

120 Years of Olympic History Analysis Using SQL Queries



Questions which were to be Answered in this Project are as:

1. How many olympics games have been held?
2. List down all Olympics games held so far.
3. Mention the total no of nations who participated in each olympics game?
4. Which year saw the highest and lowest no of countries participating in olympics?
5. Identify the sport which was played in all summer olympics.
6. Fetch details of the oldest athletes to win a gold medal.
7. Find the Ratio of male and female athletes participated in all olympic games.
8. Fetch the top 5 athletes who have won the most medals (gold/silver/bronze).
9. Fetch the top 5 most successful countries in olympics. Success is defined by no of medals won.
10. List down total gold, silver and broze medals won by each country corresponding to each olympic games.
11. Identify which country won the most gold, silver, bronze medals and the most medals in each olympic games.
12. Which countries have never won gold medal but have won silver/bronze medals?
13. Break down all olympic games where india won medal for Hockey and how many medals in each olympic games.

1.HOW MANY OLYMPICS GAMES HAVE BEEN HELD??

Query

```
1 • select year,season,city from athletes
```

Result

| | year | season | city |
|---|------|--------|-----------|
| ▶ | 1992 | Summer | Barcelona |
| | 2012 | Summer | London |
| | 1920 | Summer | Antwerpen |
| | 1900 | Summer | Paris |
| | 1988 | Winter | Calgary |
| | 1988 | Winter | Calgary |

2. MENTION THE TOTAL NO OF NATIONS WHO PARTICIPATED IN EACH OLYMPICS GAME?

Query

```
1 select games,count(distinct team) as total_nations from athletes
2 group by games
3 order by games
```

Result

| | games | total_nations |
|---|-------------|---------------|
| ▶ | 1896 Summer | 8 |
| | 1900 Summer | 53 |
| | 1904 Summer | 28 |
| | 1906 Summer | 33 |
| | 1908 Summer | 40 |
| | 1912 Summer | 57 |
| | 1920 Summer | 45 |

3. WHICH NATION HAS PARTICIPATED IN ALL OF THE OLYMPIC GAMES?

Query

```
1 • WITH t AS (  
2     SELECT team, COUNT(DISTINCT games) AS total_games  
3     FROM athletes  
4     GROUP BY team  
5 )  
6 SELECT team  
7 FROM t  
8 WHERE total_games = (SELECT MAX(total_games) FROM t)  
9
```

Result

| Result Grid | | Filter Rows: |
|-------------|---------------|--------------|
| | team | |
| ▶ | France | |
| | United States | |

4. IDENTIFY THE SPORT WHICH WAS PLAYED IN ALL SUMMER OLYMPICS.

Query

```
1 • with t as
2   (select sport,count(distinct(games)) as total_summer_games from athletes
3    where season = 'summer'
4    group by sport
5   )
6   select sport,total_summer_games from t
7   where total_summer_games = (select max(total_summer_games) from t)
```

Result

| Result Grid | | | Filter Rows: | Export |
|-------------|------------|--------------------|--------------|--------|
| | sport | total_summer_games | | |
| ▶ | Athletics | 29 | | |
| | Cycling | 29 | | |
| | Gymnastics | 29 | | |
| | Swimming | 29 | | |

5. Which year saw the highest and lowest no of countries participating in olympics?

Query

```
1 • select
2     games,
3     count(distinct team) as total_teams,
4     rank() over (order by count(distinct team)) as rank_lowest_participation,
5     rank() over (order by count(distinct team) desc) as rank_highest_participation
6 from athletes
7 group by games
8 having count(distinct team) in (
9     select min(total_teams)
10    from (select count(distinct team) as total_teams from athletes group by games) as t
11 )
12 or count(distinct team) in (
13     select max(total_teams)
14    from (select count(distinct team) as total_teams from athletes group by games) as t
15 );
```

Result




| | lowest_participation | highest_participation |
|---|----------------------|-----------------------|
| ▶ | 1896 Summer | 2008 Summer |

6. Find the Ratio of male and female athletes participated in all olympic games.

Query

```
1 • select
2 distinct(select count(sex) from athletes
3 where sex = 'm'))/(select count(sex) from athletes where sex = 'f')
4 as ratio
5 from athletes
```

Result

| Result Grid | |  |  Filter Rows |
|-------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| | ratio | | |
|  | 2.9795 | | |

7. Fetch details of the oldest athletes to win a gold medal.

Query

```
1 select * from athletes
2 where medal = 'gold'
3 order by year asc
4 limit 1
```

Result

| Result Grid | | | | | | | | | | | | | | | |
|-------------|------|-------------------------|-----|---------|--------|--------------------|--------|-------------|-------------|------|--------|--------|------------|--------------------------------|-------|
| | | Filter Rows: | | Export: | | Wrap Cell Content: | | Fetch rows: | | | | | | | |
| | ID | Name | Sex | Age | Height | Weight | Team | NOC | Games | Year | Season | City | Sport | Event | Medal |
| ▶ | 4189 | Nikolaos Andriakopoulos | M | NA | NA | NA | Greece | GRE | 1896 Summer | 1896 | Summer | Athina | Gymnastics | Gymnastics Men's Rope Climbing | Gold |

