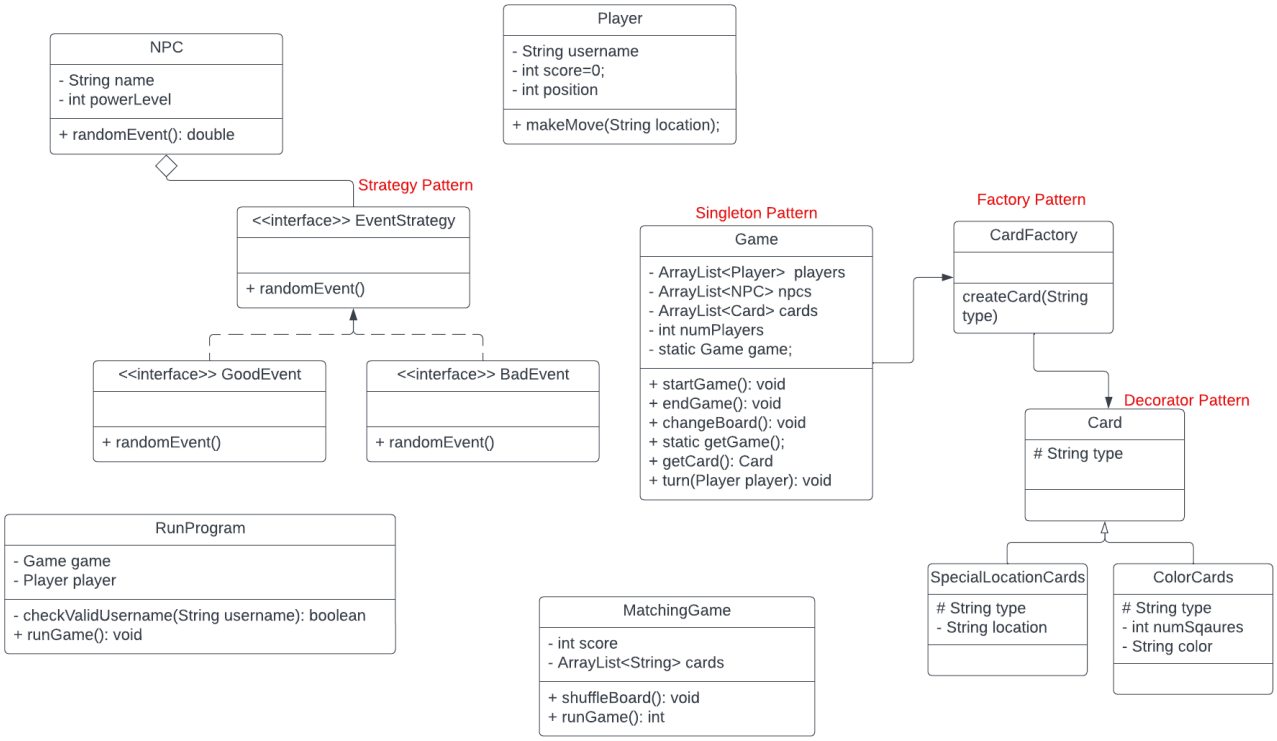
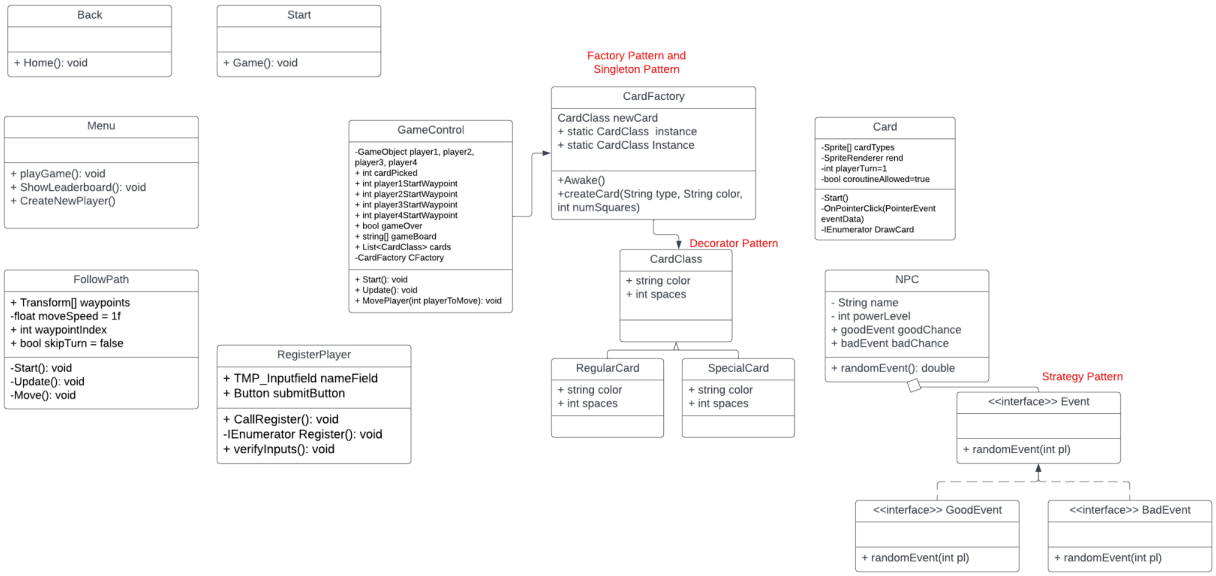
Project 7 Report

