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Foundations of Programming
Assignment 07
GitHub: https://github.com/SheridanDay/IntroToProg-Python-Mod07

Document Your Knowledge

Introduction

This new week came off what I though was an ok week six. When I saw we had to start with nothing and do our own research, I was both excited since I enjoy research, but also terrified because I don't know if I know enough to know what I need or what will help. That came into play as my project came into focus. Luckily, despite my currently complicated relationship with my homework subject, *Star Wars*, the data became the least of my issues.

Topic 1 – Research, and the Search for Knowledge

After reading the chapter of our book, I went straight to Google. I started with pages that gave general information on both pickling data and exception handling. They were useful for giving more information to supplement the video and book. However, later on, I had to do some more specific searches on different error types, why something didn't work well with "try/except" issues, and more. Overall I had about a dozen pages open and saved several for future use in the app Pocket (Figure 1). I use this phone and web app to save websites for future use between devices.
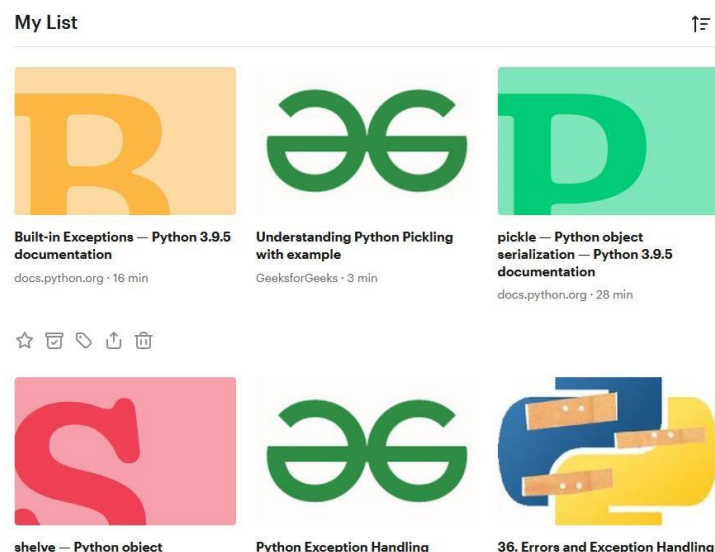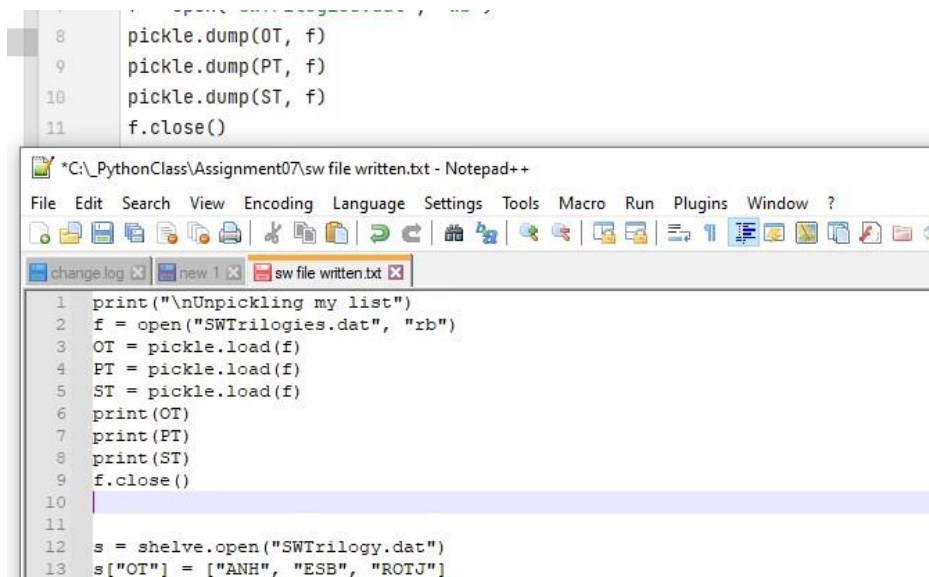

My List

Built-in Exceptions — Python 3.9.5 documentation
docs.python.org · 16 min

Understanding Python Pickling with example
GeeksforGeeks · 3 min

pickle — Python object serialization — Python 3.9.5 documentation
docs.python.org · 28 min

shelve — Python object

Python Exception Handling

36. Errors and Exception Handling

Topic 2 – I Was Not in a Pickle…with Pickles.

I will admit I'm not great a puns, but overall this is the one thing I didn't have a hard problem with. After I decided the topic of my assignment would be *Star Wars*, I knew I wanted to model my pickled and shelved data after the literal pickle lists in book. Since the franchise can be broken into three set of three movies, it was easy to set them up and load them into a .dat file. I also downloaded Notepad++ and learned what an easy program it was to use (Figure 2). I'm happy I don't have to mess with trying to format my code in PyCharm and inevitably mess up something that was working.

```
8    pickle.dump(OT, f)
9    pickle.dump(PT, f)
10   pickle.dump(ST, f)
11   f.close()
```

*C:_PythonClass\Assignment07\sw file written.txt - Notepad++

File   Edit   Search   View   Encoding   Language   Settings   Tools   Macro   Run   Plugins   Window   ?

change.log   new 1   sw file written.txt

```
1    print("\nUnpickling my list")
2    f = open("SWTrilogies.dat", "rb")
3    OT = pickle.load(f)
4    PT = pickle.load(f)
5    ST = pickle.load(f)
6    print(OT)
7    print(PT)
8    print(ST)
9    f.close()
10
11
12   s = shelve.open("SWTrilogy.dat")
13   s["OT"] = ["ANH", "ESB", "ROTJ"]
```

Figure 2. Using Notepad++ to write my code, then paste it into PyCharm for testing was much easier.

