

-- 22) Which artist has the most no of Portraits paintings outside USA?. Display artist name, no of paintings and the artist nationality.

```
with cte as( select a.full_name,  
a.nationality  
,count(1) as no_of_paintings  
,rank() over(order by count(1) desc) as rnk  
from work w  
join artist a on a.artist_id=w.artist_id join subject  
s on s.work_id=w.work_id join museum m on  
m.museum_id=w.museum_id  
where s.subject='Portraits' and  
m.country != 'USA' group by  
a.full_name, a.nationality)
```

```
select full_name as artist_name, nationality, no_of_paintings  
from cte where rnk = 1
```

Result Grid


Filter Rows:

Export:


	artist_name	nationality	no_of_paintings
▶	Jan Willem Pieneman	Dutch	14
	Vincent Van Gogh	Dutch	14

-- 21) Which are the 3 most popular and 3 least popular painting styles?

```
with cte as( select style, dense_rank() over(order  
by count(*) desc) as most from work where style is  
not null  
group by style),
```

```
cte2 as(select style, dense_rank() over(order by  
count(*) asc) as lowest3 from work where style is  
not null group by style)
```

```
select style,  
case when most <=3 then 'most_popular' end as remarks  
from cte where most <= 3  
union all select style, case when lowest3 <=3 then  
'least_popular' end as remarks from cte2 where lowest3 <= 3;
```

Result Grid  Filter Rows: <input type="text"/>		
	style	remarks
▶	Impressionism	most_popular
	Post-Impressionism	most_popular
	Realism	most_popular
	Japanese Art	least_popular
	Art Nouveau	least_popular

-- 20) Which country has the 5th highest no of paintings?

```
with cte as( select m.country, count(*) as
no_of_Paintings, rank() over(order by count(*)
desc) as rnk from work w join museum m on
m.museum_id=w.museum_id group by
m.country)
```

```
select country, no_of_Paintings
from cte where rnk = 5
```

	country	no_of_Paintings
▶	Spain	196

-- 19) Identify the artist and the museum where the most expensive and least expensive painting is placed.

```
-- most expensive with cte as( select
work_id,sale_price, dense_rank() over(order by
sale_price desc) as rnk from product_size)
```

```
select a.full_name, m.name as museum_name
from work w
join artist a on a.artist_id = w.artist_id
join museum m on m.museum_id = w.museum_id where
work_id in (select work_id from cte where rnk = 1);
```

	full_name	museum_name
▶	Peter Paul Rubens	The Prado Museum

```
-- least expensive with cte as( select
work_id,sale_price, dense_rank() over(order by
sale_price asc) as rnk from product_size)
```

```
select a.full_name, m.name as museum_name
from work w
join artist a on a.artist_id = w.artist_id
join museum m on m.museum_id = w.museum_id where
work_id in (select work_id from cte where rnk = 1);
```

	full_name	museum_name
▶	Adélaïde Labille-Guiard	The Metropolitan Museum of Art

-- 18) Display the country and the city with most no of museums.

```
select country, city, count(museum_id) as total_museum
from museum
group by country,city;
```

	country	city	total_museum
▶	USA	New York	3
	Russia	Moscow	1
	Australia	Melbourne	1
	Brazil	São Paulo	1
	Russia	2	1

-- 17) Identify the artists whose paintings are displayed in multiple countries

```
with cte as (
select w.artist_id, full_name, count(distinct country) as cnt
from work w
join museum m on m.museum_id = w.museum_id
join artist a on a.artist_id = w.artist_id group by
w.artist_id, full_name)
```

```
select full_name,cnt as countries_displayed
from cte where cnt > 1 order by cnt desc;
```

	full_name	countries_displayed
▶	Vincent Van Gogh	8
	Claude Monet	7
	Paul Gauguin	7
	Pierre-Auguste Renoir	6
	Francois Boucher	6

-- 16) Which museum has the most no of most popular painting style?

```
with cte as( select
style,count(*)
,rank() over(order by count(*) desc) as rnk
from work group by style),
cte2 as( select museum_id, count(*) as total, dense_rank() over(order by
count(*) desc) as rn from work where style = (select style from cte where rnk
= 1) and museum_id is not null group by museum_id)
```

```
select c.museum_id, name as museum_name,
total from cte2 c join museum m on m.museum_id
= c.museum_id where rn = 1;
```

	museum_id	museum_name	total
▶	35	The Metropolitan Museum of Art	244

-- 15) Which museum is open for the longest during a day. Display museum name, state and hours open and which day?

```
with cte as( select museum_id, str_to_date(open, '%h:%i:%p') as open_time,
str_to_date(close, '%h:%i:%p') as close_time, timediff(str_to_date(close, '%h:%i:%p'),
str_to_date(open, '%h:%i:%p')) as open_duration, dense_rank() over(order by
timediff(str_to_date(close, '%h:%i:%p'), str_to_date(open,
'%h:%i:%p')) desc) as rnk
from museum_hours)
```

```
select m.name, m.state, open_duration from cte
c join museum m on m.museum_id =
c.museum_id where rnk = 1;
```

