Final Report: Wipeout Limited

1. Project Name and Team Members

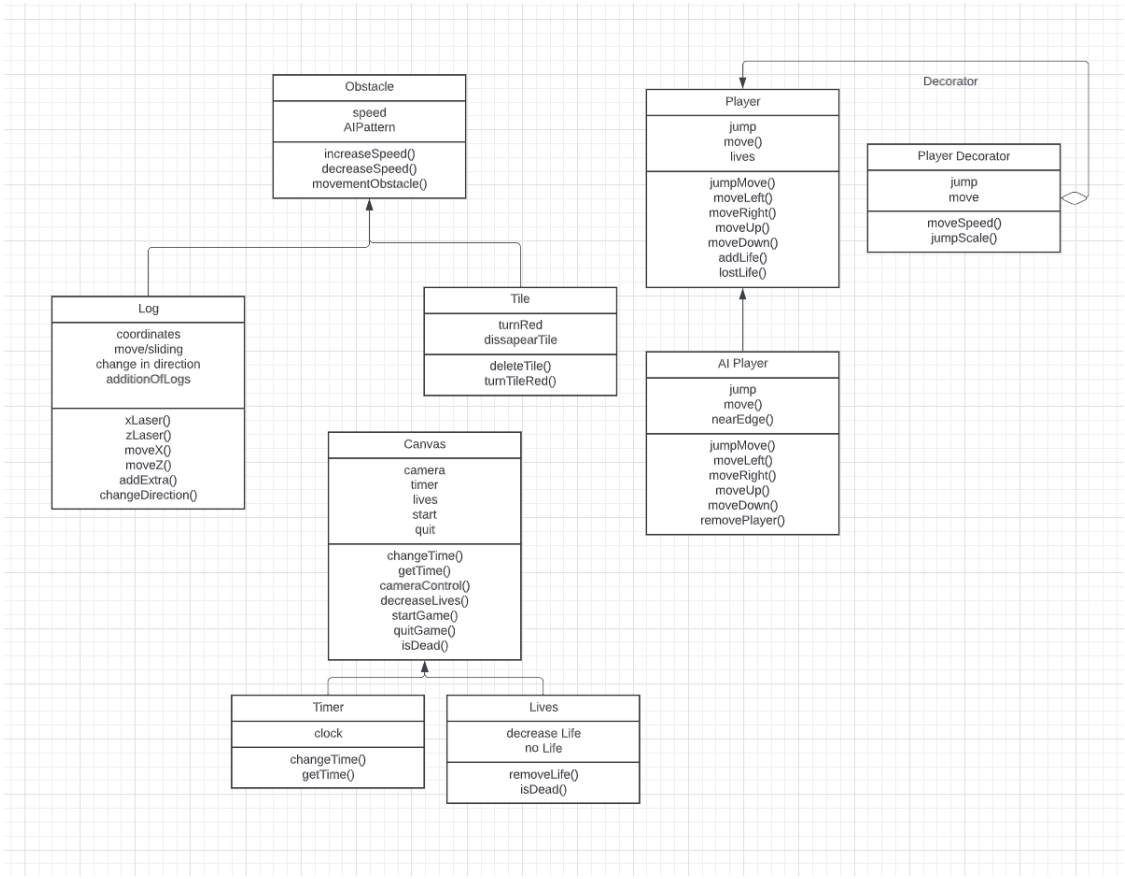
- Wipeout Limited
- Veda Jammula & Ben Courlang

