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March 06th 2020

IT FDN 100

Assignment 07

<https://github.com/woldeth/IntroToProg-Python-Mod07>

## Pickle & Structured Exceptions

### Introduction

In this assignment I searched the web to learn about pickling data and storing it in a dat file and learned how to use structured exceptions so I may make my own user-friendly errors for the end user. I made a simple program that takes in sensitive data from the user and stores the data in binary and gives friendly errors when data is entered incorrectly.

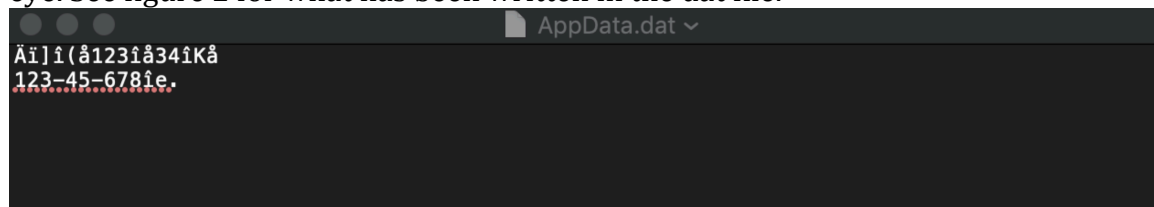
### Pickling

In this assignment I first start by importing the pickle module. I asked the user multiple sensitive question once I asked the user multiple question I captured the data using a variable. I open a new file and use the 'wb' for writing in binary. Once I open the file in 'wb' mode I use the pickle function 'dump' to populate the dat file with the information I would like. The data I choose to populate is the same data I accepted from the user. See figure for the functions I call to open and write to the file in binary.

```
objFile = open('AppData.dat', 'wb')
pickle.dump(lstEmployee, objFile)
objFile.close()
```

Figure 1: how to open file in writing binary mode and write the data to the file

Now once you look at the dat file you can see the text is unreadable to the human eye. See figure 2 for what has been written in the dat file.



```
Äïïï(â123ïâ34ïKâ
123-45-678ie.
```

Figure 2: unreadable to human eye text file

## Structured Exceptions

In my code I make it throw two errors, one for 'ValueError' which means when the user inputs an incorrect data type the program will give the users a error warning. I use this error specifically for if the user does not put in a numeric value for their age. See figure 3 for how I wrote the code.

```
except ValueError:  
    print("Oops! Put in a numeric value for your age|. Try again...")
```

Figure 3 : ValueError user friendly error

The next exception error I used in my code is the "IndexError" exception. If the user does not put in the correct amount of value in the code it will throw the index error. See figure 4 for the IndexError exception.

```
except IndexError:  
    print('You did not put your social security number in the correct format... ')
```

Figure 4: IndexError user friendly error

The last exception I throw it I force raise an exception if the user does not put their social security in the correct format that I like. I use a if statement that makes sure the user puts in 10 value and the 4<sup>th</sup> and the 7<sup>th</sup> values are '-'. See figure 5 for the if statement and raised logic.

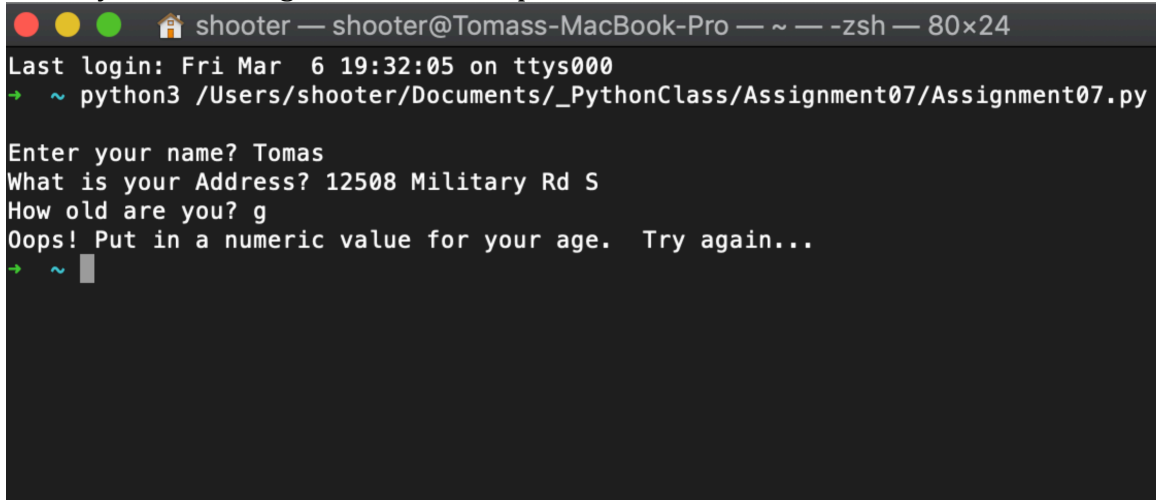
```
if strSS[3] != '-' or strSS[6] != '-' or len(strSS) != 10:  
    raise(IndexError)
```

Figure 5: Force raise logic for formatting of social security

## Running code on Terminal

I simply ran the program on my terminal by using the python3 command and the link to the file. When running my code I went ahead and made the mistake of putting a letter instead of a numeric value for the age. The program sends back a user

friendly error. See figure 6 for the output on the terminal.

A terminal window titled 'shooter — shooter@Tomass-MacBook-Pro — ~ — -zsh — 80x24'. The terminal shows the command 'python3 /Users/shooter/Documents/\_PythonClass/Assignment07/Assignment07.py' being executed. The program prompts for a name ('Enter your name?'), an address ('What is your Address?'), and an age ('How old are you?'). The user enters 'Tomas', '12508 Military Rd S', and 'g'. The program responds with 'Oops! Put in a numeric value for your age. Try again...' and then shows a tilde '~' as a prompt for the next input.

```
shooter — shooter@Tomass-MacBook-Pro — ~ — -zsh — 80x24
Last login: Fri Mar  6 19:32:05 on ttys000
➔ ~ python3 /Users/shooter/Documents/_PythonClass/Assignment07/Assignment07.py

Enter your name? Tomas
What is your Address? 12508 Military Rd S
How old are you? g
Oops! Put in a numeric value for your age. Try again...
➔ ~ █
```

Figure 6: Running the program on the terminal

## Conclusion

Overall, through this assignment I was able to take in sensitive values from a user and place them in binary on a dat file. If the user does not place the information in the format I like the program will send back a user friend error message.