

Dataset:

<https://www.kaggle.com/datasets/mexwell/famous-paintings?select=work.csv>

60 SQL Questions for Your Dataset

1. Core CREATE SCHEMA & CREATE TABLE

1. Create a schema named `artdb`.
 2. Create a table `artdb.artists` with the same structure as `artist.csv`.
 3. Create a table `artdb.works` with the same structure as `work.csv`.
 4. Create a table `artdb.museums` with the same structure as `museum.csv`.
 5. Create a schema `sales_data` for artwork pricing and move `product_size` into it.
 6. Create a schema `archive_data` and copy all artist data born before 1600 into it.
 7. Create a schema `analytics` and add a table `top_artists` with `artist_id`, `full_name`, `total_works`.
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2. Altering Tables

8. Add a column `era VARCHAR(50)` to the `artist` table.
9. Drop the `middle_names` column from `artist`.
10. Rename column `style` in `work` to `art_style`.
11. Add a column `established_year INT` to the `museum` table.
12. Modify column `sale_price` in `product_size` to `NUMERIC(12,2)`.
13. Remove column `phone` from `museum`.

14. Add a column `is_open_weekends` `BOOLEAN` to `museum_hours`.

3. SELECT Basics

15. Select all columns from the `artist` table.

16. Retrieve the first 10 rows of `work`.

17. Show only `full_name` and `nationality` from `artist`.

18. Select the `name` and `city` of all museums.

19. List all artworks (`name`) created by artist ID = 615.

20. Show all artists with nationality `French`.

4. WHERE Clause

21. Find all artists born after 1800.

22. List all Impressionist works.

23. Find museums located in the USA.

24. Show works created between 1700 and 1800.

25. Find all artists where `last_name = 'Renoir'`.

26. Show all works not linked to any museum (`museum_id IS NULL`).

27. List artworks priced above 10,000 in `product_size`.

5. ORDER BY

28. List all artists ordered by birth year (earliest first).

29. Retrieve the top 5 most expensive artworks from `product_size`.

- 30. Order museums alphabetically by city.
 - 31. Order all works by their `style` in descending order.
 - 32. Find the youngest 10 artists by sorting on `birth DESC`.
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6. Aggregations + GROUP BY

- 33. Count how many artists exist per nationality.
 - 34. Find the average sale price of artworks per `style`.
 - 35. Count the number of works per museum.
 - 36. Find the number of works created per century (`birth` grouped by 100 years).
 - 37. Show the maximum canvas width for each `size_id`.
 - 38. Count how many artworks have `Portraits` as their subject.
 - 39. Find how many works belong to each `style`.
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7. HAVING Clause

- 40. Show nationalities with more than 50 artists.
 - 41. Show museums that house more than 200 works.
 - 42. List art styles that have an average price greater than 50,000.
 - 43. Find all subject types that appear in more than 1,000 works.
 - 44. Show nationalities that have more than 5 Impressionist artists.
 - 45. Find cities that host more than 2 museums.
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8. JOINS

46. Show each artwork with its artist's full name (`work JOIN artist`).
 47. Show each work with its museum name (`work JOIN museum`).
 48. Get artworks, their artist's nationality, and museum city (`work JOIN artist JOIN museum`).
 49. Show all works with size details (`work JOIN product_size JOIN canvas_size`).
 50. List all museums and their open/close times (`museum JOIN museum_hours`).
 51. Find artworks that do not have image links (`LEFT JOIN imagelink`).
 52. Show all artists and the number of works they created (`JOIN + GROUP BY`).
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9. Subqueries

53. Find all artists who created more works than the average artist.
 54. Get the most expensive artwork in the database.
 55. Show all artists whose birth year is earlier than the average birth year.
 56. Find all museums that have at least one Impressionist work.
 57. List artworks whose sale price is above the average sale price.
 58. Find artists who have no recorded death year.
 59. Get the museum that holds the maximum number of works.
 60. Find all artworks that share the same style as "Still Life with Flowers and a Watch".
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10 SQL Subquery Questions

1. Find all artists whose total number of artworks is **greater than the average** number of artworks created by all artists.