8. Fetch the top 5 athletes who have won the most medals (gold/silver/bronze).

Query

```
1  select name,team,count(medal) as gold_medals from athletes
2  where medal = 'gold'
3  group by name,team
4  order by gold_medals desc
5  limit 5
```

Result

| | name | team | gold_medals |
|---|--------------------------------|---------------|-------------|
| ▶ | Usain St. Leo Bolt | Jamaica | 8 |
| | Matthew Nicholas "Matt" Biondi | United States | 8 |
| | Ole Einar Bjrndalen | Norway | 8 |
| | Nikolay Yefimovich Andrianov | Soviet Union | 7 |
| | Marit Bjrger | Norway | 6 |

9. List down total gold, silver and broze medals won by each country.

Query

```
1 • select team,count(case when medal = 'gold' then 1 end) as gold_medals,
2   count(case when medal = 'silver' then 1 end) as silver_medals,
3   count(case when medal = 'bronze' then 1 end) as bronze_medals
4   from athletes
5   group by team
```

Result

| | team | gold_medals | silver_medals | bronze_medals |
|---|----------------|-------------|---------------|---------------|
| ► | China | 4 | 8 | 5 |
| | Denmark | 26 | 23 | 15 |
| | Denmark/Sweden | 1 | 0 | 0 |
| | Netherlands | 25 | 49 | 44 |
| | United States | 317 | 180 | 132 |
| | Finland | 7 | 10 | 15 |

10. Identify which country won the most gold, most silver, most bronze medals and the most medals in each olympic games.

Query

```
1  with t as
2  (
3      select games, team,
4              count(case when medal = 'Gold' then 1 end) as gold,
5              count(case when medal = 'Silver' then 1 end) as silver,
6              count(case when medal = 'Bronze' then 1 end) as bronze
7
8      from athletes
9      where medal in ('Gold', 'Silver','Bronze')
10     group by games, team
11     order by games
12 )
13 select distinct games, max_gold, max_silver, max_bronze
14 from (
15     select games,
16            first_value(team) over(partition by games order by gold) as max_gold,
17            first_value(team) over(partition by games order by silver) as max_silver,
18            first_value(team) over(partition by games order by bronze) as max_bronze
19     from t
20 ) x
21
```

Result

| Result Grid Filter Rows: Export: Wrap Cell Content: | | | | | |
|-----------------------------------------------------------|-------------|------------------|------------------|------------------------------------------------|--------------------------------------|
| | Games | max_gold | max_silver | max_bronze | max_medals |
| ▶ | 1896 Summer | France | Great Britain | Great Britain/Germany | Great Britain/Germany |
| | 1900 Summer | Netherlands | Netherlands | Union des Socits Franais de Sports Athletiques | Racing Club de France |
| | 1904 Summer | Boston Archers | Boston Archers | Trans-Mississippi Golf Association-2 | Trans-Mississippi Golf Association-2 |
| | 1906 Summer | Australia | Australia | Italy | Thessalonki-1 |
| | 1908 Summer | Amstel Amsterdam | Amstel Amsterdam | England-1 | England-1 |

11. Fetch the top 5 most successful countries in olympics. Success is defined by no of medals won.

Query

```
1 • with t as
2   (select team, count(medal) as medals_won from athletes
3    where medal in ('gold', 'silver', 'bronze')
4    group by team
5   )
6   select team, medals_won, dense_rank() over(order by medals_won desc) as rnk
7   from t
8   limit 5
```

Result

| | team | medals_won | rnk |
|---|---------------|------------|-----|
| ► | United States | 629 | 1 |
| | Soviet Union | 330 | 2 |
| | Italy | 284 | 3 |
| | France | 263 | 4 |
| | Germany | 233 | 5 |

12. Which countries have never won gold medal but have won silver/bronze medals?

Query

```
1 • select team from
2 ⊖ (select team,
3    count(case when medal = 'gold' then 1 end) as gold,
4    count(case when medal = 'silver' then 1 end) as silver,
5    count(case when medal = 'bronze' then 1 end) as bronze
6    from athletes
7    where medal in ('gold','silver','bronze')
8    group by team
9    ) t
10 where gold=0 and silver !=0 or bronze !=0
```

Result

| | team |
|---|-------------|
| ▶ | Finland |
| | Norway |
| | Netherlands |
| | France |

13. Break down all Olympic games where India won medal for Hockey and how many medals in each olympic games.

Query

```
1 • select team,sport,games,count(medal) as total_medals from athletes
2 where team ='India' and sport like 'hockey'
3 group by team,sport,games|
4
```

Result

| Result Grid | | | | | Filter Rows: | Export |
|-------------|-------|--------|-------------|--------------|--------------|--------|
| | team | sport | games | total_medals | | |
| ▶ | India | Hockey | 1992 Summer | 2 | | |
| | India | Hockey | 1996 Summer | 2 | | |
| | India | Hockey | 1928 Summer | 2 | | |
| | India | Hockey | 1976 Summer | 3 | | |
| | India | Hockey | 1964 Summer | 1 | | |
| | India | Hockey | 1932 Summer | 4 | | |
| | India | Hockey | 1980 Summer | 1 | | |

Thank You