MOVIE RECOMMENDATION SYSTEM
TEAM 4
Software Engineering Project 2

Download all the files in code folder from GitHub.
Your machine should have the following installed:

Language	Python
Web Framework	Flask
Library	Pandas
Library	Numpy

The following is the directory structure for the source files:
Code

- app.py (Main file)
- ensemble.py (Factory file)
- item_based.py (Code for Item Based)
- user_based.py (Code for User Based)
- landingPage.html
- response.html
- ensemble_testcases.py (Test cases for ensemble.py)
- item_testcases.py (Test case for item_based.py)
- user_testcases.py (Test cases for user_based.py)

This folder also contains the two datasets – movies.csv and ratings.csv.

Our code confirms to **Factory Method** Software Design Pattern where ensemble.py deals with the problem of creating objects without having to specify the exact class of the object that will be created. ensemble.py calls the object at runtime based on the inputs from the user. If the user chooses User Based approach, at runtime, an object of that file is called. Similarly, for Item Based. If the user, chooses both, objects of both files are instantiated.

Function Descriptions:

item_based.py:

- recommend: Function to find the correlation and recommend movies accordingly.

  @param userID : ID of the user, default 0.
  @param genre: genre for recommendation, default None.

  @return List of rated movies and the top genre.

- get_rec_item: Driver function implementing genre and rating based filtering.

  @param userID : ID of the user, default 0.
  @param genre: genre for recommendation, default None.

  @return List of recommended movies.

user_based.py:

- recommend: Function to find the correlation and recommend movies accordingly.

  @param userID : ID of the user, default 0.
  @param genre: genre for recommendation, default None.

  @return List of rated movies and the top genre.

- get_rec_user: Driver function implementing genre and rating based filtering.

  @param userID : ID of the user, default 0.
  @param genre: genre for recommendation, default None.

  @return List of recommended movies.

ensemble.py:

- ensemble: Function to get item and user based recommendation and combine them.

  @param userID : ID of the user, default 0.
  @param genre: genre for recommendation, default None.

  @return List of recommended movies.

app.py:

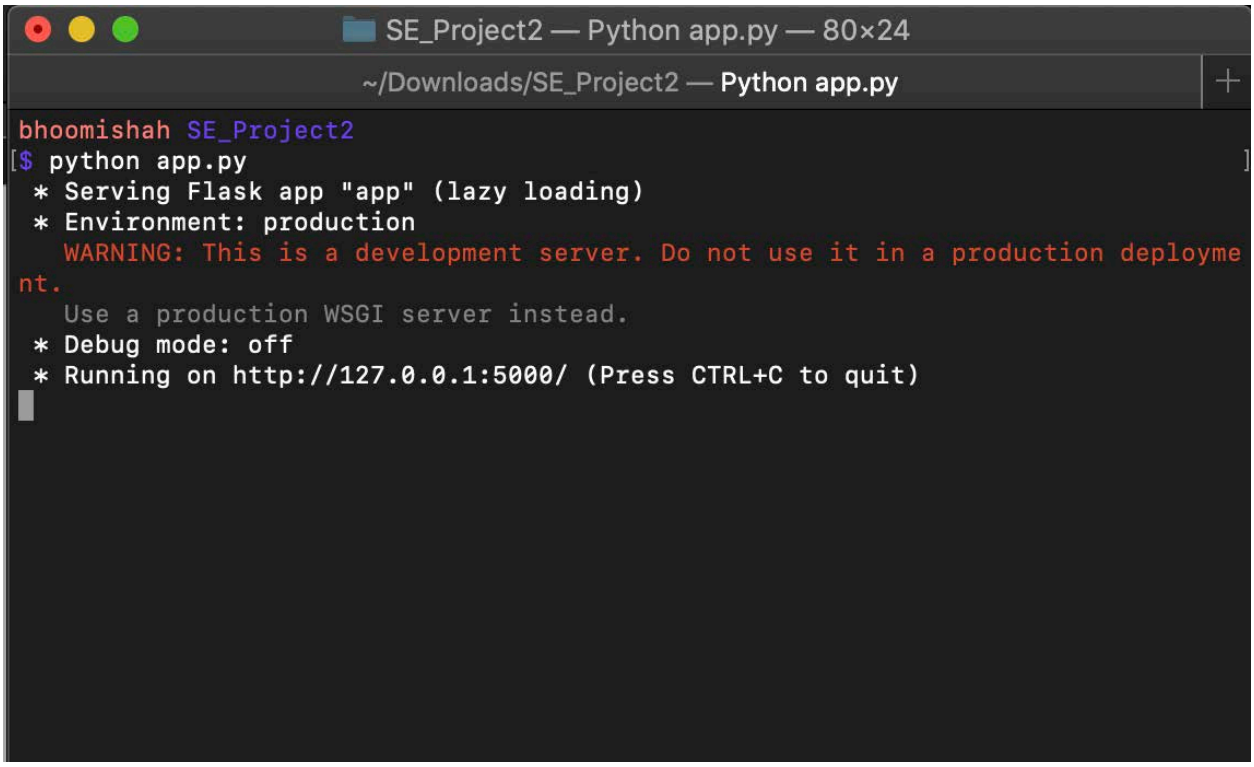
- recommend_movie: Driver function to call the respective module based on user input.

