Questions:

use olympics_games;

1) How many Olympic Games have been held?
select distinct count (games)total_olympics_games

from olympics_history

2) List down all Olympic Games held so far.

select distinct games,city

from olympics_history

order by games,city

3) Mention the total no of nations that participated in each Olympic game?

with t1 as(

       select   oh.games,nr.region

 from olympics_history oh

 join olympics_history_noc_regions nr on oh.noc = nr.noc

 group by 1,2

 order by 1,2)

 select   games,count(*)as tot_countries

 from t1

 group by 1

 order by 2 desc

  4) Which year saw the highest and lowest no of countries participating in the Olympics?

  with t1 as(

       select   oh.games,nr.region

   from olympics_history oh

  join olympics_history_noc_regions nr on oh.noc = nr.noc

   group by 1,2

```
    order by 1,2),

 t2 as( select    games,count(*)as total_countries

      from t1

      group by 1

      order by 2 )

  select distinct

  concat(first_value(games)over(order by total_countries),

         ' - ',first_value(total_countries)over(order by total_countries)) as lowest_countries,

 concat (first_value(games)over(order by total_countries),' - ',

   first_value(total_countries)over(order by total_countries desc))as heighest_countries

from t2

group by games,total_countries
```

5) Which nation has participated in all of the Olympic Games?

```
with total_games as(

        select count(distinct games)as total_games

   from olympics_history),

t2 as (

select oh.games,nr.region as countries

        from olympics_history oh

        join olympics_history_noc_regions nr   on oh.noc= nr.noc

        group by 1,2

        order by 1,2),

t3 as(

  select countries,count(*)num_of_participated

        from t2

        group by countries)

select t3.*
```

```
from t3

join total_games tg on tg.total_games = t3.num_of_participated

order by countries
```

6) Identify the sport which was played in all summer Olympics.

```
with total_games as(

        select count(distinct games)total_games

    from olympics_history

    where season='Summer'),

t2 as(

        select games,sport

    from olympics_history

    where season = 'Summer'

    group by games,sport

    order by games,sport ),

t3 as (

        select sport,count(*) num_of_games

        from t2

    group by sport)

select *

from t3

join total_games tg on tg.total_games = t3.num_of_games

order by sport
```

7) Which Sports were just played only once in the Olympics?

```
with t1 as (

        select distinct games,sport
```

```
    from olympics_history),

t2 as(

        select sport,count(*)as total_games

    from t1

    group by sport)

select   t2.*,t1.games

from t2

join t1 on t2.sport = t1.sport

where total_games =1

order by games
```

8) Find the total no of sports played in each Olympic Games.

```
with t1 as (

        select distinct games,sport

  from olympics_history

  group by games,sport),

t2 as(

  select  distinct sport,count(*)total_sport

  from t1

  group by sport)

select t1.games,t2.total_sport

from t2

join  t1 on t1.sport = t2.sport

order by games
```

9) Find details of the oldest athletes to win a gold medal.

```
with t1 as(

        select name,sex,height,weight,team,noc,games,year,season,city,sport,event,medal,
```

```
    cast(case when age = 'NA'then '0' else age end as int)as age
    from olympics_history
   where
   Medal='Gold'),
t2 as(   select *,rank()over(order by age desc)as age_rnk
        from t1)
select t2.*
from t2
where age_rnk = 1
```

10) Find the top 5 athletes who have won the most gold medals.

```
with t1 as (
        select name,team,count(*)total_gold_medal
   from olympics_history
   where medal ='Gold'
   group by 1,2
   order by 3 desc),
t2 as (
   select *, dense_rank()over(order by total_gold_medal desc)as rnk
        from t1)
select name,team,total_gold_medal
        from t2
        where rnk < 5
```

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

```
with t1 as(
        select name,team,count(*)total_medals
   from olympics_history
   where medal in ('Gold','Bronze','Silver')
```

```
    group by 1,2

    order by 3 desc),

t2 as(

    select t1.*, dense_rank()over(order by total_medals desc)as Medal_rnk

        from t1)

select *   from t2  where Medal_rnk <5;
```

