Behind The Game

This game was created as a final project for my introductory Computer Science class, which was focused on java programming language, at Allegheny College. The idea of the project was inspired from turn based RPG dungeon crawlers with stories that somewhat relate to the professor that taught the course. Although the game wasn't too complicated, it took a relatively long time due to my lack of experience in the language.

The general purpose of the final project was suppose to incorporate everything we've learned in the course; this included but not limited to: efficient , well-structured, and testable code. After the initial idea was established, I started to create a map/diagram of how the game was suppose to be played out and figure out how to contain all those features. So, to implement the game, I started by creating multiple classes that contained information for character objects, monster objects, action methods, the main method and battle conditional logic, and a test suite. Then, I tested the code with a series of test cases that ensure that the character and monster attack values are within an appropriate range, as well as to ensure that the character and monster hp values are modified accordingly given a known attack value. To evaluate the overall effectiveness of this game, I played the game at all developmental stages, calculated expected outcomes by hand, checked that the appropriate outcome happened given a battle win (Congratulations message and progression to the next enemy) or loss (loss message and a halt in the progression), and evaluated the monster AI to ensure that: 1. It attacked back and 2. That it did so in an unpredictable (but "legal" given its attack max) way. Finally, to test the efficiency of the code, I placed timers before and after each method and compared the time they took to the time I thought they would take (the time I thought they took was a guess of their worst-case time complexity from looking at the source code.

Overall, the project was extremely fun and rewarding to make because it was the first project that I made from scratch. The most interesting part was that it was made from scratch, basically without any restrictions, because it could have gone any direction I wanted; it was the first project that I was able to have full control of what I wanted to do instead of following some guideline to create a program. Although most turn-based RPG dungeon crawlers are similar, I was able to create my own twist on it and made it more enjoyable along the way.