	name	state	open_duration
▶	Musée du Louvre	Paris	12:45:00

-- 14) Display the 3 least popular canvas sizes

```
with cte as( select size_id, count(*) as cnt,
dense_rank() over(order by count(*)) as rnk
from product_size
group by size_id)
```

```
select c.size_id, c2.label as canvas_name
from cte c join canvas_size c2 on c2.size_id
= c.size_id where rnk <=3;
```

	size_id	canvas_name
▶	3218	32" x 18"(81 cm x 46 cm)
	4434	44" x 34"(112 cm x 86 cm)
	2429	24" x 29"(61 cm x 74 cm)
	3730	37" x 30"(94 cm x 76 cm)
	3627	36" x 27"(91 cm x 69 cm)

-- 13) Who are the top 5 most popular artist? (Popularity is defined based on most no of paintings done by an artist)

```
with cte as (
select artist_id, count(*) as cnt, dense_rank()
over(order by count(*) desc) as rnk from work
group by artist_id)
```

```
select c.artist_id, a.full_name, cnt as
total_paintings from cte c
join artist a on a.artist_id = c.artist_id
where rnk <= 5;
```

artist_id	full_name	total_paintings
500	Pierre-Auguste Renoir	469
550	Claude Monet	378
559	Albert Marquet	233
649	Maurice Utrillo	253
677	Vincent Van Gogh	308

-- 12) Which are the top 5 most popular museum? (Popularity is defined based on most no of paintings in a museum) with cte as(select museum_id,count(*) as cnt, dense_rank() over(order by count(*) desc) as rnk from work where museum_id is not null group by museum_id)

select c.museum_id, m.name from cte c join museum m on m.museum_id = c.museum_id where rnk<=5;

museum_id	name
35	The Metropolitan Museum of Art
43	Rijksmuseum
46	National Gallery of Art
47	National Gallery
51	The Barnes Foundation

-- 11) How many museums are open every single day?

select count(museum_id) from(select museum_id,count(distinct day) as cnt from museum_hours group by museum_id)a where cnt = 7;

count(museum_id)
17

-- 9) Fetch the top 10 most famous painting subject

with cte as(select s.subject, count(*) as total, dense_rank() over(order by count(*) desc) as rnk from work w join subject s on s.work_id =

w.work_id group by s.subject) select subject from
cte where rnk < 11;

	subject
▶	Portraits
	Abstract/Modern Art
	Nude
	Landscape Art
	Rivers/Lakes

-- 8) Museum_Hours table has 1 invalid entry. Identify it and remove it.

with cte as(select
museum_id,day,
row_number() over(partition by museum_id, day) as rn
from museum_hours) delete from cte where rn > 1;

-- 7) Identify the museums with invalid city information in the given dataset

select name as musuem_name, city from museum
where city regexp '[0-9]' or city is null;

	musuem_name	city
▶	The State Hermitage Museum	2
	Museum Folkwang	45128
	Museum of Grenoble	38000
	Musée des Beaux-Arts de Quimper	29000
	Musée du Louvre	75001

-- 6) Delete duplicate records from work, product_size, subject and image_link tables

with cte as(select work_id, row_number() over(partition by work_id) as rn from work)
delete from cte where rn > 1

-- 5) Which canva size costs the most?

with size_cost as(select size_id,sale_price,
dense_rank() over(order by sale_price desc) as
rnk from product_size)
select a.size_id,label,a.sale_price from
size_cost a join canvas_size b on
a.size_id = b.size_id where rnk = 1;

```
select work_id,count(*)
from work group by
work_id;
```

	size_id	label	sale_price
▶	4896	48" x 96"(122 cm x 244 cm)	1115

-- 4) Identify the paintings whose asking price is less than 50% of its regular price

```
select * from work;
select p.work_id,name from product_size p
join work w on w.work_id = p.work_id
where sale_price < (regular_price/2);
```

work_id	name
31974	Taking the Census
17351	The Chalon Family in London
17351	The Chalon Family in London
17351	The Chalon Family in London
30947	Ducks Resting in Sunshine

-- 3) How many paintings have an asking price of more than their regular price?

```
select count(size_id) from product_size
where sale_price > regular_price;
```

	count(size_id)
▶	0

-- 2) Are there museums without any paintings?

```
select m.museum_id, name from museum m
where m.museum_id not in(select distinct museum_id from work);
```

Result Grid		 Filter Rows
museum_id	name	

-- 1) Fetch all the paintings which are not displayed on any museums?

```
select count(*) from work where museum_id is null;
```


	count(*)
►	10223