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### Project 3 Report

I prepared for the project by thinking about what sort of combat system I want and what sort of world I want, and then building from there. At first I wanted to model an open world with a general direction that you travel but some side paths you could explore. I ended up scrapping that for a more linear world. I also wanted to have at least 3 combat options, such as quick attack, strong attack, and block. I also ended up scrapping that due to time constraints. I also bounced ideas off of other people, such as In Ji and my roommate, Kyrin. The very first thing I built in my program was the Player and Monster classes, and then I moved on to the battle and tested that extensively. It was not until later on that I actually started working on world exploration. My code skeleton was useful in some ways because it got me to think about what I still needed in my game. However, my code skeleton probably only had half of what I ended up putting in my game. For example, I did not have an Inventory class in my code skeleton, but I ended up adding it in later because I wanted a way to standardize the items both in the player's inventory and in the shop. I used the default constructor of Inventory to fulfill that purpose.

A lot of my time was spent on making menus and trying to make them look good, and also handling any input, including trying to heal a player that's unconscious (which is pretty much the same as being dead, but with the difference that you can sleep it off in my game). I found myself writing the same sort of thing over and over to handle inputs, but I thought it was inevitable because I was using different variable names and using different text in my prompts every time. It was not until recently that I realized I could accomplish my "record which number the user chose or make the user enter something until it is a number" with a function that has a loop inside of it and a string parameter for the prompt. However, I never changed my code to use this

improvement I thought up because I did not have time to change that since it was in so many places of my code.

One false start I did have was figuring out how to make the entire function repeat if the user wanted to sell an item and then changed their mind when it asked them if they were sure they wanted to sell it. At first, I was trying to figure out the best place to put it so that I could loop the entire function again, which caused me to put a lot of loops inside loops and made a lot of indentation. Eventually, we covered recursion in class, and I realized that recursion was the perfect solution to my problem. I edited my `sellItem` and `sellWeapon` functions in my shop and my `travel()` function in `Story.cpp` to use recursion in various circumstances, which allowed me to lay out my code in a more linear fashion instead of nesting things deeply.