Metadata

```
Course:  DS 5100
Module:  09 Python Packages
Topic:   HW Package Booklover
Author:  R.C. Alvarado (adapted)
Date:    7 July 2023 (revised)
```

Student Info

- Name: Rachel Holman
- Net UD: dwn9qk
- URL of new repo on GitHub: https://github.com/rachel-holman/DS5100-M9Project/blob/main/hw09.ipynb
- URL of M09 directory on Github: https://github.com/rachel-holman/DS5100-dnw9qk/tree/main/lessons/M09

Instructions

In your **private course repo on Rivanna**, use this Jupyter notebook and the data file described to write code that performs the tasks below.

Save your notebook in the `M09` directory.

Remember to add and commit these files to your repo.

Then push your commits to your repo on GitHib.

Be sure to fill out the **Student Info** block above.

To submit your homework, save your results as a PDF and upload it to GradeScope. More information about how to create the PDF for this assignment are included at the end of this document.

TOTAL POINTS: 8

Overview

Follow the following recipe we used in class to package the code you wrote for `HW08` -- `booklover.py` and `booklover_test.py`.

- Create a new git repo for your package.

- Create and edit the required files and directories for your package and move the booklover modules there.
- Stage, commit, and push all the files you've created.
- Install your package with pip.
- Outside of your package dir, write a script to test your method.

Put this notebook in your repo. This will allow you to execute bash commands and capture the outpunt directly in the notebook.

TOTAL: 8 POINTS

Tasks

Task 1

(5 points)

Show the directory structure of your repo by running this command from the root of your repo:

In [1]:
```
!ls -lR
```

```
total 40
-rw-r--r--  1 rachelholman  staff    59 Jul 31 10:11 README.md
drwxr-xr-x  8 rachelholman  staff   256 Jul 31 11:20 bookPackage
drwxr-xr-x@ 7 rachelholman  staff   224 Jul 31 11:50 bookPackage.egg-info
-rw-r--r--@ 1 rachelholman  staff  9563 Jul 31 12:07 hw09.ipynb
-rw-r--r--@ 1 rachelholman  staff   393 Jul 31 10:53 setup.py

./bookPackage:
total 32
-rw-r--r--@ 1 rachelholman  staff    25 Jul 31 11:20 __init__.py
drwxr-xr-x@ 4 rachelholman  staff   128 Jul 31 11:20 __pycache__
-rw-r--r--  1 rachelholman  staff  2543 Jul 31 10:11 booklover.py
-rw-r--r--  1 rachelholman  staff   423 Jul 31 10:11 booklover_results.txt
-rw-r--r--  1 rachelholman  staff  3221 Jul 31 10:11 booklover_test.py

./bookPackage/__pycache__:
total 16
-rw-r--r--@ 1 rachelholman  staff   242 Jul 31 11:20 __init__.cpython-310.pyc
-rw-r--r--@ 1 rachelholman  staff  2643 Jul 31 11:20 booklover.cpython-310.pyc

./bookPackage.egg-info:
total 40
-rw-r--r--@ 1 rachelholman  staff  239 Jul 31 11:50 PKG-INFO
-rw-r--r--@ 1 rachelholman  staff  271 Jul 31 11:50 SOURCES.txt
-rw-r--r--@ 1 rachelholman  staff    1 Jul 31 11:50 dependency_links.txt
-rw-r--r--@ 1 rachelholman  staff   13 Jul 31 11:50 requires.txt
-rw-r--r--@ 1 rachelholman  staff   12 Jul 31 11:50 top_level.txt
```

Task 2

(1 point)

Put the URL of your GitHub repo here. Just paste it into a Markdown cell.

URL: https://github.com/rachel-holman/DS5100-M9Project

Task 3

(1 point)

Show the results of installing your package.

```
!pip install -e .
```

In [2]:
```
!pip install -e .
```

```
Obtaining file:///Users/rachelholman/Desktop/MSDS/DS5100%20-%20DS%20Programmin
g/DS5100-dnw9qk/lessons/M09/DS5100-M9Project
  Preparing metadata (setup.py) ... done
Requirement already satisfied: pandas in /Users/rachelholman/anaconda3/lib/pyt
hon3.10/site-packages (from bookPackage==1.0) (1.5.3)
Requirement already satisfied: numpy in /Users/rachelholman/anaconda3/lib/pyth
on3.10/site-packages (from bookPackage==1.0) (1.23.5)
Requirement already satisfied: python-dateutil>=2.8.1 in /Users/rachelholman/a
naconda3/lib/python3.10/site-packages (from pandas->bookPackage==1.0) (2.8.2)
Requirement already satisfied: pytz>=2020.1 in /Users/rachelholman/anaconda3/l
ib/python3.10/site-packages (from pandas->bookPackage==1.0) (2023.3)
Requirement already satisfied: six>=1.5 in /Users/rachelholman/anaconda3/lib/p
ython3.10/site-packages (from python-dateutil>=2.8.1->pandas->bookPackage==1.
0) (1.16.0)
Installing collected packages: bookPackage
  Attempting uninstall: bookPackage
    Found existing installation: bookPackage 1.0
    Uninstalling bookPackage-1.0:
      Successfully uninstalled bookPackage-1.0
  Running setup.py develop for bookPackage
Successfully installed bookPackage-1.0
```

Task 4

(1 point)

Create a file outside your repo to test your package by running it.

To do this, import the package into your file and create a BookLover object.

Then add a book and then print number books read.

Then run the file.

Show the output of running the file below, using a command like the following:

```
!python ../book_lover_demo.py
```

Code in Tester.py:

```
import bookPackage as book

test_object = book.BookLover("Han Solo",
"hsolo@millenniumfalcon.com", "scifi")
test_object.add_book("War of the Worlds", 4)
print(test_object.num_books_read())
```

Output:

In [3]:
```
!python "/Users/rachelholman/Desktop/MSDS/DS5100 - DS Programming/DS5100-dnw9qk
```

```
1
```