Project : Solitaire

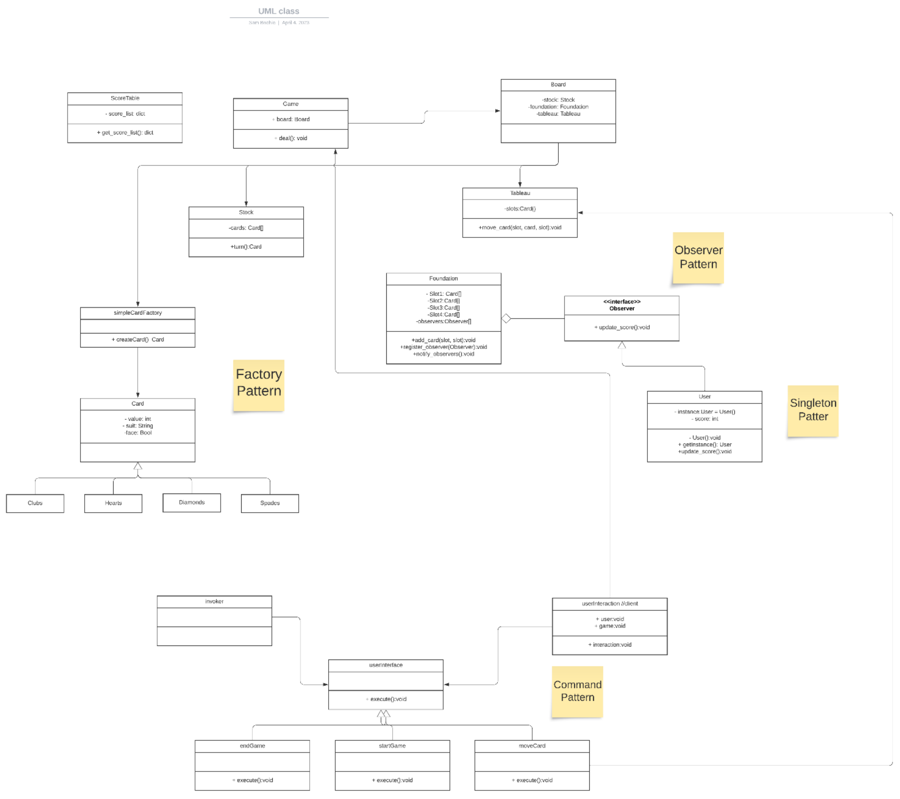
Name : Sam Boehle, Nirmal Kadirkamamathan

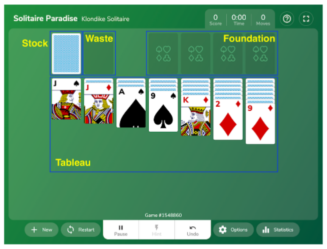
Final State of System Statement :

We were able to implement our score feature where the user will be able to see the high scores by clicking the button. We were also able to implement an observer pattern that kept track of the users score and once the game was done or they quit the score would be recorded into a csv file. The game can only be played by one user and no user authentication is required. We were able to implement all the game logic, so cards can only be moved when the action is valid. We were not able to implement the take back functionality, and the score does not consider the number of movies or time taken, instead it takes into account the number of cards that are in the foundation. The game's frontend is different from the wireframes submitted in project 5.

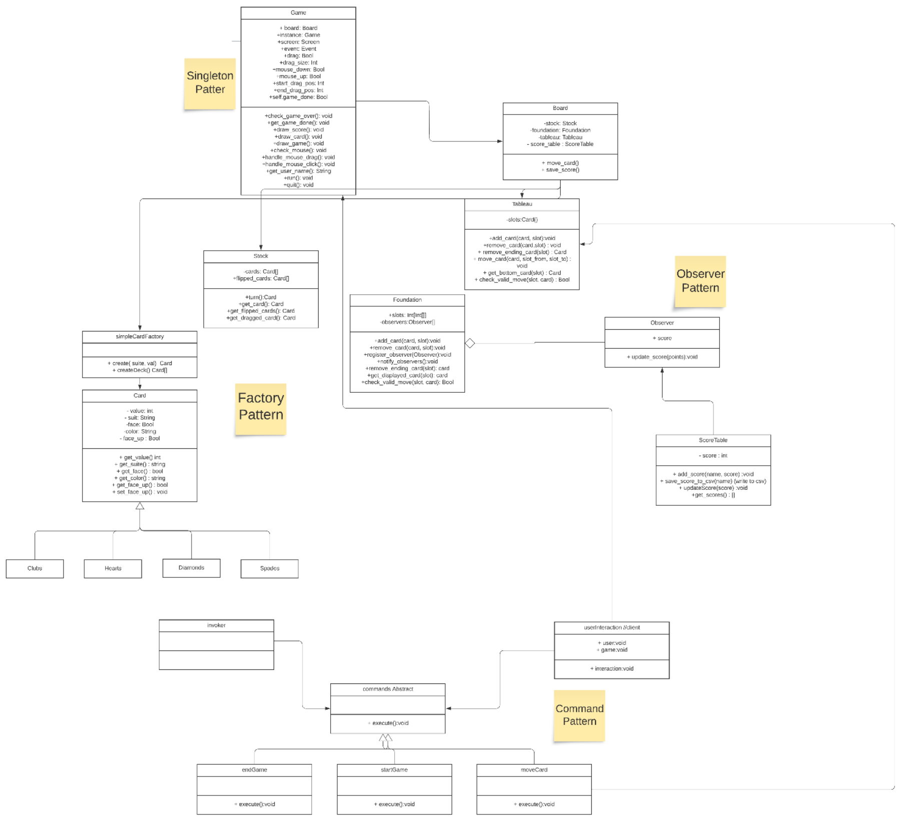
Final Class Diagram and Comparison Statement

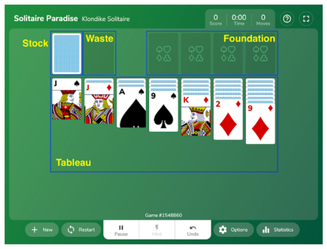
Previous:





Updated:





As you can see in the UML diagram, the Singleton Pattern was moved from the user class to the game class. Another large change was to the Game class which took on the responsibility of rendering the front end. We had to add a lot of class attributes to the Game class.

Third-Party vs. Original code statement

- We used PyGame as a low level front end framework to display images and shapes.
- We used a PyGame Solitaire repository for the card images and the dimensions of the board. Our backend OOP code and front end logic are completely different. https://github.com/Kallekro/Solitaire-Pygame

Statement on the OOAD process for your overall Semester Project

Using OOAD design principles we were able to scale up our code and keep logic separated into classes. This allowed us to easily scale up our project as we continued to add more features. The Abstract Factory Pattern allowed us to easily create playing cards of different suits and faces. I think this was the best use of an OOAD pattern in our project. Using python does not allow us to make class attributes private which was a change coming from Java and something that we wish we could do.