Music Store data analysis Project using SQL

1. Who is the senior most employee based on job title?

```
Q1:Who is the senior most employee based on job title?
select * from employee
order by levels DESC
limit 1;
```

Data Output | Messages | Notifications

	employee_id [PK] character varying (50)	last_name character	first_name character	title character varying (50)	reports_to character varying (30)	levels character varying (10)
1	9	Madan	Mohan	Senior General Manager	[null]	L7

2. Which countries have the most Invoices?

Query | Query History

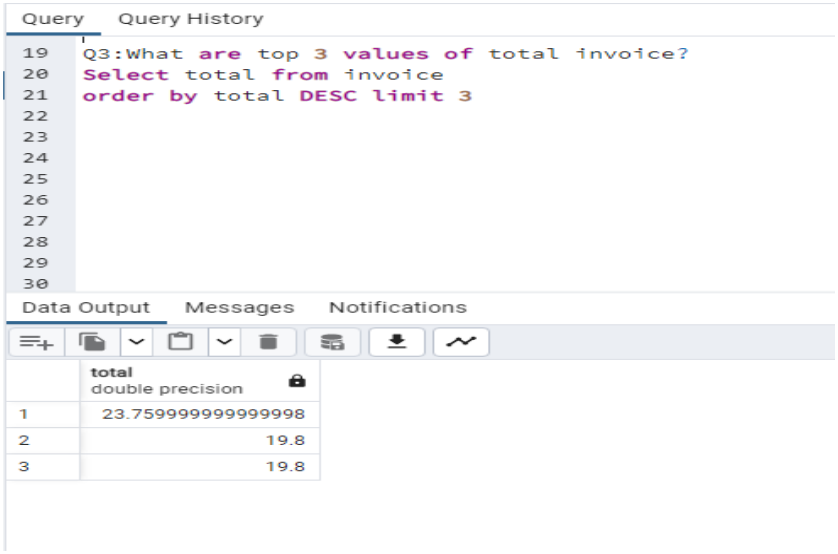
```
Q2: Which countries have the most Invoices?
Select count(*) as Count_of_country,
billing_country from invoice
Group by billing_country
order by Count_of_country desc;
```

Data Output | Messages | Notifications

	count_of_country bigint	billing_country character varying (30)
1	131	USA
2	76	Canada
3	61	Brazil
4	50	France
5	41	Germany
6	30	Czech Republic
7	29	Portugal

Total rows: 24 of 24 | Query complete 00:00:00.082

3. What are top 3 values of total invoice?



```
Query  Query History
19  Q3:What are top 3 values of total invoice?
20  Select total from invoice
21  order by total DESC limit 3
22
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30
```
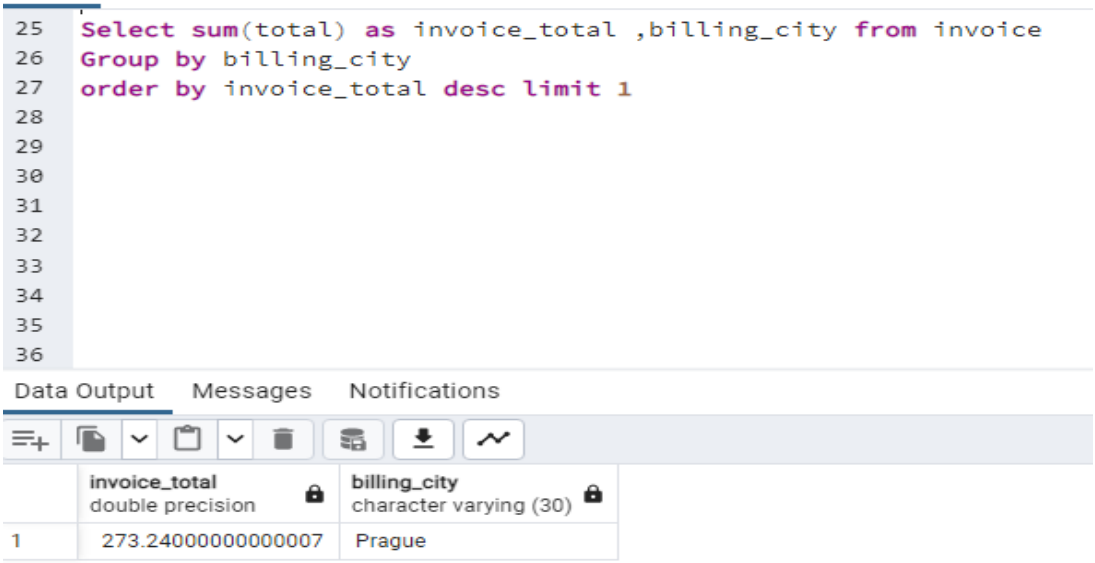

