1) Given a movies.csv file:

Title,Year,Genre,Rating
The Matrix ,1999,Action|Sci-Fi,8.7
Inception, 2010 ,Sci-Fi| Action , 8.8
Fight Club,1999,Drama ,8.8

## Clean the data:

- Remove leading/trailing spaces in all fields
- Split multiple genres (Action|Sci-Fi) into separate columns (Genre1, Genre2, ...).
- Ensure Year and Rating are numeric types.

Save the cleaned dataset to movies\_clean.csv. Generate a summary text file (genre\_stats.txt) with average rating per genre.

2) Read a students.csv file with the structure:

Name,Subject,Marks Alice,Math,88 Bob,Science,72 Charlie,Math,95

Convert names into Title Case (e.g.,  $alice \rightarrow Alice$ ).

Group marks by subject and calculate:

- Average marks per subject
- Highest scorer in each subject

Write results into summary.csv in the format:

Subject, Average, Topper, Topper Marks Math, 91.5, Charlie, 95 Science, 72, Bob, 72

3) Open a .txt file containing an article or book chapter. Remove punctuation, convert all text to lowercase, and tokenize into words. Count the frequency of each word and store it in a dictionary. Write the top 20 most frequent words to another text file (output.txt) in the format:

word,frequency the,230 data,112

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