2. List artworks whose price is **higher than the average price** of artworks in the same museum.
 3. Show the **museum(s)** that display the **most expensive artwork** overall.
 4. Retrieve the **artist name** who created the **oldest artwork** in the database.
 5. Find all artworks that belong to artists who have **more than 5 paintings**.
 6. List all artworks whose **museum_id** matches museums located in **'Paris'**.
 7. Show all artworks that are **larger than the average canvas size** for their medium.
 8. Find the **names of artists** who have **never sold an artwork** (assuming a **work** is unsold if it has no price).
 9. Retrieve the **names of museums** that host artworks by artists from **Italy**.
 10. Find the **subject(s)** that appear in artworks with prices **above the 90th percentile** of all artwork prices.
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15 SQL CTE (Common Table Expression) Questions

1. Use a CTE to list each artist and the **total number of artworks** they created.
2. Create a CTE that finds the **average artwork price per museum**, then select museums where the average price > \$10,000.
3. Build a CTE that calculates the **rank of artworks** by price within each museum.
4. Using a CTE, calculate the **average artwork size** by canvas type.
5. Create a CTE that finds **artists with multiple artworks in different museums**.
6. With a CTE, compute **total artworks per subject** and filter subjects appearing in more than 3 artworks.
7. Use a recursive CTE to generate a **series of exhibition years** from 1900 to 2025.
8. Use a CTE to find **artists with above-average artwork prices**.
9. Build a CTE to find the **most common subject** for each artist.

10. Use a CTE to find **museums that are open on Sundays** and display at least one artwork.
 11. Create a CTE to find **top 5 most expensive artworks** and the artists who made them.
 12. Use a CTE to calculate the **percentage contribution** of each artwork's price to the artist's total earnings.
 13. Use multiple CTEs: one for **average artwork price**, one for **average artwork size**, and join them.
 14. Use a CTE to list artists whose **first recorded artwork** (min year) was before 1950.
 15. Create a CTE to find the **largest canvas dimensions** per artwork type.
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15 Stored Procedure Questions

(You can create these in MySQL, PostgreSQL, or SQL Server syntax — examples below are general.)

1. Write a stored procedure `GetArtistWorks(artist_name)` that returns all artworks by a given artist.
2. Create a stored procedure `GetMuseumArtworks(museum_name)` that lists all artworks displayed in a given museum.
3. Write a stored procedure `GetTopExpensiveArtworks(limit_count)` that returns the top n most expensive artworks.
4. Write a stored procedure `GetArtistTotalValue(artist_name)` that returns the total market value of all artworks by that artist.
5. Write a stored procedure `GetAveragePriceBySubject(subject_name)` that calculates the average artwork price for a given subject.
6. Create a procedure `GetArtworksByYearRange(start_year, end_year)` to list artworks created between two years.
7. Write a procedure `UpdateArtworkPrice(artwork_id, new_price)` that updates the price of an artwork.

8. Create a procedure `AddNewArtist(name, country, birth_year)` that inserts a new record into the artist table.
 9. Write a procedure `DeleteArtwork(artwork_id)` that removes an artwork and related references.
 10. Create a procedure `GetArtistMuseumCount(artist_name)` that counts how many museums host artworks by a given artist.
 11. Write a procedure `ListArtistsAboveAvgValue()` that lists all artists whose total artwork price is above average.
 12. Write a procedure `GetMuseumRevenue(museum_name)` that sums the total price of all artworks in that museum.
 13. Create a procedure `GetArtworksByCanvasSize(min_height, min_width)` to return artworks exceeding those dimensions.
 14. Write a procedure `GetTopSubjectByArtist(artist_name)` to find the most frequent subject associated with that artist's works.
 15. Write a procedure `GetCountryArtStats(country_name)` that summarizes (count, avg price, max price) for all artworks from that country's artists.
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