Emmanuel Twum

Foundations of Programming Python

Randal Root

Assignment 03

10/13/2017

Taking User Input to Create a Text File with a Household Inventory List

The purpose of this paper is to describe how to create a python program which will create a text file and also update it. The program described below will enter household items and the item values into the text file. This paper assumes that the reader has installed python. This paper also assumes that the reader has some basic understanding of computer functions.

The first step of creating the program is to create code for opening the text file. As shown in Figure 1, a variable called ‘file’ is set equal to the ‘open’ function. Also shown in Figure 1, within the ‘open’ function the code includes the name of the file and the ‘a’ mode, which allows the user to append a text file. If the text file has already been created outside the code manually, the user will need to input the full directory of the file. Otherwise the text file will be created once the code is run.

**Figure 1:** Opening, Creating, and/or Appending a Text File

#Opens the file if already created and appends the current data. Creates a new file if the file isnt created

file = open("HomeInventory.txt", "a")

#Start Loop

while(True):

#User input for inventory item or end the loop

strInventoryItem = input("Please enter a household item to store in the inventory list or type 'close' to exit: ")

if(strInventoryItem.lower() == "close"):

print("\nClosing Inventory File")

break

else:

#User input for inventory item value

strInventoryValue = input("Please enter the value of the item: " )

#Writes the inputs to the text file and creates a new line

file.write("Item: " + strInventoryItem.capitalize() + " Value: " +"$" + strInventoryValue + "\n")

#Saves text file

file.close()

The second step in setting up the program is the ‘while’ loop which will allow the user to continue to input new items and the value of the items until the user ends the loop. There are a couple of different ways the while loop can be setup but for this example it uses ‘while(True)’ to begin the loop (see Figure 2). As shown in Figure 3, the loop uses an initial input from the user to either enter a household item into the text file or enter ‘close’ to exit the loop.

**Figure 2:** Starting the While Loop

#Opens the file if already created and appends the current data. Creates a new file if the file isnt created

file = open("HomeInventory.txt", "a")

#Start Loop

while(True):

#User input for inventory item or end the loop

strInventoryItem = input("Please enter a household item to store in the inventory list or type 'close' to exit: ")

if(strInventoryItem.lower() == "close"):

print("\nClosing Inventory File")

break

else:

#User input for inventory item value

strInventoryValue = input("Please enter the value of the item: " )

#Writes the inputs to the text file and creates a new line

file.write("Item: " + strInventoryItem.capitalize() + " Value: " +"$" + strInventoryValue + "\n")

#Saves text file

file.close()

**Figure 3:** Initial User Input

#Opens the file if already created and appends the current data. Creates a new file if the file isnt created

file = open("HomeInventory.txt", "a")

#Start Loop

while(True):

#User input for inventory item or end the loop

strInventoryItem = input("Please enter a household item to store in the inventory list or type 'close' to exit: ")

if(strInventoryItem.lower() == "close"):

print("\nClosing Inventory File")

break

else:

#User input for inventory item value

strInventoryValue = input("Please enter the value of the item: " )

#Writes the inputs to the text file and creates a new line

file.write("Item: " + strInventoryItem.capitalize() + " Value: " +"$" + strInventoryValue + "\n")

#Saves text file

file.close()

The next part of the code is an if/else statement. The purpose of the if/else statement is to give the user the option of exiting the loop with a ‘close’ input or continuing the loop with an input of the household item value (See figure 4). The beginning of the ‘If’ statement, as shown in Figure 5, is to close the loop if the input for strInventoryItem equals ‘close’. The ‘break’ statement on this first ‘if’ ends the loop. If close isn’t entered in the first part of the loop, the ‘else’ part of the loop is invoked asking for the user to input a value for the household item (See Figure 6).

