**Initial thought process after getting the data**

# Preliminary Check up

1. **Create and Use the Database**:
   * Purpose: Set up a dedicated database for Olympic data.
2. **Verify Successful Data Import**:
   * Purpose: Ensure that data has been correctly loaded into tables.
3. **Handle 'NA' Values in the Medal Column**:
   * Purpose: Replace missing medal values ('NA') with NULL for accurate analysis.
4. **Number of Rows and Columns in athlete\_events Table**:
   * Purpose: Get the dimensions of the data table for understanding its structure.
5. **List Column Names in the athlete\_events Table**:
   * Purpose: Retrieve column names to understand available data fields.
6. **Descriptive Statistics for Age, Height, and Weight**:
   * Purpose: Summarize basic statistics on athletes’ physical attributes.
7. **Total Number of Duplicate Records (Same Name, Year, Event)**:
   * Purpose: Identify duplicate records to ensure data accuracy.
8. **Delete Duplicate Records**:
   * Purpose: Clean the dataset by removing redundant records.
9. **Total Missing Values**:
   * Purpose: Quantify missing data in key columns.

# Olympic Game Statistics

1. **How many Olympic Games have been held?**:
   * Purpose: Count the total number of distinct Olympic Games.
2. **List of All Olympic Games Held So Far**:
   * Purpose: Get a historical list of all Olympic events.
3. **Total Number of Nations Participating in Each Olympic Game**:
   * Purpose: Count the number of countries represented in each Olympics.
4. **Year with the Highest and Lowest Number of Participating Nations**:
   * Purpose: Identify Olympic years with maximum and minimum international participation.
5. **Nations Participating in All Olympic Games**:
   * Purpose: Find nations with continuous participation in every Olympic event.
6. **Sports Played in All Summer Olympics**:
   * Purpose: Discover sports that have been consistently played in all Summer Olympics.
7. **Sports Played Only Once in the Olympics**:
   * Purpose: List sports that appeared in only one Olympic event.
8. **Total Number of Sports Played in Each Olympic Game**:
   * Purpose: Track the variety of sports in each Olympic edition.
9. **Details of the Oldest Athlete to Win a Gold Medal**:
   * Purpose: Identify the oldest athlete to win a gold medal in Olympic history.

# Athlete and Medal Statistics

1. **Ratio of Male and Female Athletes Participating**:
   * Purpose: Analyze gender distribution among Olympic athletes.
2. **Top 5 Athletes Who Won the Most Gold Medals**:
   * Purpose: Rank athletes by the number of gold medals won.
3. **Top 5 Athletes Who Won the Most Medals (Gold, Silver, Bronze)**:
   * Purpose: Rank athletes by their total medal count across all types.
4. **Top 5 Most Successful Countries by Number of Medals**:
   * Purpose: Rank countries by the total number of medals won.
5. **Total Gold, Silver, and Bronze Medals Won by Each Country**:
   * Purpose: Provide a breakdown of medals by type for each country.
6. **Top 10 Athletes with Most Medals**:
   * Purpose: Rank the athletes with the highest total medal counts.
7. **Countries That Have Never Won a Gold Medal but Have Won Silver/Bronze Medals**:
   * Purpose: Identify countries that have not won gold but have silver or bronze.
8. **Top 5 Countries in Each Olympic Game by Total Medals**:
   * Purpose: Rank countries by their medal haul in each Olympics.
9. **India’s Performance in Hockey**:
   * Purpose: Analyze India's historical performance in Olympic hockey.

# **Summary:**

These queries are designed to help analyze various aspects of the Olympic Games, including:

* **Participation**: Tracking how many nations and athletes have taken part in the Olympics.
* **Performance**: Ranking athletes and countries based on their medal achievements.
* **Historical Insights**: Understanding trends in sports, gender ratios, and nation performance across Olympic history.
* **Data Cleaning and Preparation**: Ensuring the dataset is complete, accurate, and ready for analysis.

The primary goal is to derive insights into the overall scope of Olympic history, athletes' accomplishments, and the dominance of certain nations and sports.