Name: Alexis Smith
June 21, 2023
Foundations of Python
Assignment 07
Github URL:https://github.com/lexissmith/IntroToProg-Python-Mod07

Assignment 7

Introduction:

In assignment 7, we were introduced to using custom functions, error handling, and working with binary files. For this lesson, we were instructed to do our own research on exception handling and pickling. We were then given a starter file that we modified to process and present the binary file. We were then instructed to post our finished code and document to Github for peer review, and also post the images, text and links to a Github webpage.

Creating the program

To modify the existing program, I added code to both save and read data to the binary file. These adjustments were made to the “processing” section of the code, which you can see below:

```
# Processing ------------------------------------- #
1 usage
def save_data_to_file(file_name, list_of_data):
    objFile = open(file_name, "wb")
    pickle.dump(list_of_data, objFile)
    objFile.close()

1 usage
def read_data_from_file(file_name):
    objFile = open(file_name, "rb")
    list_of_data = pickle.load(objFile)
    objFile.close()
    return list_of_data
```

Figure 1: Adding code to save and read the data to a binary file

In order to save and read data to our binary file, I first needed to open the file. I then added “wb” and “rb” to the code - “wb” is used to write to the binary file while “rb” is used to read the binary file! When saving the data, I then use pickle.dump in order to store the object data to the file. While reading the file, I use pickle.load in order to retrieve the pickled data.

In the presentation portion of our code, we were then instructed to get the ID and name from the user, then store it in a list object, store the list object into a binary file and read the data from the file into a new list object and display the contents.

To do these tasks, I used the input function in order to retrieve the ID and name of the user. I then used “append” in order to add the data to the file, as seen below:

```
# TODO: Get ID and NAME From user, then store it in a list object
str_choice = str(input("What is your ID and name?"))
row = {str_choice.split(",")[0] : str_choice.split(",")[1]}
lstCustomer.append(row)
```

Figure 2: retrieving ID and name, using “append” to add data to file

To store the data in the file, I wrote the following code:

```
# TODO: store the list object into a binary file
save_data_to_file(strFileName, lstCustomer)
```

Figure 3: storing data to file

And, to read the data in the file, I used the “print” function, as seen below:

```
# TODO: Read the data from the file into a new list object and display the
contents
print(read_data_from_file(strFileName))
```

Figure 3: reading the data in the file

Here is my program running in pycharm:

```
/Users/alexissmith/Documents/_PythonClass/Assignment07/venv/bin/python /Users/alexissmith/Documents/_PythonClass/Assignment07/Lab7-1_Starter.py
What is your ID and name? 2, alexis
[{' 2': ' alexis'}]

Process finished with exit code 0
```

Figure 5: Pycharm

Here is my program running in terminal:

```
alexissmith@Alexiss-MacBook-Pro ~ % cd Documents/_PythonClass/Assignment07
alexissmith@Alexiss-MacBook-Pro Assignment07 % python3 Lab7-1_Starter.py
What is your ID and name?2, alexis
[{'2': ' alexis'}]
alexissmith@Alexiss-MacBook-Pro Assignment07 %
```

Figure 6: Terminal

Conclusion:

This module instructed me on how to custom functions, error handling, and working with binary files, and post my work to my Github account. To conclude this lesson, I was able to modify an existing program to save and read data to a binary file. I then posted my script and this assignment to my Github account, which can be found here: https://github.com/lexissmith/IntroToProg-Python-Mod06