🐼 Pandas Assignment: Real-World Dataset Practice

🎬 PART 1: Netflix Movies and TV Shows

📂 Dataset Link: Netflix Dataset on Kaggle

📝 Tasks:

1. Load the dataset using `pd.read_csv()`.
2. Display the first 5 and last 5 rows.
3. How many rows and columns are there in the dataset?
4. Identify the number of unique countries where content is produced.
5. Display all records where the type is 'TV Show'.
6. Convert the `date_added` column to datetime and extract the year and month.
7. How many movies were released in 2019?
8. Group by rating and show the count of each category.

🌍 PART 2: World Population Dataset

📂 Dataset Link: World Population Data

📝 Tasks:

1. Load and display the top 10 rows.
2. Check for null values and handle them appropriately.
3. What is the population of the top 5 most populous countries?
4. Create a new column showing GDP per capita (`GDP / Population`).
5. Filter out countries with population > 100 million and area < 500,000 sq km.
6. Sort the countries based on density in descending order.

🏏 PART 3: Indian Premier League (IPL) Dataset

📂 Dataset Link: IPL Dataset

📝 Tasks:

1. Load the `matches.csv` file.
2. Find out the most successful team (based on the number of wins).
3. Count total matches played each season.
4. Display the top 5 players who won the most "Player of the Match" awards.
5. Merge `matches.csv` and `deliveries.csv` on `match_id` and perform analysis.

🎓 PART 4: Students Performance

📂 Dataset Link: Students Performance Dataset

📝 Tasks:

1. Display average marks in math, reading, and writing.
2. Who performed better in writing – males or females?
3. Add a new column for total score and percentage.
4. Plot a bar chart showing average scores grouped by parental level of education.
5. Find students who scored above 90% in all subjects.

✈️ PART 5: Flight Price Prediction Dataset

📂 Dataset Link: Flight Price Dataset

📝 Tasks:

1. Display basic info using `.info()` and `.describe()`.
2. Convert date/time columns to appropriate datetime format.
3. Create columns for Journey Day and Month.
4. Find the most frequent airline and source city.
5. Remove any duplicates and handle missing values.
