

Prototypes and Design [100 points]

Overview

For this part of the team project you need to implement the User Interface prototypes (the screens used for user interaction), and create a high-level design for your game. Using your prototypes and requirements, think of all supported user actions. What classes will you need to support these actions? How will these classes interact to implement each user action?

Details

Implement prototypes for all User Interfaces of your game using Java Swing API. The interfaces do not yet have to work. For example, when the user clicks on a button, nothing will happen. If your game supports different screens, implement the prototypes for all supported screens. Provide a driver that instantiates each prototype.

For each screen, create a list of possible user actions. Now you need to design how each action will be supported. This is part of creating a high-level design. Walk through each action and identify which classes you will need. Determine the relationship between the classes you identified and put them into a UML class diagram. Specify the is-a, has-a, and uses-a relationships. You can use any tool you choose. I use an online tool: <https://www.draw.io/>.

Create a sequence diagram for each supported user action. Use any tool you choose. I use an online tool: <https://sequencediagram.org/>

Submit

1. Code for your prototypes into your team git repo.
2. An electronic version of your class diagram via email (one per team).
3. A document specifying each user action with a corresponding sequence diagram via email (one per team).

Grading

Your grade will be based on the following criteria:

[40 points] Prototypes: do your prototypes match all the requirements?

[10 points] Class Diagram

[30 points] User actions and sequence diagrams document

[20 points] Peer evaluation results: I will distribute a peer-evaluation form next week. A portion of your grade will be determined by how well you worked with the rest of the team and your contribution to the project (as evaluated by your teammates).