

-- 1. How many Olympic games have been held?

```
select count(distinct(games)) as total_olympics_played
from olympics_history;
```

	total_olympics_played bigint
1	51



-- 2. List down all Olympic games held so far.

```
select distinct(year) , season,city
from olympics_history
order by year;
```

	year integer	season character varying	city character varying
1	1896	Summer	Athina
2	1900	Summer	Paris
3	1904	Summer	St. Louis
4	1906	Summer	Athina
5	1908	Summer	London
6	1912	Summer	Stockholm

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

```
select games, count(distinct region) as total_country
from olympics_history oh
join olympics_history_noc_regions ohn on ohn.noc = oh.noc
group by games order by games;
```

	games character varying 	total_country bigint 
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	58

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

```
(select 'highest - ' || games as games, count(distinct region) as
total_participant
from olympics_history oh
join olympics_history_noc_regions ohn on ohn.noc = oh.noc
group by games order by total_participant desc
limit 1)
```

```

union all
(select 'lowest - ' || games as games, count(distinct region) as
total_participant
from olympics_history oh
join olympics_history_noc_regions ohn on ohn.noc = oh.noc
group by games order by total_participant asc
limit 1);

```

	games text	total_participant bigint
1	highest - 2016 Summer	204
2	lowest - 1896 Summer	12

```

-- 5. Which nation has participated in all of the olympic games
with cte as (select region, count(distinct(games)) as total_olympics_played
from olympics_history oh
join olympics_history_noc_regions onc on onc.noc = oh.noc
group by region
order by total_olympics_played
)
select * from cte
where total_olympics_played = (select max(total_olympics_played) from
cte);

```

	region character varying	total_olympics_played bigint
1	Switzerland	51
2	Italy	51
3	UK	51
4	France	51

```

-- 5 using window function

```

```



WITH OlympicCounts AS (
  SELECT region, COUNT(DISTINCT games) AS total_olympics_played,
         RANK() OVER (ORDER BY COUNT(DISTINCT games) DESC) AS r
  FROM olympics_history oh
  JOIN olympics_history_noc_regions onc ON onc.noc = oh.noc
  GROUP BY region
)

```

```

SELECT region, total_olympics_played
FROM OlympicCounts
WHERE r = 1;



```

	region character varying 	total_olympics_played bigint 
1	Italy	51
2	UK	51
3	Switzerland	51
4	France	51

```

-- 7. Which Sports were just played only in one olympics season.
with cte as (select sport, count(distinct games) as no_of_season_played
from olympics_history
group by sport
order by sport,no_of_season_played
)
select * from cte where no_of_season_played =1;

```

	<b>sport</b> character varying 	<b>no_of_season_played</b> bigint 
1	Aeronautics	1
2	Basque Pelota	1
3	Cricket	1
4	Croquet	1
5	Jeu De Paume	1
6	Military Ski Patrol	1
7	Motorboating	1

-- using window function

```
select sport,no_of_season_played
from(select sport, count(distinct games) no_of_season_played,
rank() over(order by count(distinct games)) as r
from olympics_history
group by sport)
where r = 1
order by sport;
```

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

```
select games,count(distinct sport) as total_games_played
from olympics_history
group by games
order by games;
```

	games character varying 🔒	total_games_played bigint 🔒
1	1896 Summer	9
2	1900 Summer	20
3	1904 Summer	18
4	1906 Summer	13
5	1908 Summer	24
6	1912 Summer	17
7	1920 Summer	25

```
-- 9. Fetch oldest athletes to win a gold medal
with cte as (select *,case when age = 'NA' then NULL else age end as
new_age
from olympics_history where medal = 'Gold'),
cte2 as(select *,dense_rank() over(order by new_age desc) as rnk from cte
)
select name,age,team,games,event,medal
from cte2 where rnk = 2;
```

	name character varying 🔒	age character varying 🔒	team character varying 🔒	games character varying 🔒	event character varying 🔒	medal character varying 🔒
1	Charles Jacobus	64	United States	1904 Summer	Roque Men's Singles	Gold
2	Oscar Gomer Swahn	64	Sweden	1912 Summer	Shooting Men's Running Target, Single Shot, Team	Gold

