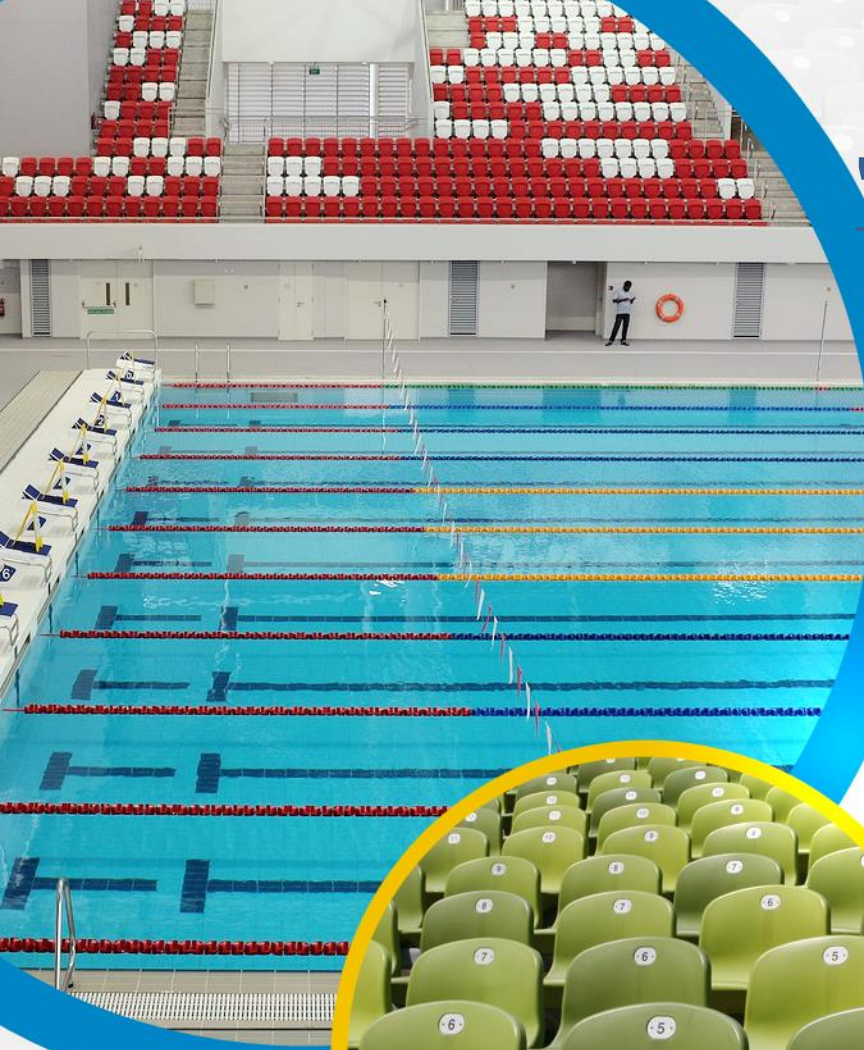


# "Analysis of Olympic Games Data" SQL Report





# Project overview:

- The project involves analyzing data from the Olympic Games to gain insights into participation and performance across different nations and sports.
- The analysis is performed using SQL queries on two tables: `olympics_history` and `olympics_history_noc_regions`.

# Dataset Overview:



The dataset consists of two primary tables: `olympics_history` and `olympics_history_noc_regions`.

