

CS 120 Final Project

Due Dates	
Proposal	Friday 4/7
Text-based Project	Friday 4/21
Graphics Project	Friday 5/5

Proposal

Your proposal must include:

- A list of the 3 group members.
- A description of at least 5 classes.
 - There must be an abstract class.
 - There must be relationships between the classes (≥ 1 Has-A and ≥ 1 Is-A).
 - For each class, you should list the methods and fields that are included in that class.
 - Include if the method is virtual, pure virtual, override, etc.
 - It may be convenient to draw a family tree of the relationships between your classes
- State which parts of your plan are the core functionality (that satisfy the above criteria) and which parts are extras that you will implement if you have time (e.g. drawing fancy graphics, animation, etc.)

You may change your plan as you are implementing the project. It is not set in stone, it is so that I can get an idea of what your project will be and to make sure it fits the scope of the final project.

Text-based Project

Your text-based project must include:

- The implementation of the classes in your proposal.
- A file with your main function and testing.
- File I/O to save/load states of instances. Your main function should give the user the option to open a saved file or to start new, and once you have started there should be an option to save to a file.
- You do not need to have a completely functioning program at this point, but you need to have completely functioning classes. For example, if your program relies on graphics (e.g. to move the player, to test if objects overlap, to shoot bullets across the screen, etc.) you do not need to have the full program running at this point. But the classes involved behind the scenes should be fully implemented and tested.

Graphics Project

Your graphics project must include:

- Everything from the text-based project.
- A graphics window that displays a fully-functioning program.
 - Your program must respond to at least 4 different keyboard keys.
 - Your program should respond to the mouse in at least 2 ways (move, hover, click, drag).

For each of the three deadlines, **one group member** must submit your project on Blackboard.

Grading

Proposal (40 points)

- 6 pts List of 3 group members
 - 10 pts Description of at least 5 classes
 - 4 pts An abstract class
 - 6 pts At least one Is-A and at least one Has-A relationship
 - 10 pts List of methods and fields
 - 4 pts Separation of base functionality vs. extra functionality
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Text-based Project (60 points)

- 30 pts Implementation of 5 classes
 - 10 pts Testing of all classes
 - 20 pts File I/O
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Graphics Project (60 points)

- 20 pts Full working program
- 6 pts Graphics included
- 16 pts Responds to 4 keyboard keys
- 8 pts Responds to mouse in at least 2 ways
- 10 pts Presentation