Homework #1: Python Essentials

Due: 9/25/2021 @ Midnight

Introduction: In Parts 1 and 2 of this homework, you will make sure that you have everything set-up correctly. In Parts 3 and 4, you will start writing some medium size Python programs. These programs will require use of Python data structures, e.g. lists and dictionaries. Please make sure to break your program into functions and include comments throughout your code. You can zip both programs together and upload to our Moodle.

Part 1. Get your computer set-up.

Follow the instructions here:
https://ehmatthes.github.io/pcc_2e/setup_instructions/setup_instructions/.

Make sure to install Python > 3.6 and Sublime Text.

If you don't already have git installed, followed along here:
https://git-scm.com/book/en/v2/Getting-Started-Installing-Git

Part 2. Say Hello, World!

Write a simple "Hello, World!" program in Sublime Text.

Practice running your program from within Sublime and via the Terminal.

Part 3. General Provisions Store

Let's imagine we are creating a general provisions store within a text-based adventure game.

Here is sample output for what your program should do. User input is denoted in bold.

```
Welcome to the General Provisions Store!
What can I get you today?
0. Food Rations: 6 gold pieces
1. Water Flask: 3 gold pieces
2. Dagger: 12 gold pieces
3. Helmet: 32 gold pieces
Enter 0-4 of q to end> 0

Got it.  You selected Food Rations.
What can I get you today?
0. Food Rations: 6 gold pieces
```

```
1. Water Flask: 3 gold pieces
2. Dagger: 12 gold pieces
3. Helmet: 32 gold pieces
Enter 0-4 of q to end> 2

Got it.  You selected Dagger.
What can I get you today?
0. Food Rations: 6 gold pieces
1. Water Flask: 3 gold pieces
2. Dagger: 12 gold pieces
3. Helmet: 32 gold pieces
Enter 0-4 of q to end> q

Ok, here is your receipt.
Food Rations: 6 gold pieces.
Dagger: 12 gold pieces.
Thanks.  Today's Total is 18 gold pieces.
```

Recreate the functionality above. Hint: you may want to consider using lists and dictionaries. Don't forget to break your program into functions, and include comments!

Part 3. Text-Based Adventure Game

Next, let's create a simple text-based adventure game.

There is no real goal of this game, except that you will enable the user to explore a world of your own making. Users will explore your world by entering: **east, west, north, south, up and down**. Users can also type **'look'** to see a description of their current location and type **'quit'** to end the game.

To receive full credit:

- You must create at least 6 locations in your world. Please be creative!
- You must break your program into functions, and include comments.

Hint: Connecting the locations via some kind of internal map is the tricky part of this program. Consider what data structures might be best for this.

Below is a sample run from my world. User input is denoted in bold.

```
You are standing in a large garden.
You can see beautiful flowers all around.
There is a small house to the east.
```

```
> east
You are standing in a kitchen.
It's a mess in here!
You can see a garden to the west, and a small bedroom to the east.
> west
You are in the Garden.
> look
You are standing in a large garden.
You can see beautiful flowers all around.
There is a small house to the east.
You are in the Garden.
> east
You are in the Kitchen.
> look
You are standing in a kitchen.
It's a mess in here!
You can see a garden to the west, and a small bedroom to the east.
You are in the Kitchen.
> east
You are standing in a small bedroom.
There is a small hole in the ground and,
it looks like you can climb down.
You can also see a kitchen to the west.
> down
You are standing in a room that looks like a hidden, nuclear bunker.
There are metal canisters along the wall.
There is a ladder going up.
It's a bit dark, but you can also see a panel of buttons to the left.
> quit
Thanks for playing!
```