2. Final State of System Statement

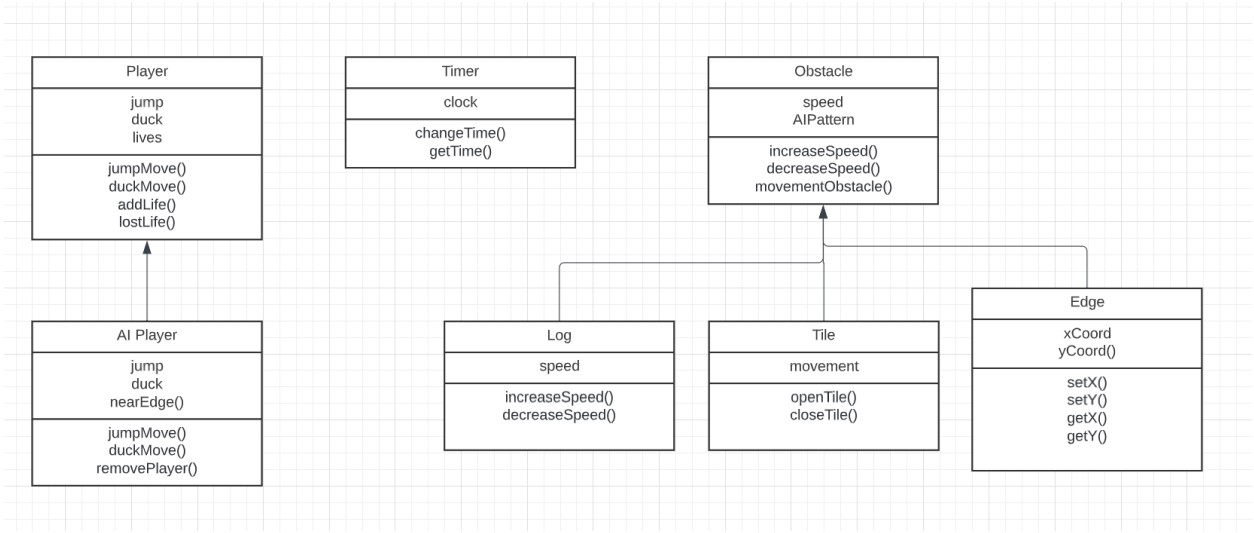
- The final state of the system is a working game called Wipeout Limited. We have the starting screen which incorporates a start button, quit button, and a rules button to understand the game. The game then prompts a character for the current user and a character for the AI player. There are logs that come towards the players and the user has to use the up, left, and right button while also navigating the screen with the mouse to change the camera angle. There are also tiles that fall down throughout the game and the player has to avoid being on the tile so the player does not die. Everytime the user gets hit with a long, the user decreases in one life with a total of 3 lives. There is also a timer that starts from 60 seconds, and goes down by the second. The game ends if the user makes it out alive until the final second is done. We were able to use patterns: Factory, Command, Decorator, and Strategy. We were not able to implement figuring out where the edge is and having it be a boundary.

3. Final Class Diagram and Comparison Statement

Project 7 UML Diagram



Project 5 UML Diagram



Key Changes

There were a couple of key changes with how we constructed our final code to implement the patterns and use all of the ideas that we came up with in Project 5. We incorporated more classes than from Project 5 such as the Canvas class that has the title screen and graphics included in it. The title screen also holds the timer and lives which are an integral part of the game. We also were not able to implement the idea of an edge and rather we just made it so that if you fall off the edge, then you will immediately lose. Also, the way we incorporate the tile is different given that we have the tile first turn red then disappear after some time and not come back throughout the whole game to make it harder. Lastly, we separated timer and lives to inherit the canvas class which includes all of the main graphics for the game. We also decorate the player with how it jumps and moves with the camera angle. Overall, the main idea of the game did not change but the way each function was implemented was different. The game has only improved from Project 5 to now, the final product.

4. Third-Party Code vs Original Code

We created all of our code from scratch but got help by looking at the resources from the sites below:

1. Do Factory
2. Previous Project Code
3. Make A 3D Platformer in Unity #1: The Setup

5. Statement on the OOAD Process

1. One key design process element was being able to meet up together to brainstorm and come up with ideas that we can both compromise on. We both had different ideas of what we wanted to do but compromised on creating a game in Unity. The rest was based on bouncing off of each other's ideas and adding more elements as we came up with

something. Once we did this with Project 5, we were able to create a good plan on google documents.

2. Another key design process element was submitting checkpoints and keeping each other updated with what we were working on. Every week, we would meet once or twice to combine code and figure out any challenges that the other person was facing. Once we did that, we could move on further each other leading up to completing the project. Working with a partner has helped me improve my coding skills and learn how to communicate with them and be able to ask questions.
3. The last key design process element was being smart with how we organized and split up the work. We had to go over each other's skill sets and find out which part interested who. We were able to come up with a plan given the previous classes and coding projects we have worked on. We also wanted to try working on parts of the project that we had no experience with so we gained knowledge off of it and learned more. Being able to work on a project with someone who has different interests in what they wanted to come was an important aspect of being able to build the final product.

Code Submission Link