Topic 3 – Putting Pieces Together, Somehow, Badly

Ok, so I was able to pickle and unpickle my data. I felt pretty good. Now I knew what I wanted to do with the data, but wasn't sure how to go about it. I knew I wanted a user to select a numbered answer from a list of *Star Wars* trilogies based on a question. It was hard to get my vision out of my head. I tried several ways, including dictionaries, lists, multiple "try/except" statements, and even a (poor) replication of the "Trivia Game" from the book (Figure 3). Nothing worked right or felt like how I wanted my stuff to look.

```
21   # D. - picktu.         33   ine Original Irilogy (OI) consists of
22   # PT = pickle.          34   The Prequel Trilogy (PT) consists of
23   # ST = pickle.          35   The Sequel Trilogy (ST) consists of T
24   # print("Origi          36   """)
25   # print("Prequ          37
26   # print("Seque          38
27   # f.close()             39   def open_file(file_name):
28                           40       the_file = open(file_name)
29                           41       try:
                             42           the_file = open(file_name)
                             43       except IOError as e:
                             44           print("The file is missing.",
                             45           input("\n\nPress the enter ke
                             46           sys.exit()
                             47       else:
                             48           return the_file
                             49
                             50
                             51   def title(the_file):
                             52       line = the_file.readline()
                             53       return line
                             54
                             <
Normal text file                              length : 2,796   line
```

Figure 3. One of my attempts inspired by the book. This was eventually deleted.

Topic 4 – Back to What I Know

I spent a few hours messing with a variety of bad ideas that I didn't like or didn't work. I again was overcomplicating things, so I went back to an old assignment: if/else statements. It may result in my grade not being what I was hoping, but this worked and I did it all on my own. It displays the data I want, asks the question, and gives you an error if you select the wrong number or uses the "except" statement if you select no number at all (Figure 4).

```
39
40
41   import sys
42   def open_file(file_name):
43       try:
44           the_file = open(file_name)
45       except IOError as e:
46           print("Unable to open the file", file_name, "Ending program.\n", e)
47           input("\n\nPress the enter key to exit.")
48           sys.exit()
49       else:
50           return the_file
51
52
53   while True:
54       try:
55           movie = int(input("Which Star Wars trilogy is the highest rated amongst rating aggregators
56           if movie == "1":
57               print("That is correct! The Original Trilogy is still the highest-rated trilogy of the
58           else:
59               print("That is not correct. The correct answer is the Original Trilogy.")
60       except ValueError:
61           print("That was not a number. Please try again.")
62
```

Figure 4. A near-final version of my code after it worked. I polished it after a few runs.

Summary

I really enjoyed doing some research and finding ways to complete a task on my own. The last couple of weeks were complicated, so the pre-written code was appreciated to cut back on time. I do feel like being able to write my own code, no matter how complicated, from start to finish made it more fulfilling. It's hard to say which way is better. I'm just happy I found a solution that I'm happy with and that runs how I wanted it to look (Figure 5).


```
I have pickled the Star Wars Trilogies!

The Star Wars Trilogies, unpickled:
Original Trilogy:  ['ANH', 'ESB', 'ROTJ']
Prequel Trilogy:  ['TPM', 'AOTC', 'ROTS']
Sequel Trilogy:  ['TFA', 'TLJ', 'ROS']


Here is a question for you:

The Star Wars franchise has three trilogy movie series
1 - The Original Trilogy (OT) consists of A New Home (
2 - The Prequel Trilogy (PT) consists of The Phantom M
3 - The Sequel Trilogy (ST) consists of The Force Awak

Which Star Wars trilogy is the highest rated amongst o
Please choose 1, 2, or 3!
Which Star Wars trilogy is the highest rated amongst o
That is not correct. Please try again!
Which Star Wars trilogy is the highest rated amongst o
That was not a number. Please try again.
Which Star Wars trilogy is the highest rated amongst o
That was not a number. Please try again.
Which Star Wars trilogy is the highest rated amongst o
That is not correct. Please try again!
Which Star Wars trilogy is the highest rated amongst o
That is correct! The Original Trilogy is still the hig
Press enter to exit. Thanks!


Process finished with exit code 0
```

```
I have pickled the Star Wars Trilogies!

The Star Wars Trilogies, unpickled:
Original Trilogy:  ['ANH', 'ESB', 'ROTJ']
Prequel Trilogy:  ['TPM', 'AOTC', 'ROTS']
Sequel Trilogy:  ['TFA', 'TLJ', 'ROS']

Here is a question for you:

The Star Wars franchise has three trilogy movie series.
1 - The Original Trilogy (OT) consists of A New Home (ANH), The Em
2 - The Prequel Trilogy (PT) consists of The Phantom Menace (TPM),
3 - The Sequel Trilogy (ST) consists of The Force Awakens (TFA), T

Which Star Wars trilogy is the highest rated amongst online rating
Please choose 1, 2, or 3!
Which Star Wars trilogy is the highest rated amongst online rating
That was not a number. Please try again.
Which Star Wars trilogy is the highest rated amongst online rating
That is not correct. Please try again!
Which Star Wars trilogy is the highest rated amongst online rating
That is not correct. Please try again!
Which Star Wars trilogy is the highest rated amongst online rating
That is correct! The Original Trilogy is still the highest-rated t
Press enter to exit. Thanks!

C:\Users\jedig>
```

Figure 5. Successful code in PyCharm (left) and Command Prompt (right). Yes my username is JediGirl. Like I said, my extensive relationship with Star Wars is complicated.