Programming Project Report

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Academic Integrity Statement: I pledge that I have neither given nor received unauthorized help on this programming assignment.

Problem Statement:

The goal in project 7 was to work on creating a small text-based dungeons and dragons inspired game by focusing on designing and implementing a simple room class that fits in to the dungeon and monster classes that were provided for us. For inputs, the program takes in the number of rooms, which room the player starts in, which room contains the boss, and then for each room: the name of the room, which room is in the north, south, east, and west of the room, the name of the monster in the room, and its attributes. For error handling we had to have a clean function which would remove any extra rooms passed into the program, as well as making the move function only accept proper cardinal directions from the user.

Design:

For design decisions, I followed the instructions for the class design which involved creating 4 directional member variables and 2 member objects. For the Look method it was just a basic printing to the console, and a set of if statements that determined whether or not there is a room in a certain direction. The move method takes input and will continue to prompt the user until they input a valid direction. I did not use any data structures to implement the room class.

Implementation:

I started the program with the monster and dungeon class implemented as well as the main program written, just needing the room class implemented. I started by simply creating the class header file with the function headers and the basic variable declarations and making sure that the class compiled correctly on my machine. From there I moved to implementing some of the methods and gradually testing them to make sure that they all worked properly. After this i did a couple of final tests to make sure that the program worked properly.

Testing:

I tested the program on several different inputs to make sure that it worked for the error handling that was required in the program. The tests are included in a separate file marked for testing output.

Conclusions:

Overall the program seems to be able to deal with the typical use cases and can react to them pretty well. The error checking that is implemented is effective and meets the guidelines set in the original assignment. The programming project was a success because it achieved everything it need to and the code was relatively clean and well commented.If I could do the program again, there is not much that I would change because the implementations were fairly simple and worked well for me. The project, when including the time to document it properly, took roughly 1 and a half hours.