## 1-Olympics\_history:

**Attributes:** ID, Name, Sex, Age, Height, Weight, Team, NOC, Games, Year, Season, City, Sport, Event, Medal.

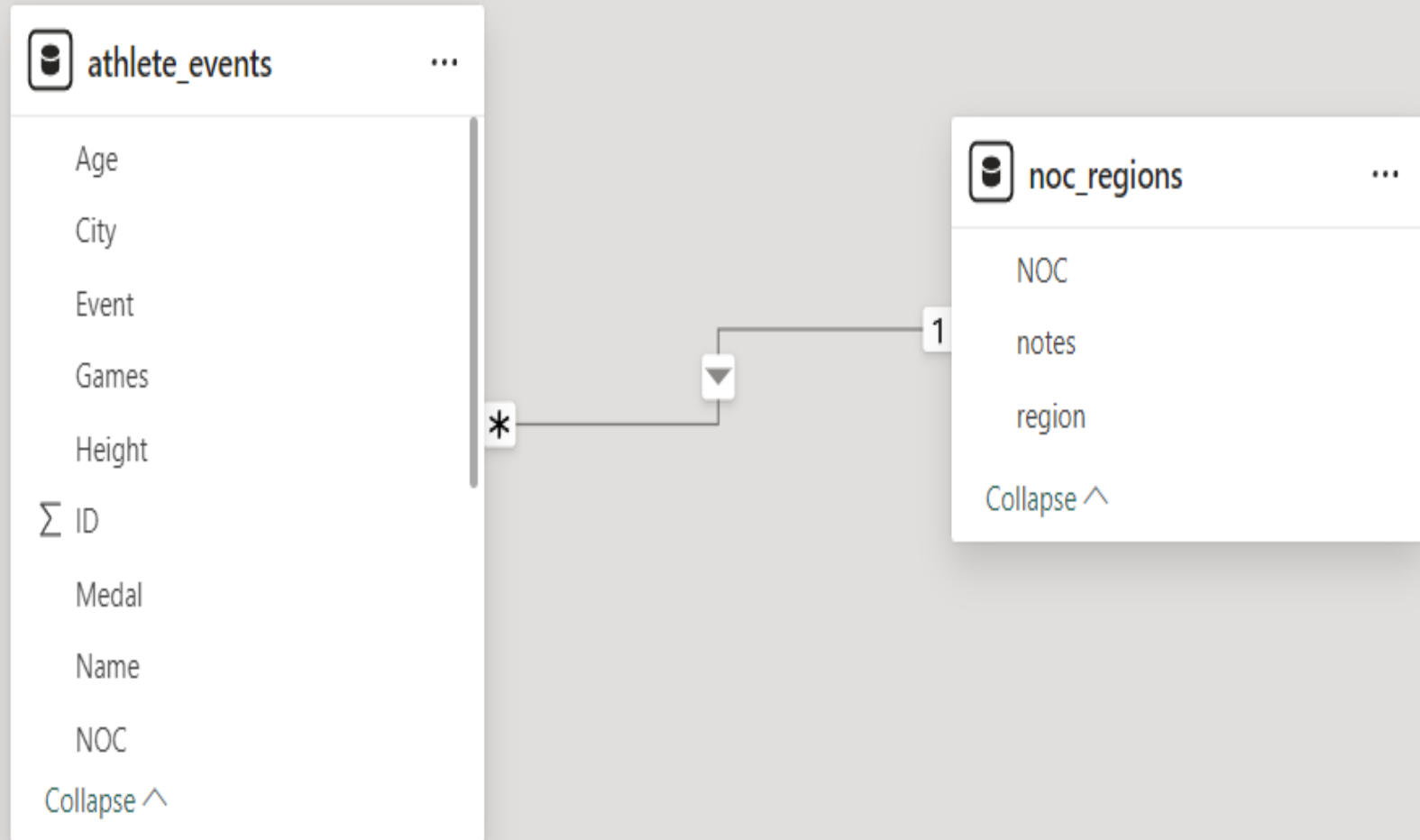
**Description:** This table contains detailed records of athletes' participation in various Olympic events, including personal attributes (age, height, weight), team and nationality information (Team, NOC), specifics of the games they participated in (Year, Season, City, Sport, Event), and their medal achievements.

## 2-Olympics\_history\_noc\_regions:

**Attributes:** NOC, region, notes.

**Description:** This table maps the National Olympic Committees (NOCs) to their corresponding regions and includes additional notes where applicable. It provides essential contextual information to link athlete performance data with their respective countries and regions.

# Database Schema



## Key Questions and Insights (Easy)



*1. How many Olympic Games have been held?*

```
SELECT COUNT(DISTINCT games) AS total_Olympics_games  
FROM olympics_history;
```

*Insight: The total number of Olympic Games held.*

*2: List down all Olympics games held so far?*

```
SELECT DISTINCT year,season,city  
FROM olympics_history  
ORDER BY year;
```

*Insight: Provides a chronological list of all Olympic Games held,sorted by year and location.*





**3:-Total number of nations participating in each Olympic Games?**

```
SELECT year, season, COUNT(DISTINCT noc)
AS Number_of_nations
FROM olympics_history
GROUP BY year, season
ORDER BY year, season;
```

**Insight: Number of nations participating in each Olympic Game.**

**4:-Identify the sport which was played in all summer Olympics?**

```
SELECT season,sport,year
FROM olympics_history
WHERE season='Summer'
GROUP BY sport,season,year
ORDER BY year desc;
```

**Insight: Sports played consistently in all Summer Olympics across various years**



**5:-Which Sports were just played only once in the olympics?**

```
SELECT sport,COUNT(DISTINCT games) AS occurrence_count  
FROM olympics_history  
GROUP BY sport  
HAVING COUNT(DISTINCT games)=1;
```

**Insight:Sports that featured only once in Olympic history.**

**6:-Fetch the total no of sports played in each Olympic games?**

```
SELECT games,COUNT(DISTINCT sport) AS total_no_of_sport  
FROM olympics_history  
GROUP BY games;
```

**Insight:Number of sports per Olympic Games.**

## Key Questions and Insights (Moderate)



*1. Which year saw the highest and lowest number of countries participating in the Olympics?*