Data Output | Messages | Notifications

	total double precision
1	23.759999999999998
2	19.8
3	19.8

Q4 . Which city has the best customers? We would like to throw a promotional Music Festival in the city we made the most money. Write a query that returns one city that has the highest sum of invoice totals. Return both the city name & sum of all invoice totals.



```
25  Select sum(total) as invoice_total ,billing_city from invoice
26  Group by billing_city
27  order by invoice_total desc limit 1
28
29
30
31
32
33
34
35
36
```

Data Output | Messages | Notifications

	invoice_total double precision	billing_city character varying (30)
1	273.24000000000007	Prague

Q5. Who is the best customer? The customer who has spent the most money will be declared the best customer. Write a query that returns the person who has spent the most money

```
select c.customer_id,c.first_name, c.last_name,sum(bill.total) as total
from customer as c
left join invoice as bill ON c.customer_id = bill.customer_id
Group by c.customer_id
order by total desc
limit 1
```

Data Output | Messages | Notifications

	customer_id [PK] integer	first_name character	last_name character	total double precision
1	5	R	Madhav	144.54000000000002

Q6. Write query to return the email, first name, last name, & Genre of all Rock Music listeners. Return your list ordered alphabetically by email starting with A

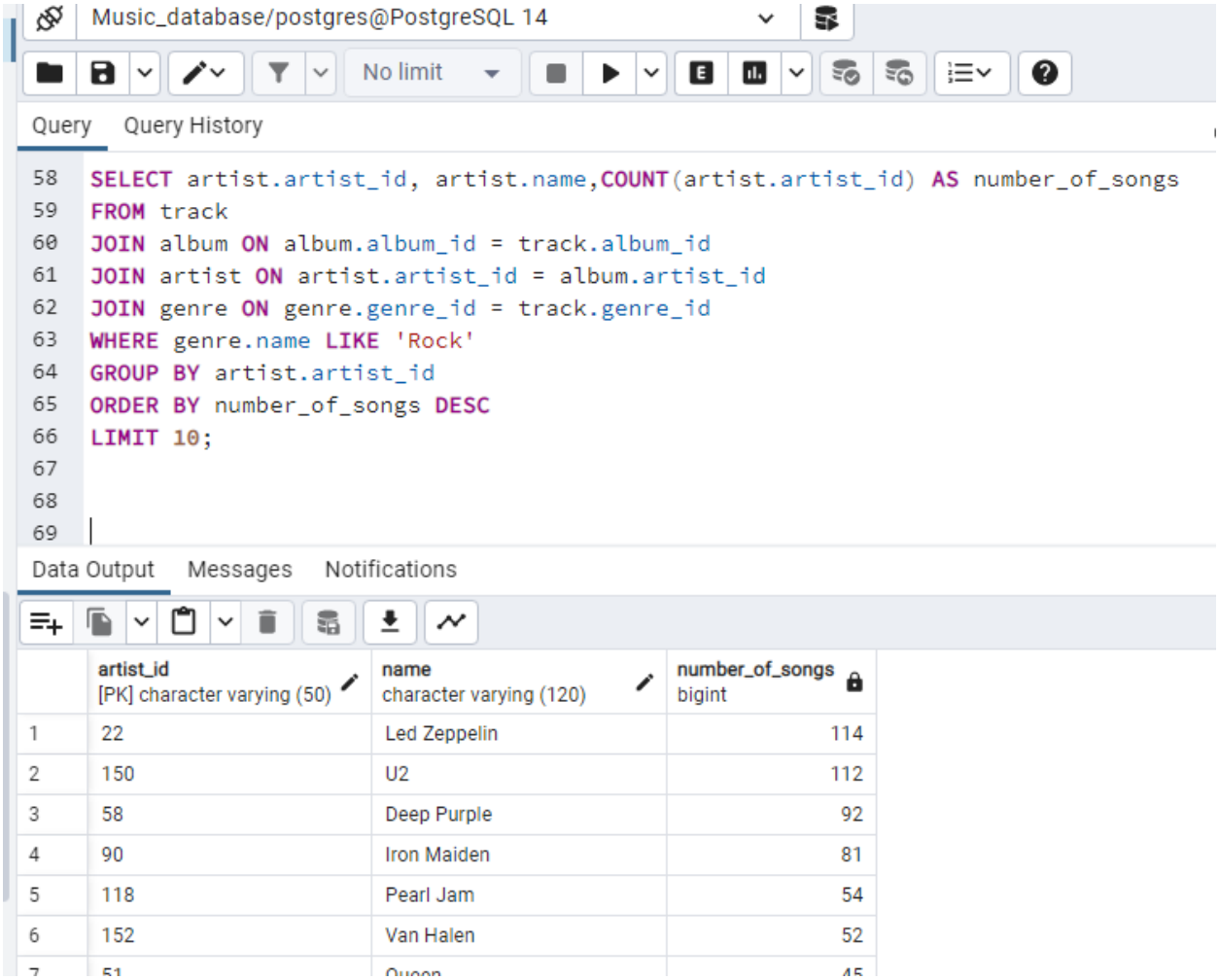
Query | Query History

```
SELECT DISTINCT email,first_name, last_name
FROM customer
JOIN invoice ON customer.customer_id = invoice.customer_id
JOIN invoice_line ON invoice.invoice_id = invoice_line.invoice_id
WHERE track_id IN(
    SELECT track_id FROM track
    JOIN genre ON track.genre_id = genre.genre_id
    WHERE genre.name LIKE 'Rock'
)
ORDER BY email;
```