**Figure 4:** If/Else Statement

#Opens the file if already created and appends the current data. Creates a new file if the file isnt created

file = open("HomeInventory.txt", "a")

#Start Loop

while(True):

#User input for inventory item or end the loop

strInventoryItem = input("Please enter a household item to store in the inventory list or type 'close' to exit: ")

if(strInventoryItem.lower() == "close"):

print("\nClosing Inventory File")

break

else:

#User input for inventory item value

strInventoryValue = input("Please enter the value of the item: " )

#Writes the inputs to the text file and creates a new line

file.write("Item: " + strInventoryItem.capitalize() + " Value: " +"$" + strInventoryValue + "\n")

#Saves text file

file.close()

**Figure 5:** Start If/Else Statement

#Opens the file if already created and appends the current data. Creates a new file if the file isnt created

file = open("HomeInventory.txt", "a")

#Start Loop

while(True):

#User input for inventory item or end the loop

strInventoryItem = input("Please enter a household item to store in the inventory list or type 'close' to exit: ")

if(strInventoryItem.lower() == "close"):

print("\nClosing Inventory File")

break

else:

#User input for inventory item value

strInventoryValue = input("Please enter the value of the item: " )

#Writes the inputs to the text file and creates a new line

file.write("Item: " + strInventoryItem.capitalize() + " Value: " +"$" + strInventoryValue + "\n")

#Saves text file

file.close()

**Figure 6:** End If/Else Statement

#Opens the file if already created and appends the current data. Creates a new file if the file isnt created

file = open("HomeInventory.txt", "a")

#Start Loop

while(True):

#User input for inventory item or end the loop

strInventoryItem = input("Please enter a household item to store in the inventory list or type 'close' to exit: ")

if(strInventoryItem.lower() == "close"):

print("\nClosing Inventory File")

break

else:

#User input for inventory item value

strInventoryValue = input("Please enter the value of the item: " )

#Writes the inputs to the text file and creates a new line

file.write("Item: " + strInventoryItem.capitalize() + " Value: " +"$" + strInventoryValue + "\n")

#Saves text file

file.close()

The last step of the program’s loop is to write the inputs to the text file opened then save and close the file. As shown in Figure 7, the code uses the ‘.write’ function to write the inputs to the text file. The format of items saved in the text file, as shown in Figure 7, is: Item: ItemName Value: $Value. A new line is created after the inputs with the ‘\n’, as shown in Figure 7. The next part of the program is saving the text, which is simply done by using the ‘.close’ function, as shown in Figure 8. The loop will continue until the user enters ‘close’ as stated previously.

**Figure 7:** Writing Inputs to Text File

#Opens the file if already created and appends the current data. Creates a new file if the file isnt created

file = open("HomeInventory.txt", "a")

#Start Loop

while(True):

#User input for inventory item or end the loop

strInventoryItem = input("Please enter a household item to store in the inventory list or type 'close' to exit: ")

if(strInventoryItem.lower() == "close"):

print("\nClosing Inventory File")

break

else:

#User input for inventory item value

strInventoryValue = input("Please enter the value of the item: " )

#Writes the inputs to the text file and creates a new line

file.write("Item: " + strInventoryItem.capitalize() + " Value: " +"$" + strInventoryValue + "\n")

#Saves text file

file.close()

**Figure 8:** Save Text File

#Opens the file if already created and appends the current data. Creates a new file if the file isnt created

file = open("HomeInventory.txt", "a")

#Start Loop

while(True):

#User input for inventory item or end the loop

strInventoryItem = input("Please enter a household item to store in the inventory list or type 'close' to exit: ")

if(strInventoryItem.lower() == "close"):

print("\nClosing Inventory File")

break

else:

#User input for inventory item value

strInventoryValue = input("Please enter the value of the item: " )

#Writes the inputs to the text file and creates a new line

file.write("Item: " + strInventoryItem.capitalize() + " Value: " +"$" + strInventoryValue + "\n")

#Saves text file

file.close()

As shown in Figure 9, after running the program a new text file called HomeInventory will appear in the same directory as the python program, assuming the text file wasn’t created prior to running the program and saved in a different directory. Also, as shown in figure 9, when opening the text file you’ll see all the inputs from the user.

**Figure 9:** Program Outputs