*Highest Participation:*

***SELECT year, season, COUNT(DISTINCT noc)***

***AS Number\_of\_nations***

***FROM olympics\_history***

***GROUP BY year, season***

***ORDER BY Number\_of\_nations DESC***

***LIMIT 1;***





### *Lowest Participation:*

```
SELECT year, season, COUNT(DISTINCT noc)  
AS Number_of_nations  
FROM olympics_history  
GROUP BY year, season  
ORDER BY Number_of_nations ASC  
LIMIT 1;
```

***Insight: Years with the highest and lowest participation by nations.***



## ***2. Which nation has participated in all Olympic Games?***

```
WITH unique_games  
AS (SELECT DISTINCT games  
FROM olympics_history), noc_participation  
AS (SELECT noc, COUNT(DISTINCT games)  
AS participation_count FROM olympics_history  
GROUP BY noc)  
SELECT np.noc, nr.region  
FROM noc_participation np  
JOIN olympics_history_noc_regions nr  
ON np.noc = nr.noc  
WHERE np.participation_count = (SELECT COUNT(*)  
FROM unique_games);
```

***Insight: List of nations participating in all Olympic Games.***



*3:-Identify sports played in all Summer Olympics?*

```
SELECT sport  
FROM olympics_history  
WHERE season = 'Summer'  
GROUP BY sport  
HAVING COUNT(DISTINCT games) =  
(SELECT COUNT(DISTINCT games)  
FROM olympics_history  
WHERE season = 'Summer');
```

*Insight: Sports consistently played in all Summer Olympics.*



*4:-Fetch the top 5 athletes who have won the most gold medals?*

```
SELECT name,team,COUNT(*) AS gold_medal_count  
FROM olympics_history  
WHERE medal='Gold'  
GROUP BY name,team  
ORDER BY gold_medal_count DESC  
LIMIT 5;
```

*Insight: Identifies the top 5 athletes with the highest number of gold medals won.*



# Key Questions and Insights (Hard)



*1:-Top 5 athletes with the most gold medals?*

```
SELECT name, team, COUNT(*)  
AS gold_medal_count  
FROM olympics_history  
WHERE medal = 'Gold'  
GROUP BY name, team  
ORDER BY gold_medal_count DESC  
LIMIT 5;
```

*Insight: Athletes with the highest number of gold medals.*



## *2. Top 5 most successful countries by total medals ?*

```
SELECT nr.region, COUNT(*) AS total_medals  
FROM olympics_history oh  
JOIN olympics_history_noc_regions nr ON oh.noc = nr.noc  
WHERE medal != 'NA'  
GROUP BY nr.region  
ORDER BY total_medals DESC  
LIMIT 5;
```

*Insight: Countries with the highest total medal counts.*



### ***3:-Which nation has participated in all of the olympic games ?***

**Step 1: Find the total number of unique Olympic Games**

***WITH unique\_games AS(SELECT DISTINCT games  
FROM olympics\_history),***

**Step 2: Count the number of unique games each NOC has participated in**

***noc\_participation AS (SELECT oh.noc,  
COUNT(DISTINCT oh.games) AS participation\_count  
FROM olympics\_history AS oh  
GROUP BY oh.noc)***



Step 3: Find the NOC(s) that have participated in all unique games

```
SELECT  np.noc,  nr.region,  np.participation_count  
FROM    noc_participation AS np  
JOIN    olympics_history_noc_regions AS nr ON np.noc = nr.noc  
WHERE   np.participation_count = (SELECT COUNT(*)  
FROM unique_games);
```

***Insight: Identifies nations consistently participating in every Olympic Games, showcasing their enduring commitment.***





**14. List down total gold, silver and bronze medals won by each country?**

```
CREATE EXTENSION tablefunc;  
SELECT country  
,COALESCE(gold,0) AS gold,COALESCE(silver,0)AS silver  
,COALESCE(bronze,0) AS bronze  
FROM crosstab('SELECT nr.region as country,medal,count(1)  
AS total_medals FROM olympics_history AS oh  
JOIN olympics_history_noc_regions AS nr on oh.noc=nr.noc  
WHERE medal !='NA' GROUP BY nr.region,medal  
ORDER BY nr.region,medal','values ("Bronze"),("Gold"),("Silver"))' AS  
final_result(country VARCHAR,bronze BIGINT,gold BIGINT,,silver BIGINT,)  
ORDER BY gold DESC,silver DESC,bronze DESC;
```

**Insight:Countries' total gold, silver, and bronze medals listed, revealing their Olympic success.**



# Recommendations:

## **For Researchers:**

Utilize the insights to study trends in sports and athlete performance over time.

## **• For Organizers:**

Consider the historical popularity and participation in sports when planning future Olympic Games.

## **• For Countries:**

Leverage historical performance data to inform training and development programs for athletes.



## **Conclusion:**

- **The analysis provides a comprehensive view of the Olympic Games, shedding light on key trends and standout performances.**
- **These insights can guide future research, event planning, and athlete development strategies.**



THANK YOU

