

SQL PROJECT 2

-- Joining Tables:

- 1. Retrieve the full name of artists along with the names of the museums where their works are displayed.

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7
8
9  -- Joining Tables:
10 -- 1. Retrieve the full name of artists along with the names of the museums where their works are displayed.
11 • select full_name, m.name from artist a
12     inner join work w on
13     a.artist_id=w.artist_id
14     inner join museum m on
15     w.museum_id=m.museum_id ;
16
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

| full_name | name |
|---------------------|--------------------------------|
| Alexandre Cabanel | Musée d'Orsay |
| Alexandre Cabanel | The Metropolitan Museum of Art |
| Alexandre Cabanel | The Metropolitan Museum of Art |
| Alexandre Cabanel | Philadelphia Museum of Art |
| Alfred Henry Maurer | The Barnes Foundation |
| Alfred Henry Maurer | The Barnes Foundation |

Result 14 x

-- 2. Group By and Count:

- How many works does each artist have in the database? Display the artist's full name along with the count of their works, ordered by the count in descending order.

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19
20 -- 2. Group By and Count:
21 -- How many works does each artist have in the database? Display the artist's full name along with the count of their works,
22 -- ordered by the count in descending order.
23 • select full_name, count(w.work_id) as workcount from artist a
24     left join work w on
25     a.artist_id=w.artist_id
26     group by full_name
27     order by workcount desc;
28
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

| full_name | workcount |
|-----------------------|-----------|
| Pierre-Auguste Renoir | 469 |
| Claude Monet | 378 |
| Vincent Van Gogh | 308 |
| Maurice Utrillo | 253 |
| Albert Marquet | 233 |
| Henri Lebasque | 200 |

Result 15 x

-- 3. Order By and Limit:

-- List the top 5 museums with the highest number of works displayed in the database, along with their respective counts.

```
30 -- 3. Order By and Limit:
31 -- List the top 5 museums with the highest number of works displayed in the database, along with their respective counts.
32
33 • select m.name, count(w.work_id) as totalworks from museum m
34 left join work w on
35 m.museum_id=w.museum_id
36 group by m.name
37 order by totalworks desc
38 limit 5;
39
```

| name | totalworks |
|--------------------------------|------------|
| The Metropolitan Museum of Art | 939 |
| Rijksmuseum | 452 |
| National Gallery | 423 |
| National Gallery of Art | 375 |
| The Barnes Foundation | 350 |

-- 4. Join, Order By, and Limit:

-- Display the names and styles of the works along with the corresponding museum names, ordered by the museum name in ascending order. Limit the results to 10.

```
41 -- 4. Join, Order By, and Limit:
42 -- Display the names and styles of the works along with the corresponding museum names, ordered by the museum name in ascending order.
43 -- Limit the results to 10.
44
45 • select w.name, w.style, m.name from work w
46 inner join museum m on
47 m.museum_id=w.museum_id
48 order by m.name asc
49 limit 10;
50
```

| name | style | name |
|---|---------------|-------------------------|
| Verdun | Nabi | Army Museum |
| Window | Impressionism | Chrysler Museum of Art |
| Saint Ambrose | Romanticism | Cleveland Museum Of Art |
| Portrait of George Pitt, First Baron Rivers | Rococo | Cleveland Museum Of Art |
| Peregrine Falcons (Duck Hawks) | Naturalism | Cleveland Museum Of Art |
| Symbolic Head | Symbolism | Cleveland Museum Of Art |
| Edvard Munch's The Scream, Part 1 | Expressionism | Cleveland Museum Of Art |

-- 5.Join, Group By, and Sum:

-- Show the total sale price for each artist's works. Display the artist's full name along with the total sale price, ordered by the total sale price in descending order.

```
54 -- 5.Join, Group By, and Sum:
55 -- Show the total sale price for each artist's works. Display the artist's full name along with the total sale price, ordered by the
56 -- total sale price in descending order.
57 • select a.full_name ,concat(p.sale_price) as total_sale_price from artist a
58 inner join work w on
59 w.artist_id=a.artist_id
60 inner join product_size p on
61 p.work_id=w.work_id
62 order by total_sale_price desc;
63
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

| | full_name | total_sale_price |
|---|--------------------|------------------|
| ▶ | Paul Gauguin | 995 |
| | Paul Gauguin | 995 |
| | Peter Paul Rubens | 995 |
| | Peter Paul Rubens | 995 |
| | Paul Klee | 985 |
| | Claude Monet | 985 |
| | Lucas Cranach | 985 |
| | John James Audubon | 985 |
| | John James Audubon | 985 |
| | ... | ... |

Result 26

-- 6. Join, Group By, and Having:

-- List artists who have more than 3 works in the database, along with the count of their works.