  @return Rendered HTML Page.

Execution Instruction:

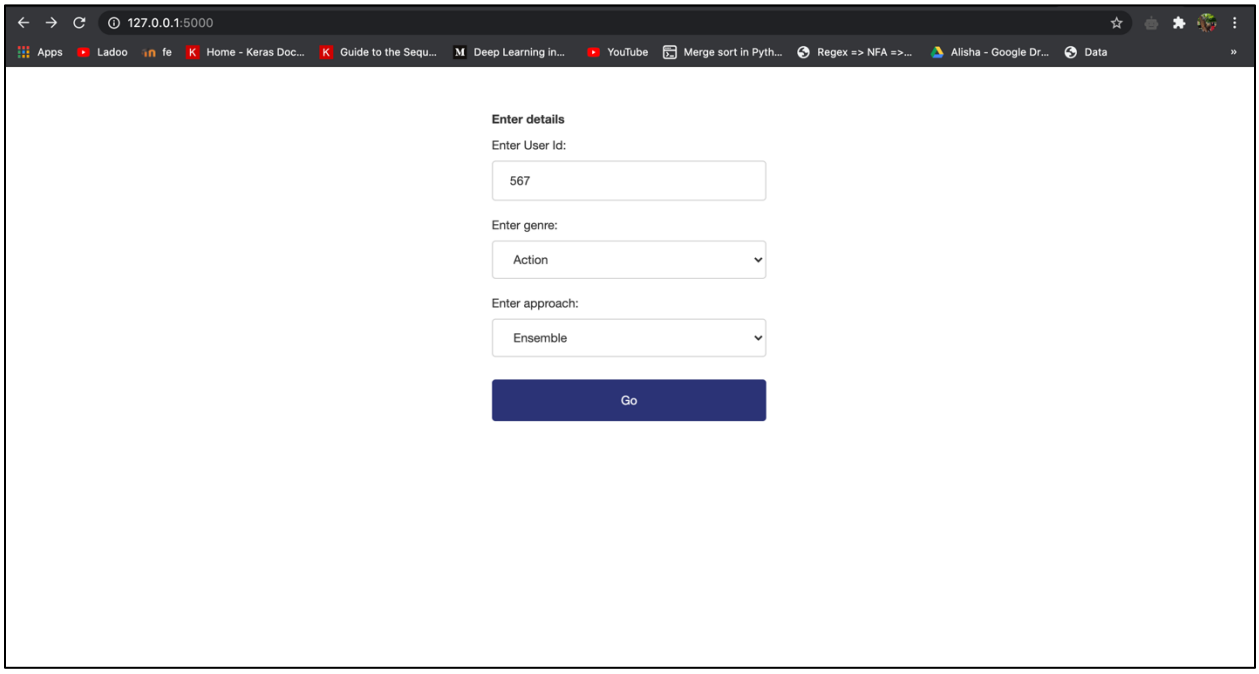
Step 1:

Run the file using the command “python app.py”



Step 2:

Copy the address on your browser and input the fields based on the recommendation you wish to see:



Enjoy your recommendations: