Requirement Specifications

You are to create a demo backbone for a text adventure game in a crawlspace. This should be similar to the backbone that would be required for "Carruther's Original Adventure" that can be found athttps://www.amc.com/shows/halt-and-catch-fire/exclusives/colossal-cave-adventure.

This crawlspace is set up as a three-dimensional space for an explorer to move around and pick up treasures. Each location has a number associated with it in a pattern similar to the one shown below. Each location also has a description of what the explorer is seeing and if there is a treasure in that space. Included in this crawlspace are also exits that serve as a way to get from one location to another within the crawlspace. The goal of the game is for the explorer to move throughout the crawlspace and collect all of the treasures.

The experience of the explorer (user) should appear something like the following. The user will initially be presented a set of instructions on a description of the game similar to the paragraph above and list of the possible commands that can be used. The explorer will then be prompted to introduce themselves by inputting their name.

This software will then prompt the explorer (user) to input a command to interact with a crawlspace adventure. After every command given, a new message will be shown and they will be prompted to give another command. If at any time the user enters a command that the program does not understand, they will be warned that the move is not possible and be reintroduced to the list of possible commands.

One of these commands will be to move around the space. If the explorer enters a “move” command, the code will then ask which direction the explorer would like to move. The code will take in the inputs of “forward”, “backward”, “left”, “right”, “up”, or “down”. After any of these commands are given, the software will relocate the explorer and output the description of the location they are now in as well as the numerical representation of where they are. This description will include what the explorer is seeing and if there is a treasure or exit in the same space. When there are walls that prevent the explorer from moving in a certain direction, they will be warned that they cannot move that direction and will be prompted to enter a different command.

Other possible commands will come from interacting with the objects which are either treasures or exits. Each treasure is worth a certain number of points. The explorer can use the “examine” command to look at an object. it is a treasure, it will display how many points it is worth. If it is an exit, it will display the location where it will lead. If the explorer picks up the treasure through a “take” command, the points will be added to their score. The only object that will not be able to be taken up is an exit. If the explorer attempts to pick up an exit, the code will display a string that says "what a concept!" If the explorer commands to examine or take an object that is not there, the code will warn the explorer that it is impossible. If the explorer decides to go through the exit through the “exit” command, the program will relocate the explorer to the place where the exit took them and display their new location.

After the user has picked up all of the treasure within the crawlspace, the game will end. The explorer will be shown their score and the inventory of all of the items that they have picked up throughout the game. They will then be asked to run the code again if they wish to play again.

Example of the crawlspace grid:

First Level:

1 2 3

4 5 6

7 8 9

Second Level:

10 11 12

13 14 15

16 17 18

Third Level:

19 20 21

22 23 24

25 26 27