CS116 – Lab 6
Due Date: November 2

Purpose: All your work so far was with individual functions. In the real world it is often the case that you would have a problem that would involve writing a bunch of functions that interact with each other. This makes debugging more challenging and is a crucial skill.

Skills: In this lab you will practice the following skills:

- How to debug a program with multiple functions.

Knowledge: This lab will also help you master the following content knowledge:

- How to constuct a larger program with multiple functions

- How to use global variables

Task: Before starting this lab, you should have read Chapter 10 in your text. Follow the steps in this lab carefully and complete the assignments. You will be starting with the code in `ch10.py` which you previously debugged. Before we start making changes to this code, try out the adventure game by executing the function `playGame()`.

Assignment 1:

Add global variable `hand=[]` which keep track of a list of items that the player is carrying. Change the program so that the description now informs the player that there is a key in the Living Room. If the player types "key" while in the Living Room the player is now carrying the key. Now, if the player has the key when entering the Kitchen, the stairs become accessible, allowing the player to go "west" and up the stairs. You will have to add some rooms to the game to make this work.

Criteria For Success: Your game should print the appropriate messages about the key and the player should only be able to go up the stairs if the player has picked up the key.

Assignment 2:

Add a lantern somewhere in the game that the player can pick up in the same way as the key. Note that it is possible that the hand list has both of these items. Create the ability for the player to go down from the Porch to explore secret underground rooms only if the player is holding the lantern.

Criteria For Success: Your game should print the appropriate messages about the lantern and the player should only be able to go down under the porch if the player has picked up the lantern. You have a lot of freedom about where the player finds the lantern and what the player sees under the porch.

Assignment 3:

Add an Ogre to your game who has the ability to kill the player causing the game to terminate and the player lose. Put a bomb somewhere in the game that the player can pick up. If the player has the bomb when encountering the Ogre the player can blast the Ogre to smithereens.

Criteria For Success: You have a lot of freedom for this assignment. Your game must contain an ogre and a bomb. Encountering the ogre without the bomb will result in death of the player and loss of the game. Encountering the ogre with the bomb will result in the ability of the player to kill the ogre.

Assignment 4:

Allow the player to win the game by finding some secret treasure. When the player wins the game should print a message of congratulations and exit.

Criteria For Success: Again, you have a lot of freedom in this assignment. The game should end successfully when the player finds the secret treasure.

Extra Credit:

Add sounds and/or pictures to your game that appear when entering rooms and during consequential events.

Criteria For Success: You have an awesome game with pictures and/or sounds!

Submit your file containing your game. If you completed the extra credit, submit all your files including the pictures/sounds in a single zip file. Please indicate both partner names in your submission file.