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

```
SELECT (select concat('1:',(SELECT COUNT(sex)::NUMERIC FROM
olympics_history WHERE sex = 'M') /
(SELECT COUNT(sex) FROM olympics_history WHERE sex = 'F')));
```

	concat text 🔒
1	1:2.6380666112020611

```
-- 11. Fetch the top 5 athletes who have won the most gold medals.
with cte as (select name,team,
count(medal),dense_rank() over(order by count(medal) desc) as rnk
from olympics_history
where medal = 'Gold'
group by name,team)
select * from cte where rnk<6;
```

	name character varying	team character varying	count bigint	rnk bigint
1	Michael Fred Phelps, II	United States	23	1
2	Raymond Clarence "Ray" Ewry	United States	10	2
3	Paavo Johannes Nurmi	Finland	9	3
4	Larysa Semenivna Latynina (Diriy-)	Soviet Union	9	3
5	Frederick Carlton "Carl" Lewis	United States	9	3
6	Mark Andrew Spitz	United States	9	3
7	Ole Einar Bjrndalen	Norway	8	4

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

```
with cte as (select name,team,
count(medal),dense_rank() over(order by count(medal) desc) as rnk
from olympics_history
where medal in(select medal from olympics_history where medal not like
'NA')
group by name,team)
select * from cte where rnk<6;
```

	name character varying	team character varying	count bigint	rnk bigint
1	Michael Fred Phelps, II	United States	28	1
2	Larysa Semenivna Latynina (Diriy-)	Soviet Union	18	2
3	Nikolay Yefimovich Andrianov	Soviet Union	15	3
4	Edoardo Mangiarotti	Italy	13	4

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

```

with cte as (select region,
count(medal),dense_rank() over(order by count(medal) desc) as rnk
from olympics_history oh
JOIN olympics_history_noc_regions onc ON onc.noc = oh.noc
where medal in(select medal from olympics_history where medal not like 'NA')
group by region)
select * from cte where rnk<6;

```

	region character varying	count bigint	rnk bigint
1	USA	5637	1
2	Russia	3947	2
3	Germany	3756	3
4	UK	2068	4
5	France	1777	5

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

```

select region,
count(case when medal = 'Gold' then 1 end) as gold,
count(case when medal = 'Silver' then 1 end) as silver,
count(case when medal = 'Bronze' then 1 end) as bronze
from olympics_history oh
JOIN olympics_history_noc_regions onc ON onc.noc = oh.noc
group by region
order by gold desc,silver desc,bronze desc;

```

	region character varying	gold bigint	silver bigint	bronze bigint
1	USA	2638	1641	1358
2	Russia	1599	1170	1178
3	Germany	1301	1195	1260
4	UK	678	739	651
5	Italy	575	531	531
6	France	501	610	666

-- 15. List down total gold, silver and bronze medals won by each country corresponding to each olympic games.

```

select region,games,

```



```

count(case when medal = 'Gold' then 1 end) as gold,
count(case when medal = 'Silver' then 1 end) as silver,
count(case when medal = 'Bronze' then 1 end) as bronze
from olympics_history oh
JOIN olympics_history_noc_regions onc ON onc.noc = oh.noc
group by region,games
order by gold desc,silver desc,bronze desc;

```


	region character varying	games character varying	gold bigint	silver bigint	bronze bigint
1	Russia	1980 Summer	187	129	126
2	USA	1984 Summer	186	116	50
3	USA	1996 Summer	159	48	52
4	UK	1908 Summer	147	131	90
5	USA	2012 Summer	145	57	46
6	USA	2016 Summer	139	54	71

-- 15. List down total gold, silver and bronze medals won by each country corresponding to each olympic games.

```

with cte as(
select oh.games,onc.region,oh.medal,count(*) as medal_count,
dense_rank() over (partition by games, medal order by count(*) desc) as rank
from olympics_history oh
join olympics_history_noc_regions onc on oh.noc = onc.noc
where oh.medal IN ('Gold', 'Silver', 'Bronze')
group by oh.games, onc.region, oh.medal)
select games,
max(case when medal = 'Gold' and rank = 1 then region || ' ' || cast(medal_count AS varchar)
end) as max_gold,
max(case when medal = 'Silver' and rank = 1 then region || ' ' || cast(medal_count AS varchar)
end) as max_silver,
max(case when medal = 'Bronze' and rank = 1 then region || ' ' || cast(medal_count AS varchar)
end) as max_bronze
from cte
group by games
order by games;

