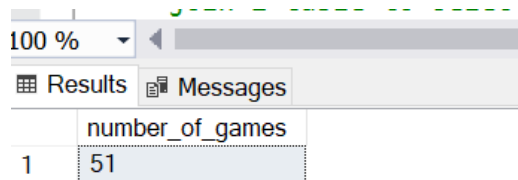


## EXPLANATION QUERIES AND RESULTS

```
-- 1. How many olympics games have been held?  
SELECT COUNT(distinct games) AS number_of_games  
FROM athlete_events;
```



The screenshot shows a database interface with a query window at the top and a results window below. The query window contains the SQL query for the first question. The results window has tabs for 'Results' and 'Messages', with 'Results' selected. It displays a single row with the column name 'number\_of\_games' and the value '51'.

	number_of_games
1	51

```
--2. List down all Olympics games held so far. ( which year / kind of olympic /which city  
are held)  
SELECT distinct year,season,city  
FROM athlete_events;
```

Results		Messages	
	year	season	city
1	1984	Summer	Los Angeles
2	1960	Winter	Squaw Valley
3	1980	Summer	Moskva
4	2004	Summer	Athina
5	1948	Summer	London
6	1964	Summer	Tokyo
7	2016	Summer	Rio de Janeiro
8	1996	Summer	Atlanta
9	1912	Summer	Stockholm
10	1988	Summer	Seoul
11	1896	Summer	Athina
12	1906	Summer	Athina
13	1956	Summer	Stockholm
14	2014	Winter	Sochi
15	2006	Winter	Torino
16	1952	Winter	Cortina d'Ampezzo

--3.Mention the total no of nations who participated in each olympics game?

Step1 : join 2 table to select the distinct region(country)

Step 2: count number of region for each group games

```
with all_countries as
(SELECT games,o.region
FROM athlete_events as a
JOIN olympics_history_noc_regions as o
on a.NOC=o.NOC
group by games,o.region)

SELECT games,count(games) as num_countries
FROM all_countries
GROUP BY games;
```

100 %

Results Messages		
	games	num_countries
1	1896 Summer	12
2	1900 Summer	31
3	1904 Summer	14
4	1906 Summer	20
5	1908 Summer	22
6	1912 Summer	29
7	1920 Summer	29
8	1924 Summer	45
9	1924 Winter	19
10	1928 Summer	46
11	1928 Winter	25
12	1932 Summer	47
13	1932 Winter	17
14	1936 Summer	49
15	1936 Winter	28
16	1948 Summer	59

✓ Query executed successfully.

--4. Which year saw the highest and lowest no of countries participating in olympics

Step 1 :fetch the table wwhich games and the number of countries take part in for each games

Step 2 : fetch from that table the lowest and highest number of countries

```
with all_countries as
(
SELECT games,o.region
FROM athlete_events as a
JOIN olympics_history_noc_regions as o
on a.NOC=o.NOC
group by games,o.region),

tot_countries as
(
SELECT games,count(games) as num_countries
FROM all_countries
GROUP BY games
)

SELECT distinct
```

```

        concat(first_value(games) over(order by num_countries), '-
',first_value(num_countries) over(order by num_countries)) as lowest_num
    ,
        concat(first_value(games) over(order by num_countries desc), '-
',first_value(num_countries) over( order by num_countries desc)) as highest_num
FROM tot_countries;
;

```

100 %

Results Messages

	lowest_num	highest_num
1	1896 Summer-12	2016 Summer-204

--5. Which nation has participated in all of the olympic games ?

Step 1: create a table1 with country and the number of times each country took part in the olympic games

Step 2: create a table2 count total number of olympic games were held

Step 3: join 2 tables at the number games of table2 --> we have the country took part in all olympic game.

```

with all_countries as
    (SELECT games,region
      FROM athlete_events as a
      JOIN olympics_history_noc_regions as o
        on a.NOC=o.NOC
     group by games,region),

    tot_attending as
    (SELECT region,count(region) as num_attending
      FROM all_countries
     GROUP BY region),

    num_games as
    ( SELECT count(distinct games) as num_game
      FROM athlete_events)

SELECT *
FROM tot_attending as t
JOIN num_games as n
on t.num_attending=n.num_game;

```

100 %			
Results Messages			
	region	num_attending	num_game
1	France	51	51
2	Italy	51	51
3	Switzerland	51	51
4	UK	51	51

-- 6. Identify the sport which was played in all summer olympics.

Step 1 :fetch the table1 include sport and the game which just in summer

Step 2 :count the number of appearance of each sport in table1

Step 3 :count total number of summer game in table3

Step 4 :math table2 and tabble3 at the number of summer game

```

with summer_sport as
  (SELECT sport,games
   FROM athlete_events
  group by sport,games
   HAVING games like '%summer%'
  ),
  num_sport_summer as
  (SELECT sport,count(sport)as num_sport_summer
   FROM summer_sport
   group by sport),
  num_summer_game as
  (SELECT count(distinct games) as num_summer_game
   FROM athlete_events
   WHERE games like '%summer%')

SELECT *
FROM num_sport_summer as sp
JOIN num_summer_game as gm
on sp.num_sport_summer=gm.num_summer_game;

```

100 %

Results		Messages	
	sport	num_sport_summer	num_summer_game
1	Gymnastics	29	29
2	Fencing	29	29
3	Swimming	29	29
4	Cycling	29	29
5	Athletics	29	29

