VIRTUAL ART GALLERY

1. Retrieve the names of all artists along with the number of artworks they have in the gallery, and list them in descending order of the number of artworks.

QUERY : select artists.name as Artist_name, count(artworks.artworkid) as Num_artworks from artists
left join artworks on artists.artistid = artworks.artistid

group by artists.artistid, artists.name order by num_artworks desc;

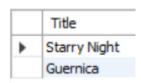
OUTPUT:

	Artist_Name	Num_Artworks
•	Pablo Picasso	1
	Vincent van Gogh	1
	Leonardo da Vinci	1

2. List the titles of artworks created by artists from 'Spanish' and 'Dutch' nationalities, and order them by the year in ascending order.

QUERY: select artworks. Title from artworks inner join artists on artworks. artistid = artists. artistid where artists. nationality in ('spanish', 'dutch') order by artworks. year asc;

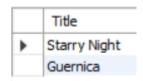
OUTPUT:



3. Find the names of all artists who have artworks in the 'Painting' category, and the number of artworks they have in this category.

QUERY: select artworks. Title from artworks inner join artists on artworks. artistid = artists. artistid where artists. nationality in ('spanish', 'dutch') order by artworks. year asc;

OUTPUT:



4. List the names of artworks from the 'Modern Art Masterpieces' exhibition, along with their artists and categories.

QUERY: from artworks join exhibitionartworks on artworks.artworkid = exhibitionartworks.artworkid join exhibitions on exhibitionartworks.exhibitionid = exhibitions.exhibitionid join artists on artworks.artistid = artists.artistid join categories on artworks.categoryid = categories.categoryid where exhibitions.title = 'modern art masterpieces';

OUTPUT:



5. Find the artists who have more than two artworks in the gallery.

QUERY : select artists.name as Artist_name, count(*) as Artwork_count from artists join artworks on artists.artistid = artworks.artistid group by artists.name having count(*) > 2;



6. Find the titles of artworks that were exhibited in both 'Modern Art Masterpieces' and 'Renaissance Art' exhibitions .

QUERY: select artworks. Title from artworks

join exhibitionartworks on artworks.artworkid = exhibitionartworks.artworkid join exhibitions on exhibitionartworks.exhibitionid = exhibitions.exhibitionid where exhibitions.title = 'modern art masterpieces' and artworks.artworkid in (select artworkid from exhibitionartworks join exhibitions on exhibitionartworks.exhibitionid = exhibitions.exhibitionid where exhibitions.title = 'renaissance art');

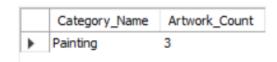
OUTPUT:



7. Find the total number of artworks in each category.

QUERY: select categories.name as Category_name, count(*) as Artwork_count from artworks
join categories on artworks.categoryid = categories.categoryid
group by categories.name;

OUTPUT:



8. List artists who have more than 3 artworks in the gallery.

QUERY: select artists.name as Artist_name, count(*) as Artwork_count from artists
join artworks on artists.artistid = artworks.artistid
group by artists.artistid having count(*) > 3;



9. Find the artworks created by artists from a specific nationality (e.g., Spanish).

QUERY: select artworks.title as Artwork_title, artists.name as Artist_name from artworks
join artists on artworks.artistid = artists.artistid
where artists.nationality = 'spanish';

OUTPUT:

	Artwork_Title	Artist_Name		
•	Guernica	Pablo Picasso		

10. List exhibitions that feature artwork by both Vincent van Gogh and Leonardo da Vinci.

QUERY: select exhibitions.title as Exhibition_title from exhibitions
join exhibitionartworks on exhibitions.exhibitionid = exhibitionartworks.exhibitionid
join artworks on exhibitionartworks.artworkid = artworks.artworkid
join artists on artworks.artistid = artists.artistid
where artists.name in ('vincent van gogh', 'leonardo da vinci')
group by exhibitions.title
having count(distinct artists.name) = 2;



11. Find all the artworks that have not been included in any exhibition.

QUERY : select artworks.* from artworks left join exhibitionartworks on artworks.artworkid = exhibitionartworks.artworkid where exhibitionartworks.artworkid is null;

	ArtworkID	Title	ArtistID	CategoryID	Vear	Description	Imagel IRI	
	ALCHOURED	HUC	AI USULD	Categor yzo	I Cui	Description	Inageone	

12. List artists who have created artworks in all available categories.

QUERY: select artists.artistid, artists.name as artist_name from artists
join artworks on artists.artistid = artworks.artistid
join (select distinct artistid from artworks) as artworksbyartist
on artists.artistid = artworksbyartist.artistid
group by artists.artistid, artists.name
having count(distinct artworks.categoryid) = (select count(*) from categories);

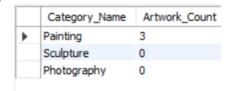
OUTPUT:



13. List the total number of artworks in each category.

QUERY: select categories.name as category_name, count(artworks.artworkid) as artwork_count from categories left join artworks on categories.categoryid = artworks.categoryid group by categories.categoryid, categories.name;

OUTPUT:



14. Find the artists who have more than 2 artworks in the gallery.

QUERY : select artists.artistid, artists.name as artist_name, count(artworks.artworkid) as artwork_count from artists join artworks on artists.artistid = artworks.artistid group by artists.artistid, artists.name having count(artworks.artworkid) > 2;



15. List the categories with the average year of artworks they contain, only for categories with more than 1 artwork.

QUERY : select categories.name as category_name, avg(artworks.year) as average_year from categories join artworks on categories.categoryid = artworks.categoryid group by categories.categoryid, categories.name having count(artworks.artworkid) > 1;

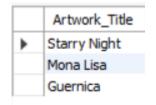
OUTPUT:

	Category_Name	Average_Year		
•	Painting	1776.3333		

16. Find the artworks that were exhibited in the 'Modern Art Masterpieces' exhibition.

QUERY: select artworks.title as artwork_title from artworks
join exhibitionartworks on artworks.artworkid = exhibitionartworks.artworkid
join exhibitions on exhibitionartworks.exhibitionid = exhibitions.exhibitionid
where exhibitions.title = 'modern art masterpieces';

OUTPUT:



17. Find the categories where the average year of artworks is greater than the average year of all artworks.

QUERY: select categories.name as category_name, avg(artworks.year) as category_average_year from categories join artworks on categories.categoryid = artworks.categoryid group by categories.categoryid, categories.name having avg(artworks.year) > (select avg(year) from artworks);



18. List the artworks that were not exhibited in any exhibition.

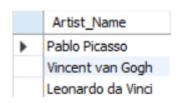
QUERY: select title from artworks where artworkid not in (select artworkid from exhibitionartworks);

OUTPUT:	Title

19. Show artists who have artworks in the same category as "Mona Lisa".

QUERY: select distinct artists.name as artist_name from artist join artworks on artists.artistid = artworks.artistid join categories on artworks.categoryid = categories.categoryid where categories.name = (select categories.name from artworks join categories on artworks.categoryid = categories.categoryid where artworks.title = 'mona lisa');

OUTPUT:



20. List the names of artists and the number of artworks they have in the gallery.

QUERY : select artists.name as artist_name, count(artworks.artworkid) as artwork_count from artists left join artworks on artists.artistid = artworks.artistid group by artists.artistid, artists.name;

	Artist_Name	Artwork_Count
•	Pablo Picasso	1
	Vincent van Gogh	1
	Leonardo da Vinci	1