

Comment all code appropriately

Test your programs fully

Upload your completed program to Blackboard

**Submission Date:**

The files for this assignment are provided on blackboard in Assign2Files.zip.

Your code **must** contain appropriate exception handling.

Deal with erroneous data, invalid filenames, invalid type, corrupt files

Files provided: top1000Films.csv, anthem.txt, books.json

The main file for this assignment is top1000Films.csv which contains information on films, including title, directors, release year, actors, and genre. Your task is to write a Python program to perform the following tasks:

Display a menu that should run continually until the user selects Quit

1. Display contents of **any** csv file on screen
2. Display contents of **any** text file on screen
3. Display contents of **any** JSON file on screen
4. Read the contents of **top1000Films.csv** and write to json file **top1000Films.json**
5. Create a list of actors(unique).
6. Search on keyword
7. Write top films of a given year to file
8. Generate frequency distribution report
0. Quit

### Further Instructions

1. Open any csv file and display the contents on screen
2. Open any text file and display the contents on screen.
3. Open any json file and display the contents on screen.
4. Read the file **top1000Films.csv** and write all information to appropriately formatted json file called **top1000Films.json**
5. Create a list of unique actors present in the dataset, display it and write it to file called Actors
6. Allow the user to enter a *keyword* or partial word and display the Title, Actors, Genre and the Rank in the top 1000 on screen. The *keyword* can appear in any of the fields, Title, Director, Actors or Genre. (Assume only reading from **top1000Films**)
7. Get the *target year* from the user. Write a function that will accept the year and will write the title and director and rank of all films released this year to a new file topFilmsYYYY.txt (where YYYY is chosen year) with the headings :

```
Top Films 2016
Title          Director          Rank
Split          M. Night Shyamalan      3
Sing           Christophe Lourdelet     4
Suicide Squad  David Ayer               5
. . .
```

8. Generate a *frequency distribution report* that displays the name of every Director and the number of films they have in top 1000. Write to file freqDist.csv **or** freqDist.json

**Requirements:**

The program should be well-structured, with functions for each task.

Implement exception handling to handle errors (e.g., file not found or invalid format).

Ensure that the program is user-friendly and provides clear output for each task.

Submit the Python script (assign2\_L00012345.py) along with any necessary instructions for running the program and sample files for testing. Ensure that your code is well-commented and follows good coding practices.

Note: on completion of task 4 you can decide to read from the json file or the csv file for the subsequent tasks.