--7.Which Sports were just played only once in the olympics.

```

with sport_games as
  (SELECT sport,games
   FROM athlete_events
   GROUP BY sport,games),
sport_num as
  (SELECT sport, count(sport) as num_sport
   FROM sport_games
   GROUP BY sport),
one_attending as
  (SELECT sport,first_value(num_sport) over(order by sport) as num_attending
   FROM sport_num)

SELECT a.sport,num_attending,games
FROM athlete_events as a
JOIN one_attending as one
on a.sport = one.sport

```

100 %

Results Messages

	sport	num_attending	games
1	Basketball	1	1992 Summer
2	Judo	1	2012 Summer
3	Football	1	1920 Summer
4	Tug-Of-War	1	1900 Summer
5	Speed Skating	1	1988 Winter
6	Speed Skating	1	1988 Winter
7	Speed Skating	1	1992 Winter
8	Speed Skating	1	1992 Winter
9	Speed Skating	1	1994 Winter
10	Speed Skating	1	1994 Winter
11	Cross Country Skiing	1	1992 Winter
12	Cross Country Skiing	1	1992 Winter
13	Cross Country Skiing	1	1992 Winter
14	Cross Country Skiing	1	1992 Winter
15	Cross Country Skiing	1	1994 Winter
16	Cross Country Skiing	1	1994 Winter

-- 8. Fetch the total no of sports played in each olympic games.

```
SELECT games, count(distinct sport) AS number_sport
FROM athlete_events
GROUP BY games;
```

100 %

Results Messages

	games	number_sport
1	1924 Summer	20
2	1988 Winter	10
3	1980 Winter	10
4	1906 Summer	13
5	2006 Winter	15
6	1928 Summer	17
7	1992 Summer	29
8	1960 Winter	8
9	1984 Winter	10
10	1968 Summer	20
11	1900 Summer	20
12	2016 Summer	34
13	1932 Winter	7
14	1908 Summer	24
15	1912 Summer	17
16	1936 Summer	24

✓ Query executed successfully.

--9. Fetch oldest athletes to win a gold medal

```
with gold_age as
(SELECT age,name,medal
 FROM athlete_events
 WHERE medal like 'Gold'AND age is not NULL
),
rank as
(SELECT *,rank() over(order by age desc) as rnk
 FROM gold_age)

SELECT *
 FROM rank
 WHERE rnk=1;
```



-- use min , max to convert the

100 %

	age	name	medal	rnk
1	64	Oscar Gomer Swahn	Gold	1
2	64	Charles Jacobus	Gold	1

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

Step 1 : create a table1 with the number of male and female

Step 2 : use min , max to convert the vertical format to horizon format ( 2 column)

Step 3 : devide each other to make the ratio

```
with sex_num as
(SELECT sex, count(sex) as num_math
 FROM athlete_events
 GROUP BY sex),
sex_num_convert as
(SELECT max(num_math) as m, min(num_math) as f
 FROM sex_num)
SELECT concat('1 : ', round(m*1.0/f,2)) as ratio
 FROM sex_num_convert;
```

100 %

	ratio
1	1 : 2.640000000000

--- 11. Fetch the top 5 athletes who have won the most gold medals.

```
SELECT name, Medal, team, count(Medal) as num_medal
 FROM athlete_events
 group by name, Medal, team
 having Medal like 'Gold'
 order by num_medal desc
 OFFSET 0 ROWS FETCH FIRST 5 ROWS ONLY;
```

100 %

Results Messages

	name	Medal	team	num_medal
1	Michael Fred Phelps, II	Gold	United States	23
2	Raymond Clarence "Ray" Ewry	Gold	United States	10
3	Mark Andrew Spitz	Gold	United States	9
4	Frederick Carlton "Carl" Lewis	Gold	United States	9
5	Larysa Semenivna Latynina (Diriy-)	Gold	Soviet Union	9

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

```
SELECT name,team,count(Medal) as num_medal
FROM athlete_events
WHERE Medal is not NULL AND Medal not like 'NA'
GROUP BY name,team
ORDER BY num_medal DESC
OFFSET 0 ROWS FETCH FIRST 5 ROWS ONLY;
```

100 %

Results Messages

	name	team	num_medal
1	Michael Fred Phelps, II	United States	28
2	Larysa Semenivna Latynina (Diriy-)	Soviet Union	18
3	Nikolay Yefimovich Andrianov	Soviet Union	15
4	Edoardo Mangiarotti	Italy	13
5	Takashi Ono	Japan	13

--13. Fetch the top 5 most successful countries in olympics. Success is defined by no of medals won.

```
SELECT region,count(Medal) as num_medal
FROM athlete_events as a
```

```

JOIN olympics_history_noc_regions as o
on a.NOC=o.NOC
WHERE Medal in ('Gold','Silver','Bronze')
GROUP BY region
ORDER BY num_medal DESC
OFFSET 0 ROWS FETCH FIRST 5 ROWS ONLY;

```

Results		Messages
	region	num_medal
1	USA	5637
2	Russia	3947
3	Germany	3756
4	UK	2068
5	France	1777

```

-- 14. List down total gold, silver and bronze medals won by each country.
SELECT region,Medal
FROM athlete_events as a
JOIN olympics_history_noc_regions as o
on a.NOC = o.NOC
GROUP BY region,Medal
HAVING Medal in ('Gold','Silver','Bronze');

```

100 %

Results Messages

	region	Medal
1	Afghanistan	Bronze
2	Algeria	Bronze
3	Algeria	Gold
4	Algeria	Silver
5	Argentina	Bronze
6	Argentina	Gold
7	Argentina	Silver
8	Armenia	Bronze
9	Armenia	Gold
10	Armenia	Silver
11	Australia	Bronze
12	Australia	Gold
13	Australia	Silver
14	Austria	Bronze
15	Austria	Gold
16	Austria	Silver

✓ Query executed successfully.