

Creating Python Modules

Unit 1, Session 4

```
Damis-MacBook-Pro:Class Exercise dlasisi$ ls
Session 4 Examples.ipynb      Session4_Solutions_Code.ipynb  sephora_shoppers.csv
Session4_Practice.ipynb      sephora.py
Damis-MacBook-Pro:Class Exercise dlasisi$ head sephora.py
import datetime
import pandas as pd

class BeautyInsider:
    def __init__(self, name, points, birthday,
                  purchasetoday=0, redeemedpoints=0, rinvitation='No', rmonthlygift='No',
                  rbirthdaygift='No'):
        self.name = name
        self.points = points
        self.birthday = birthday
Damis-MacBook-Pro:Class Exercise dlasisi$
```

We can create python modules by a saving class script in a python file. We can view parts of this file in terminal by typing the command **head sephora.py**

```
Damis-MacBook-Pro:Class Exercise dlasisi$ touch __main__.py
Damis-MacBook-Pro:Class Exercise dlasisi$
```

Before the python module can work, you have to create a `__main__.py` file. It should be empty. Use either **touch** or **vi**. When using **vi** remember that the file automatically opens.

```
Damis-MacBook-Pro:Class Exercise dlasisi$ vi __main__.py
```

```
"__main__.py" [New File]
```

: wq

Exit out of the file by using **:wq**

```
Damis-MacBook-Pro:Class Exercise dlasisi$ ls
Session 4 Examples.ipynb      Session4_Solutions_Code.ipynb  sephora.py
Session4_Practice.ipynb      __main__.py                    sephora_shoppers.csv
Damis-MacBook-Pro:Class Exercise dlasisi$
```

And voila!. Remember that the `__main__.py` file and the module have to be in the same directory.

```

Damis-MacBook-Pro:Class Exercise dlasisi$ ls
Session 4 Examples.ipynb      Session4_Solutions_Code.ipynb  __pycache__
Session4_Practice.ipynb      __main__.py                    sephora.py
Damis-MacBook-Pro:Class Exercise dlasisi$ python
Python 3.6.4 |Anaconda, Inc.| (default, Jan 16 2018, 12:04:33)
[GCC 4.2.1 Compatible Clang 4.0.1 (tags/RELEASE_401/final)] on darwin
Type "help", "copyright", "credits" or "license" for more information.
>>> import sephora
>>> import pandas as pd
>>>
>>> df = pd.read_csv('sephora_shoppers.csv')
>>>
>>> InsiderStatus = []
>>>
>>> for i in range(len(df)):
...     myBI = sephora.BeautyInsider(df.iloc[i][1], df.iloc[i][2], df.iloc[i][0], df.iloc[i]
f.iloc[i][5], df.iloc[i][3])
...     InsiderStatus.append(myBI.print_summary())
...
>>> InsiderStatus
[
      Benefits      Instructions
0  Total points      1125
1  Birthday gift  Do not send birthday gift to Jon
2  Monthly gift      Send monthly gift
3  Invitation      Do not send invitation,
0  Total points      209
1  Birthday gift  Do not send birthday gift to Tywin
2  Monthly gift      Do not send monthly gift
3  Invitation      Do not send invitation,
0  Total points      985
1  Birthday gift  Do not send birthday gift to Daenerys
2  Monthly gift      Send monthly gift
3  Invitation      Do not send invitation,
0  Total points      141
1  Birthday gift  Do not send birthday gift to Arya
2  Monthly gift      Do not send monthly gift
3  Invitation      Do not send invitation,
0  Total points      1019
1  Birthday gift  Do not send birthday gift to Jamie
2  Monthly gift      Send monthly gift

```

Open python in your terminal.

Import your new module.

Read in your csv file.

Call your new module and the class within it, as well as it's arguments.