11. **Programming Problem** (75 points)

Write a Python script called `movietime.py` that will print out the best movies across two databases that have a user specified genre and rating.

There are two data files you will need to read in and merge the information from. The first file is named `imdb.txt`. Each line in this file contains three pieces of information separated by spaces. The first value is a movie rating (G, PG, or R). The second is a movie id number (an integer). The third is a ranking on a scale of 1-5 (a real number). The second file is named `movielens.txt`. Each line in this file contains three pieces of information separated by commas. The first value is a movie genre (comedy, action, or romance). The second is a movie id number (an integer). The third is a ranking on a scale of 1-10 (a real number).

You should begin by reading in the data from each file and merging the information for entries with the same movie id. Any movie that is only in one file and not the other should be removed from further consideration. Those that are in both should have a new ranking value computed that is the average of the rankings in the two files, after the value in the `imdb.txt` file is multiplied by 2.

Your program should be supplied with a genre value (comedy, action, or romance) and a movie rating (G, PG, or R) as command line arguments. Validate these inputs and print out an error message and quit if they are not ok. For valid input, the program should go through the merged movie data and filter out all movies that do not have the specified genre and rating. It should then print out this list of movies (id number and combined ranking) in a nice table, sorted according to the combined movie rankings, with the highest ranking (10 is the best) on top.

You can find two data files to process on the Assignment page of Blackboard under the label of Final Exam. When completed, upload your program and the output generated using these data files for an input pairing of the *action* genre and *PG* rating.