```
64
65 -- 6. Join, Group By, and Having:
66 -- List artists who have more than 3 works in the database, along with the count of their works.
67 • select a.full_name, count(w.work_id) as workcount from artist a
68 inner join work w on
69 w.artist_id=a.artist_id
70 group by full_name
71 having workcount>3
72 order by workcount;
73
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

| | full_name | workcount |
|---|-------------------------|-----------|
| ▶ | Alexey Savrasov | 4 |
| | Carel Fabritius | 4 |
| | Cecilia Beaux | 4 |
| | Charles Cromwell Ingham | 4 |
| | Cornelis Van Haarlem | 4 |
| | Ferdinand Bol | 4 |
| | Frans Jansz Post | 4 |
| | Jan Brueghel | 4 |
| | John Cleveley | 4 |
| | ... | ... |

Result 28

-- 7. Join, Where, and Order By:

-- Retrieve the names of works and their corresponding artists' full names for works that have a sale price smaller than their regular price.

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75
76 -- 7. Join, Where, and Order By:
77 -- Retrieve the names of works and their corresponding artists' full names for works that have a sale price smaller than their regular price.
78 • select a.full_name as artistname, w.name as worksname ,p.sale_price,p.regular_price from artist a
79 inner join work w on
80 w.artist_id=a.artist_id
81 inner join product_size p on
82 w.work_id=p.work_id
83 having p.sale_price < p.regular_price;
84
85
```

| Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows: |
|---------------|----------------------------------|------------|--------------------|-------------|
| artistname | worksname | sale_price | regular_price | |
| Albrecht Adam | Arabian Horses at Pasture | 305 | 535 | |
| Albrecht Adam | Arabian Horses at Pasture | 325 | 575 | |
| Albrecht Adam | Arabian Horses at Pasture | 375 | 675 | |
| Albrecht Adam | Arabian Horses at Pasture | 405 | 735 | |
| Albrecht Adam | Arabian Horses at Pasture | 495 | 915 | |
| Albrecht Adam | Arabian Horses at Pasture | 675 | 1275 | |
| Albrecht Adam | Arabian Horses at Pasture | 805 | 1535 | |
| Albrecht Adam | Count Halm on His Basedow Estate | 335 | 595 | |
| Albrecht Adam | Count Halm on His Basedow Estate | 425 | 775 | |

-- 8. Join, Group By, and Average:

-- Calculate the average height and width of the artworks in the database.
Display the average height and width.

```
86 -- 8. Join, Group By, and Average:
87 -- Calculate the average height and width of the artworks in the database. Display the average height and width.
88 • select avg(height) as avgheight,
89 avg(width) as avgwidth from canvas_size;
90
91
```

| Result Grid | Filter Rows: | Export: | Wrap Cell Content: |
|--------------------|--------------|---------|--------------------|
| avgheight | avgwidth | | |
| 36.917098445595855 | 38.0300 | | |

-- Join, Group By, and Max:

-- 9 Find the maximum sale price among all the works in each museum. Display the museum name along with the maximum sale price.

```
90
91
92
93
94 -- Join, Group By, and Max:
95 -- 9 Find the maximum sale price among all the works in each museum. Display the museum name along with the maximum sale price.
96 • select max(p.sale_price) as max_sale_price, m.name as museum_name from museum m
97 inner join work w on
98 m.museum_id=w.museum_id
99 inner join product_size p on
100 p.work_id=w.work_id
101 group by museum_name;
102
103
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [IA](#)

| max_sale_price | museum_name |
|----------------|----------------------------------|
| 1055 | Rijksmuseum |
| 1005 | The State Hermitage Museum |
| 1025 | Los Angeles County Museum of Art |
| 1005 | The Metropolitan Museum of Art |
| 925 | Musée du Louvre |
| 1025 | National Gallery of Art |
| 1085 | National Gallery |
| 1005 | The Tate Gallery |
| 1025 | The J. Paul Getty Museum |

Result 37 x

-- Join, Group By, and Concatenate:

-- 10. Concatenate the first name and last name of artists along with their nationality, separated by a comma. Display the concatenated string along with the count of works by each artist, ordered by the count in descending order.

```
03
04 -- Join, Group By, and Concatenate:
05 -- 10. Concatenate the first name and last name of artists along with their nationality, separated by a comma.
06 -- Display the concatenated string along with the count of works by each artist, ordered by the count in descending order.
07
08 • select * from artist;
09 • select concat_ws(' ',a.first_name,a.last_name,',',a.nationality) as artist_name,
10 count(w.work_id) as workcount
11 from artist a
12 inner join work w on
13 w.artist_id=a.artist_id
14 group by artist_name
15 order by workcount desc;
16
17
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [IA](#)

| artist_name | workcount |
|---------------------------|-----------|
| Pierre Renoir , French | 469 |
| Claude Monet , French | 378 |
| Vincent Van Gogh , Dutch | 308 |
| Maurice Utrillo , French | 253 |
| Albert Marquet , French | 233 |
| Henri Lebasque , French | 200 |
| Camille Pissarro , French | 188 |
| Louis Valtat , French | 184 |
| Maximilien Luce , French | 174 |

Result 44 x