Final Project Report

1. **Name of Project:** Candyland
   Team Members: Kylie Elbert, Tahira Zafar
2. **Final State of System:** For our Candyland game, we implemented a way for players to create a player by inputting their name. This name is stored in a MySQL database along with other player information. We also implemented basic gameplay. Players are able to draw cards from a deck and the number of spaces on the cards dictates how many spaces they move on the board. Right now, the player moves based only on the number of spaces on the card and not the color of the box as we did not have time to implement that part of the game. We also created a screen for a Leaderboard page but we were unable to implement it due to time constraints. We were also planning on doing a matching game at first for some of the spaces but decided not to during Project 6. Most of the unimplemented features are because we underestimated the learning curve for Unity. Neither of us had used it before so we had some trouble figuring it out and getting everything to work. This is why we changed a few things from Projects 5 and 6.
3. **Project 5 Class Diagram**



Final Class Diagram



Comparing the Project 5 class diagram and the final class diagram, most of the classes from the original diagram are present. There were quite a few classes we added on later as we were learning Unity and figuring out how things worked. The one class we did not end up implementing is the MatchingGame class as we did not have enough time to implement that part of the game. We also switched the Singleton pattern from the GameControl to the CardFactory class. Everything else is mostly the same except for some of the functions and attributes because we were not aware at the beginning of how Unity worked.

4. **Third-Party Code:** A lot of the code was based on Youtube tutorials as neither of us was familiar with Unity or how it worked.
    - Youtube video for setting up a database with Unity: https://www.youtube.com/watch?v=SKbY-0zt2VE&ab_channel=BoardToBitsGames
    - Youtube video for using Unity to register users with the database: https://www.youtube.com/watch?v=4W90-mh70JY&t=1389s&ab_channel=BoardToBitsGames
    - Youtube Unity 2D Boardgame Tutorial: https://www.youtube.com/watch?v=W8ielU8iURI&t=19s&ab_channel=AlexanderZotov
    - Based singleton pattern from: https://gamedevbeginner.com/singletons-in-unity-the-right-way/
    - Interface implementation: https://www.tutorialsteacher.com/articles/generate-random-numbers-in-csharp
5. **OOAD Process**

- We were very ambitious in the beginning because we did not have a clear idea of how to use Unity, which ended up in us having to modify a lot of the original ideas for the end result
- It was helpful to make diagrams at the beginning (e.g use case) because they helped to identify exactly what we wanted the players to do.
- We should have practiced using Unity a little bit using simple tutorials before diving right into our project so that we could have at least a little bit of an idea of how it worked.