

revised January 1, 2023

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Teams: The list of teams and members will be distributed separately. 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 JAVA. The specifications and the problem statement have been previously handed out (and are available via <http://web.unbc.ca/~casper/Semesters/2017W/101-project.php> at <http://web.unbc.ca/~casper/assets/pdf/cpsc101/2017/2017-cpsc101-project-spec.pdf>).

Design (30%): Read the sheet "Thinking about Objects". As a group, discuss how you might apply these concepts to your Score 4 programs. Submit a design document that includes

- table of contents.
- 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
- 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.

For each noun that becomes a class, it is probably helpful to combine the precisely worded paragraph, the list of facts, and the attributes, behaviours, and collaborations into one entry for that noun.

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

Some textbooks emphasize formalized design using UML diagrams. While I strongly 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*.

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 03, 2017

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 February 6. I may insist in some cases that the design be re-submitted before work on the implementation begins.

Due Date: February 17, 2017

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

1. An itemized list of contributions of each member. **Due Date: March 15, 2017**
2. Your revised design document. **Due Date: March 15, 2017**

3. Complete listings of your program. **Due Date: March 15, 2017**
4. Sample output if feasible. **Due Date: March 15, 2017**
5. A short users' guide explaining how to find and use your program(s).
Due Date: March 15, 2017
6. A 5–10 minute presentation of your work and a demonstration of the simulation.
Due Date: March 20, 2017

Note: As you proceed with the implementation, you may want to revise your design. This is acceptable, and even encouraged. However, *all changes to the original design must be clearly documented with the reason as to why those 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 31, 2017

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 07, 2017

- 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).