```

	games character varying 	max_gold text 	max_silver text 	max_bronze text
1	1896 Summer	Germany 25	Greece 18	Greece 20
2	1900 Summer	UK 59	France 101	France 82
3	1904 Summer	USA 128	USA 141	USA 125
4	1906 Summer	Greece 24	Greece 48	Greece 30
5	1908 Summer	UK 147	UK 131	UK 90
6	1912 Summer	Sweden 103	UK 64	UK 59
7	1920 Summer	USA 111	France 71	Belgium 66
8	1924 Summer	USA 97	France 51	USA 49
9	1924 Winter	UK 16	USA 10	UK 11
10	1928 Summer	USA 47	Netherlands 29	Germany 41

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

with cte as(

select oh.games, onc.region, oh.medal, count(\*) as medal\_count,

dense\_rank() over (partition by games, medal order by count(\*) desc) as rank

from olympics\_history oh

join olympics\_history\_noc\_regions onc on oh.noc = onc.noc

where oh.medal IN ('Gold', 'Silver', 'Bronze')

group by oh.games, onc.region, oh.medal)

select games,

max(case when medal = 'Gold' and rank = 1 then region || ' ' || cast(medal\_count AS varchar)  
end) as max\_gold,

max(case when medal = 'Silver' and rank = 1 then region || ' ' || cast(medal\_count AS varchar)  
end) as max\_silver,

max(case when medal = 'Bronze' and rank = 1 then region || ' ' || cast(medal\_count AS varchar)  
end) as max\_bronze,

(select region || ' ' || cast(sum(medal\_count) as varchar) from cte c where c.games = cte.games  
group by games, region

order by games, sum(medal\_count) desc

limit 1) as season\_max\_medal

from cte

group by games

order by games;

	games character varying	max_gold text	max_silver text	max_bronze text	season_max_medal text
1	1896 Summer	Germany 25	Greece 18	Greece 20	Greece 48
2	1900 Summer	UK 59	France 101	France 82	France 235
3	1904 Summer	USA 128	USA 141	USA 125	USA 394
4	1906 Summer	Greece 24	Greece 48	Greece 30	Greece 102
5	1908 Summer	UK 147	UK 131	UK 90	UK 368
6	1912 Summer	Sweden 103	UK 64	UK 59	Sweden 190
7	1920 Summer	USA 111	France 71	Belgium 66	USA 194
8	1924 Summer	USA 97	France 51	USA 49	USA 182
9	1924 Winter	UK 16	USA 10	UK 11	UK 31

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

with cte as(

select region,

count(case when medal = 'Gold' then 1 end) as gold,

count(case when medal = 'Silver' then 1 end) as silver,

count(case when medal = 'Bronze' then 1 end) as bronze

from olympics\_history oh

JOIN olympics\_history\_noc\_regions onc ON onc.noc = oh.noc

group by region

)

select \* from cte where gold = 0 and (silver>0 or bronze >0);

	region character varying	gold bigint	silver bigint	bronze bigint
1	Afghanistan	0	0	2
2	Barbados	0	0	1
3	Bermuda	0	0	1
4	Botswana	0	1	0
5	Curacao	0	1	0

-- 19. In which Sport/event, India has won highest medals.

with ind\_max\_medal\_sport as(

select sport,

count(medal) as medal\_won,



dense\_rank() over(order by count(medal) desc) as rnk

from olympics\_history oh

```

join olympics_history_noc_regions onc ON onc.noc = oh.noc
where team = 'India' and medal<>'NA'
group by sport
)
select sport,medal_won
from ind_max_medal_sport
where rnk = 1;

```

	<b>sport</b> character varying 	<b>medal_won</b> bigint 
1	Hockey	173

```

-- 20. Break down all olympic games where India won medal for Hockey and how many medals
in each olympic games
select team,games,count(medal) as hockey_medal
from olympics_history
where sport = 'Hockey' and team = 'India'
group by team,games
order by games;

```

	<b>team</b> character varying 	<b>games</b> character varying 	<b>hockey_medal</b> bigint 
1	India	1928 Summer	14
2	India	1932 Summer	15
3	India	1936 Summer	19
4	India	1948 Summer	20
5	India	1952 Summer	14
6	India	1956 Summer	17