**Post – Mortem**

It has been 2 years since I decided my major as Computer Science at Queens College, yet I have never actually created a working software by myself. I have been taking the courses very passively, and had no idea what I will want to do with this degree after graduating. My only motivation for doing Computer Science is that there is higher chance of getting employed after graduation with this degree. Therefore, when I first learned that I will have to develop a software on my own for this class I was frustrated and did not know what to do for the project at all. I have not taken database class and never learned about front-end and back-end, had no experience in any development area. Then I thought about that I really enjoy playing games ever since I had computer, so I started learning about developing game.

Developing game with having only limited skills of programming gave me hard time in the beginning. I wanted to create online RPG game (multiplayers), however, there was no way that I will learn about back-end developing and how to use Game engine at the same time. Additionally, as a single developer, I also needed time to create external components of the game other than programming like music and images. Thus, I decided to start with very simple thing, that moving a simple object in empty scene by receiving inputs from the keyboard. Then I learned how to make two objects interact with each other, how to make a platform for the objects to move on it, and how to pass each object’s data from their scripts by object-oriented programming. After that, I learned how to create game sprites to add characteristics to the objects I created in the scene. With some very basic knowledges of how to develop a game, I could finally decide the size of my project.

Even after deciding which game to make, it wasn’t easy to build the game scene. The hardest part was how to make a dynamic experience in one scene. I had to diversify attack patterns of the monster in order to make it unexpected for the player, and different phases for the monster to make the game scene more interesting. Of course, I had to put so much efforts and time in designs and music for each various attacks and phases. I can say that I might have spent more time in designing the sprites and composing the music, and I learned that making game is not just about programming and writing algorithms for game logic. There are so many limitations for a single developer to create a game that he/she wants. I will definitely think about working with a graphic designer to make a game for the next time.

I could make the most parts of the game I designed, like timer, different attack patterns of the monster, monster ai, various animations, and score board, however, I did not have time to figure out a way to add database to the game for equipment items for the player. When I first decided to make the game, I wanted to make RPG game, and equipment is essential part of RPG game. Also, I wanted to build the project into Web server, so it can be a flash game that anyone can access to play on a website, but I could not figure out how to do it either. Those two things are the things that I will definitely learn how to do it after this project is over. In addition, player movement of my game is little awkward I feel like, I think the issue is coming from not adding right physics material to the player object and platform. When two game object collides with each other in the game space their friction and bounciness matter. I will have to learn more details about game physics materials and perfect way to add movement to the object.

At first, I thought I would follow the waterfall model as it is a common SDLC that a small project follows, however, since I’ve tried to learn new game developing techniques and applied any new creative idea to my game scene, it was not quite suitable for my game development. Spiral model was more favorable to my project as I could keep revising the process, like I kept playing each scene on the game engine as adding more features to the game.