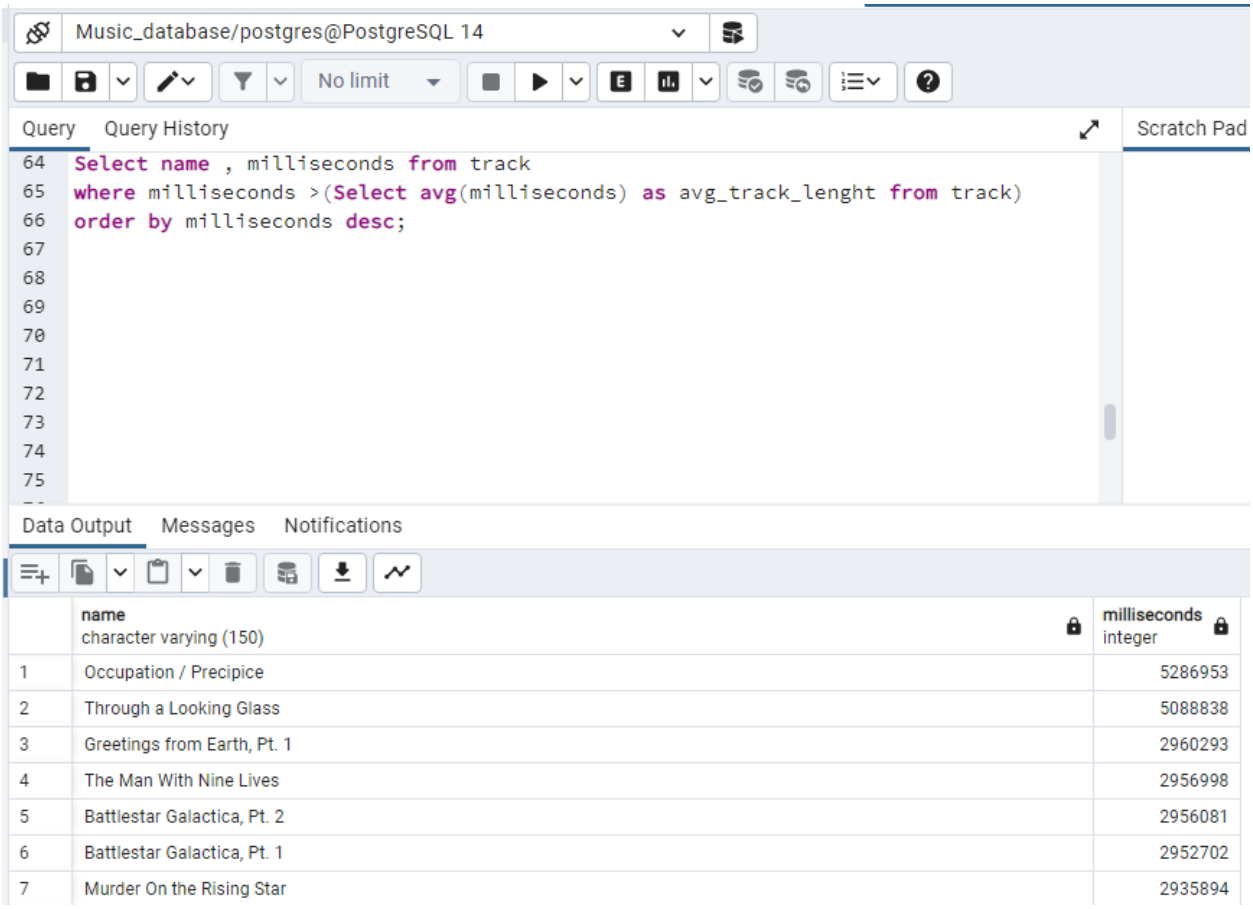
Data Output | Messages | Notifications

	email character varying (50)	first_name character	last_name character
1	aaronmitchell@yahoo.ca	Aaron	Mitchell
2	alero@uol.com.br	Alexandre	Rocha
3	astrid.gruber@apple.at	Astrid	Gruber
4	bjorn.hansen@yahoo.no	Bjørn	Hansen
5	camille.bernard@yahoo.fr	Camille	Bernard
6	daan_peeters@apple.be	Daan	Peeters
7	diego.gutierrez@yahoo.ar	Diego	Gutiérrez

Q7. Let's invite the artists who have written the most rock music in our dataset. Write a query that returns the Artist name and total track count of the top 10 rock bands



Q8. Return all the track names that have a song length longer than the average song length. Return the Name and Milliseconds for each track. Order by the song length with the longest songs listed first



	name character varying (150)	milliseconds integer
1	Occupation / Precipice	5286953
2	Through a Looking Glass	5088838
3	Greetings from Earth, Pt. 1	2960293
4	The Man With Nine Lives	2956998
5	Battlestar Galactica, Pt. 2	2956081
6	Battlestar Galactica, Pt. 1	2952702
7	Murder On the Rising Star	2935894

