributes, behaviours, and messages sent to other objects,
- a cover, and a
- table of contents.

The above list gives minimal requirements for your design document. Include other information that you think will help you design and implement your project.

The textbook emphasizes formalized design using UML diagrams. The list above dates from an earlier version of the text which did not include references to UML. While I strong encourage you to learn as much UML as you can on your own, I am not going to teach it, or require it of you. In particular, *UML is not necessary in your design document.*

There may be further specification of what is required in the design document.

Also, identify the percentage of work completed by each member of the group and provide the proposed distribution of workload for the implementation part of the project.

Due Date: February 02, 2007

Revised Design (0%): I shall attempt to constructively criticize the design documents and return them to the project groups by early in the week of Februabry 10. I may insist in some cases that the design be re-submitted before work on the implementation begins.

Due Date: February 14, 2007

Implementation (50%): Complete the implementation of your simulator by writing code. Thoroughly test your program and provide the following:

1. Your revised design document. **Due Date: March 14, 2007**
2. Complete listings of your program. **Due Date: March 14, 2007**
3. Output for three representative simulations showing how to use your program.

   Due Date: March 14, 2007
4. A short users' guide explaining how to find and use your program(s).

   Due Date: March 14, 2007

5. An itemized list of contributions of each member.   **Due Date: March 14, 2007**

6. A 5–10 minute presentation of your work and a demonstration of the simulation.
   Due Date: March 16 or 19

Note: As you proceed with the implementation, you may want to revise your design. This is acceptable, and even encourage. However, *all changes to the original design must be clearly documented with the reason as to why thoses changes were necessary.*

Testing (10%): Your group will make your program(s) (but not the object code or source) and users' manual available to another group in the class assigned by the instructor. That group will thoroughly test your code and provide feedback for improvements in the design, interface, *etc.* You will do the same for a different group, and supply a copy of your written report to the group you review and to the instructor.
    Due Date: March 23, 2007

Revision (10%): You may agree or disagree with the suggested changes and criticisms contained in the report reviewing your project. In case you agree, you may choose to revise your design and implementation. If you disagree, you may submit a critique of the proposed changes. In either case, you will submit a formal final report.
    Due Date: April 02, 2007

Notes: 1. You will work on this project as a group. It is your responsibility to divide the work within the group and to make sure that your group functions effectively.

2. All submissions *must be* formal reports, meaning that they must be neatly presented and bound, grammatically correct, correctly spelled, and professional looking.

3. Both the testing report and the final written response should be written as objectively and professionally as possible. In particular: they should have opening and concluding paragraphs; and they should state who is reviewing or responding to what (by whom). Statements like "*Obviously, the group who reviewed our project never bothered reading p.96 of our user manual*" automatically lose marks (whether or not they are true).