12) Find the top 5 most successful countries in the Olympics. Success is defined by no of medals won.

```
with t1 as(

    select nr.region as country ,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),

t2 as(

    select *,dense_rank()over(order by total_medals desc) as rnk

        from t1)

select *

        from t2

where rnk <5;
```

13) List down the total gold, silver and bronze medals won by each country.

```
create extension tablefunc;


        select country,

        coalesce(bronze,0) as bronze,

        coalesce(gold,0) as gold,
```

```
        coalesce(silver,0)as silver

        from crosstab(

        'select nr.region as country,oh.medal,count(*)total_medals

    from olympics_history oh

    join olympics_history_noc_regions nr   on nr.noc = oh.noc

    where medal <>''NA''

    group by country,medal

    order by country,medal',

    'values(''Bronze''),(''Gold''),(''Silver'')')

as final_result (country varchar,bronze bigint,Gold bigint, Silver bigint)

order by gold  desc ,Silver desc,Bronze desc
```

14) List down the total gold, silver and bronze medals won by each country corresponding to each Olympic Games.

```
select left(games,strpos(games,'-')-1)as games,

right(games,length(games)-strpos(games,'-')) as country,

coalesce(bronze,0)as bronze,

coalesce(gold,0)as gold,

coalesce(silver,0)as silver
 FROM CROSSTAB('SELECT concat(games, '' - '', nr.region) as games

        , medal , count(1) as total_medals

        FROM olympics_history oh

        JOIN olympics_history_noc_regions nr ON nr.noc = oh.noc

        where medal <> ''NA''

        GROUP BY games,nr.region,medal

        order BY games,medal',

      'values (''Bronze''), (''Gold''), (''Silver'')')

  AS FINAL_RESULT(games text, bronze bigint, gold bigint, silver bigint)
```

15) Identify which country won the most gold, silver and bronze medals in each Olympic Games.

```
with t1 as(
        select left(games,strpos(games,'-')-1)as games,
   right(games,length(games)-strpos(games,'-')) as country,
   coalesce(bronze,0)as bronze,
   coalesce(gold,0)as gold,
   coalesce(silver,0)as silver
   FROM CROSSTAB('SELECT concat(games, '' - '', nr.region) as games
                , medal
                , count(1) as total_medals
                FROM olympics_history oh
                JOIN olympics_history_noc_regions nr
                ON nr.noc = oh.noc
                where medal <> ''NA''
                GROUP BY games,nr.region,medal
                order BY games,medal',
           'values (''Bronze''), (''Gold''), (''Silver'')')
    AS FINAL_RESULT(games text, bronze bigint, gold bigint, silver bigint))
        select   distinct games,
        concat (first_value(country) over(partition by games order by gold desc),' - ',
        first_value(gold)over(partition by games order by gold desc))as   Max_gold,
        concat (first_value(country) over(partition by games order by silver desc),' - ',
        first_value(silver)over(partition by games order by silver desc))as Max_silver,
        concat (first_value(country) over(partition by games order by bronze desc),' - ',
first_value(bronze)over(partition by games order by bronze desc))as Max_bronze
        from t1
        order by games
```

16) Which countries have never won a gold medal but have won silver/bronze medals?

select * from (

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 oh

JOIN OLYMPICS_HISTORY_NOC_REGIONS nr ON nr.noc=oh.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))

where gold = 0 and (silver > 0 or bronze > 0)

order by gold desc , silver desc , bronze desc

17) In which Sport/event has India won the highest medals?

with t1 as(

select sport,count(*)total_medals

from olympics_history

where medal <> 'NA' and team= 'India'

group by sport

order by 2 desc),

t2 as(

select *,rank() over(order by total_medals desc)as medal_rnk

from t1)

select *

from t2

where medal_rnk =1

18) Break down all Olympic Games where India won medals for Hockey and how many medals in each Olympic Games.

select games,sport,team,count(*) total_medal

from olympics_history

where medal<>'NA' and team = 'India'

and sport ='Hockey'

group by 1,2,3

order by 4 desc