

## Lab: Games - (part 7)

- adding a sort statement

- saving the list in a file (and opening it)

Make a copy of your games\_6 lab

In order for this to be a useful program we will want to be able to save the list of games

This code might look a little complicated but really, once you understand what it is doing, it isn't that crazy

**1. In the function where you print the lists just add a single sort statement**

```
games.sort()
```

*\* this will put the list of games in ascending order*

**2. Importing the pickle library**

*\* at the top of your code - this library allows you to 'pickle' or 'preserve' your data file*

```
import pickle
```

**3. In place of where you are currently creating an empty list - call the open function instead**

```
# open the file or create a new one
games = open_file()
```

**4. Where you close out the program and print the list one more time**

- add code to close the file first

```
# end the program
save_file(games)
print_game_list(games)
```

## 5. Last part - we need to write the 2 functions that take care of opening/saving the data file

\* you will notice a new file called **games.pydata** in your repl.it

\*\* this is the data file that is created - you can delete it if you are testing and would like to start over

```
def open_file():
    try:
        file_object = open('games.pydata',
                           'rb')
        games = pickle.load(file_object)
        file_object.close()
    except:
        games = []
    return games
```

### What the above code does:

Try to open an existing file (in read bytes mode)

- if this works load the data in a list called games, then close the file

If the file does not exist create an empty list called games

Return the games list

```
# save the list in a file
def save_file(games):
    try:
        games.sort()
        file_object = open('games.pydata', 'wb')
        pickle.dump(games, file_object)
        file_object.close()
        cprint("\n\tSuccess! Your games file was
        saved", "green")
    except:
        print(e)
        print("\n\tSorry, something went wrong.
        Our minions are working on it...")
```

**What the above code does:**

Try to save the list in a data file

- first sort the file
- then open/create a file (in write bytes mode)
- close the file, print message

If the file save has an error print a message