Project Title: Settlers of Catan
Team Members: Gyumin Youm, Freddy Rodriguez

Status Summary

• Work Done: Written description of the work done in the first week of your project and (in the case of multi-person teams) the breakdown of work across team members.
Gyumin Youm:

- implementation of all the classes to be used,
- establishment a graph network in between each possible locations to place settlement
- Implementation of a card Factory to decouple instantiation of Cards.
- Randomization of resource, value placement across the board
- Visual representation of the game board

Freddy Rodriguez:

- Working outline for build() and trade() methods that will be used to run the game
- Implementation of Command pattern that uses build/trade methods
- Implementation of a logger class
    - Observer and singleton design patterns

• Changes or Issues Encountered: Has anything changed so far in your approach to the project from the initial design in Project 5?

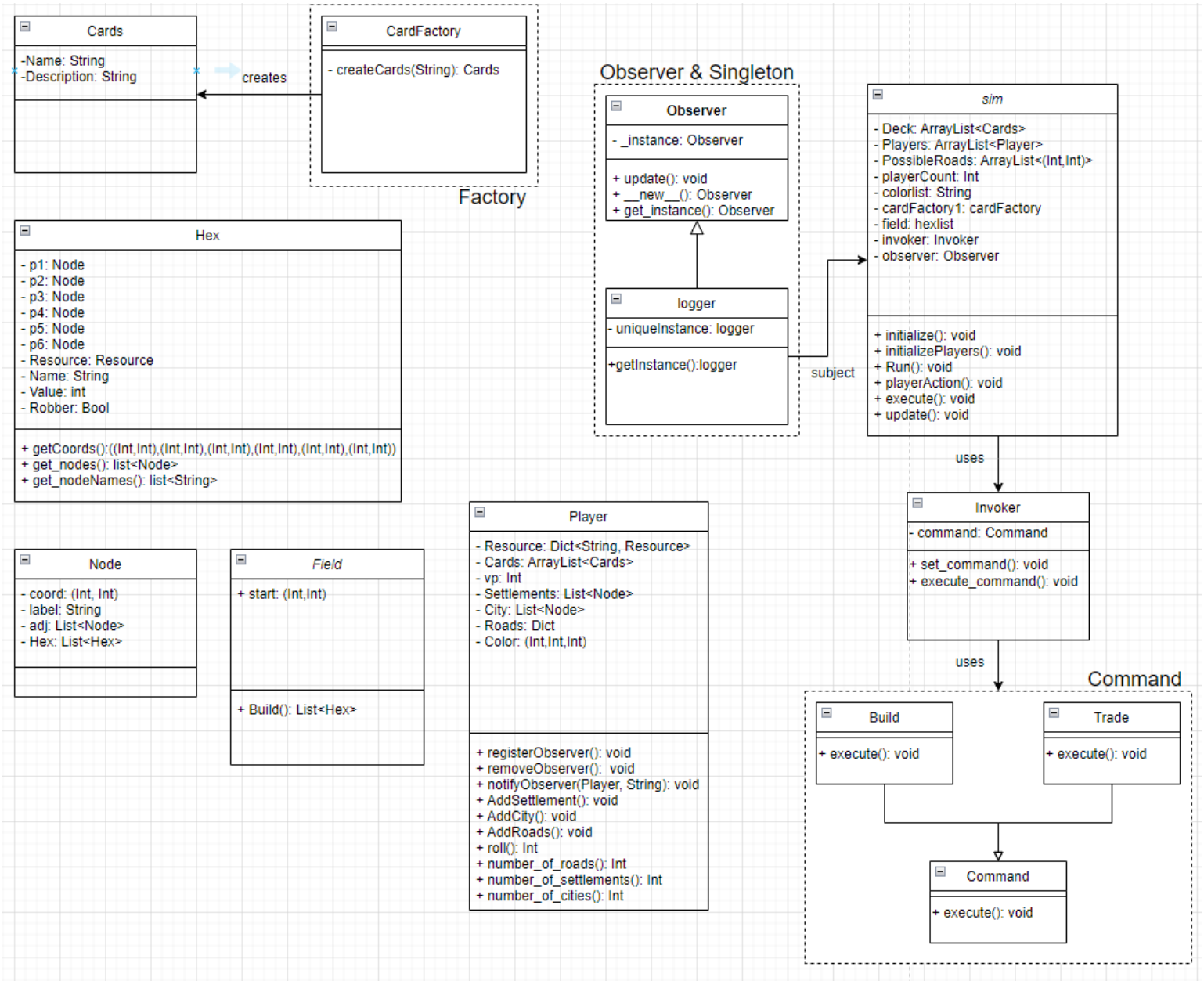
- Initially, we were planning on implementing a Settlers of Catan simulator that is played between 4 A.I. players. Each of the A.I. players would have a certain strategy they would stick to (e.g, monopolizing a resource, going for harbor, etc), and the user would then be able to use the simulation to study which strategy would yield the highest win rate. After the project 5 submission, we've received the suggestion to change the project to a game play between 4 players rather than a simulation due to the difficulty of implementing A.I. decisions.
- Since we decided to not go with AI players, we chose to use a Command design pattern for user input (instead of Strategy for AI decision-making)

• Patterns: Now that you have more of your system implemented, please describe the use of
design patterns so far in your prototype and how they are helping you or your design.

- cardFactory is a factory pattern and it allows decoupling instantiation of each Card.
- Command pattern is used for user actions which include build, trade.
- Observer and Singleton pattern is to be used for the logger class that would receive game messages and relay all the necessary information to users.
- Decorator pattern is to be used for when the user upgrades a settlement to a city

Class Diagram

A class diagram that shows the classes that have been implemented so far and their relationships to one
another. (In other words, this diagram may not show the complete system you designed in Project 5 but
rather the classes your team implemented during the past two weeks.) This will likely be an annotated
version of your Project 5 UML Class Diagram. Pattern use should be highlighted in this diagram.



Plan for Next Iteration

Provide an estimate of how much more work needs to be done for your team to have implemented the design that you presented in Project 5 (with any design changes that may have occurred). What are your plans for the final iteration to get to the Project 7 delivery? What do you plan to have done by 4/27 when the project is due?

- Work that needs to be done:
    - Implementation of updating the pygame window so users can see the location of each selection
    - Adding text/shapes on to the screen to notify user what is built
    - Possible display of number of cards present on the screen
    - Logic for building/longest road
    - Adding trading harbors
- Plan is to finish the game logic and then make the pygame window update after each user's turn to assist users in their decisions.
- We plan to have a bug-free, working Settlers of Catan game and a pygame window that updates after each user turn.