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IT FDN 110 A

Assignment 03

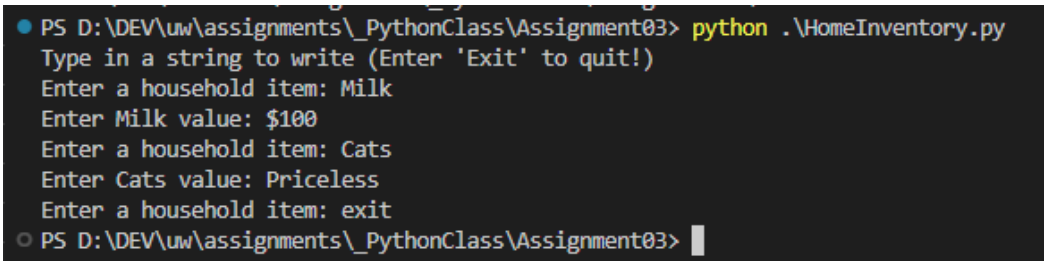
Python Inventory Script

Introduction

Week 3 of the course introduced if statements, loops, and opening and saving files in python. The following paragraphs outline the methods that were used to capture user input into an external file using a while loop.

Intended Outcome

The intended outcome for this week is a script file that generates a list of household items and their estimated values. The script opens or creates a text file then captures user input for an item's name and estimated value, then appends that info to the end of the text file. After each input from the user, the scripts checks to see if the user entered a specific value to exit the script.



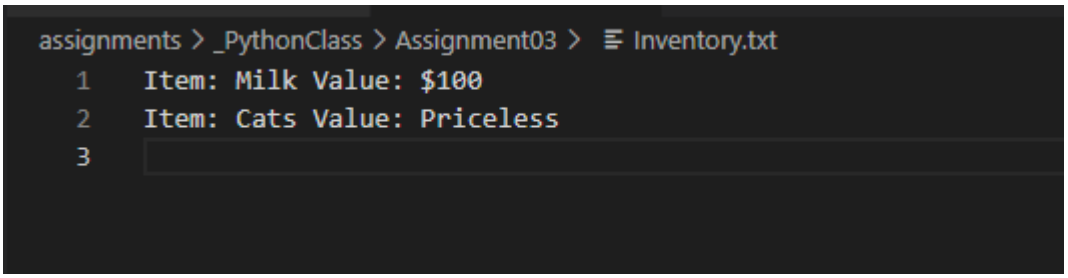


Figure 1: Intended Outcome

Open Inventory File

After the header section, I define an object ‘objFile’ and call the open function and pass it a file name “Inventory.txt” to open from a relative file location. I provide an argument of “a” to tell the function that it should add to the file by appending any new information.

```
14  # Create an object and call the open function and pass the "a" argument to indicate appending information to the file
15  objFile = open("Inventory.txt", "a")
```

Figure 2: Open Inventory.txt

While Looping

A while loop is used to both capture information from the user and add that information to the end of the ‘Inventory.txt’ file.

Prior to the while loop, a print statement is executed after the ‘inventory.txt’ file is open, to inform the user on how to end the script.

On Line 22, the logic for the while loop is started and conditions for each line of the loop is set, in this case, so long as the statements in the loop evaluate to “true”.

Next, a variable ‘houseItem’ is used to store the input from the user and asks that the user pass in a “household item” name.

Next, a ‘break’ is used with an ‘If’ statement to allow for the user to exit out of the loop with a submitted input of ‘exit’, regardless of how ‘exit’ is typed into the input function.

Next, another variable ‘itemValue’ is used to store the input from the user and asks that the user pass in an estimated value of the item.

Another ‘break’ is used with an ‘If’ statement to allow for the user to exit out of the loop with a submitted input of ‘exit’, regardless of how ‘exit’ is typed into the input function.

If ‘exit’ hasn’t been passed into the script at this point, an ‘else’ statement completes the If block and writes the information stored in ‘houseItem’ and ‘itemValue’ to a line at the end of the ‘Inventory.txt’ file.

If ‘exit’ is found from the user, the while loop exits the current loop, and jumps to the end of the script, in this case line 28, and tells the objFile variable to close the ‘Inventory.txt’ file.

```
17  # Inform the user how to exit the while loop
18  print("Type in a string to write (Enter 'Exit' to quit!)")
19
20  # Begin a while loop that captures user input, checks for the exit condition,
21  # and writes the info to the file if the condition evaluates to false
22  while(True):
23    houseItem = input("Enter a household item: ")
24    if(houseItem.lower() == "exit"): break
25    itemValue = input(f"Enter {houseItem} value: ")
26    if(itemValue.lower() == "exit"): break
27    else: objFile.write("Item: " + houseItem + " Value: " + itemValue + "\n")
28  objFile.close()
29
```

Figure 3: While Looping

Observations

Although this program works correctly, one thing I find interesting is that my 'If' statements still work even though I don't have an 'elif' statement for the second 'if'. I'm going to leave this program as it is, but one thing to note is that this is probably bad form, especially if you are working in a team (thenewboston, n.d.).

Summary

In summary, utilizing all the resources provided to the class and the online lecture, this paper outlines all the steps that were taken to create a python script that results in a successful execution of the intended outcome (Figure 1). Following the steps outlined above will allow for the audience to recreate the presented result.

References

thenewboston. (n.d.). *Python Programming Tutorial - 21 - else and elif*. Retrieved from youtube: https://www.youtube.com/watch?app=desktop&v=g1maz1ynR74&feature=youtu.be