Q9. Find how much amount spent by each customer on artists? Write a query to return customer name, artist name and total spent.

```
WITH best_selling_artist AS (
        SELECT artist.artist_id AS artist_id, artist.name AS artist_name,
SUM(invoice_line.unit_price*invoice_line.quantity) AS total_sales
        FROM invoice_line
        JOIN track ON track.track_id = invoice_line.track_id
```

```
        JOIN album ON album.album_id = track.album_id
        JOIN artist ON artist.artist_id = album.artist_id
        GROUP BY 1
        ORDER BY 3 DESC
        LIMIT 1
)
SELECT c.customer_id, c.first_name, c.last_name, bsa.artist_name, SUM(il.unit_price*il.quantity) AS amount_spent
FROM invoice i
JOIN customer c ON c.customer_id = i.customer_id
JOIN invoice_line il ON il.invoice_id = i.invoice_id
JOIN track t ON t.track_id = il.track_id
JOIN album alb ON alb.album_id = t.album_id
JOIN best_selling_artist bsa ON bsa.artist_id = alb.artist_id
GROUP BY 1,2,3,4
ORDER BY 5 DESC;
```

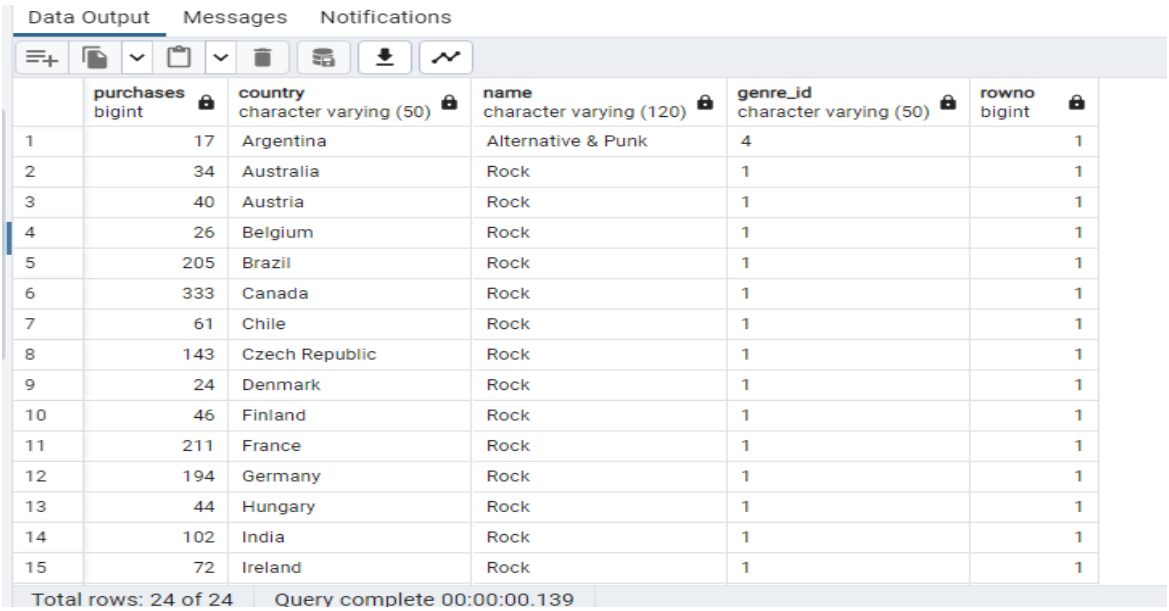
Data Output | Messages | Notifications

	customer_id integer	first_name character	last_name character	artist_name character varying (120)	amount_spent double precision
1	46	Hugh	O'Reilly	Queen	27.719999999999985
2	38	Niklas	Schröder	Queen	18.81
3	3	François	Tremblay	Queen	17.82
4	34	João	Fernandes	Queen	16.830000000000002
5	53	Phil	Hughes	Queen	11.88
6	41	Marc	Dubois	Queen	11.88
7	47	Lucas	Mancini	Queen	10.89
8	33	Ellie	Sullivan	Queen	10.89
9	20	Dan	Miller	Queen	3.96
10	5	R	Madhav	Queen	3.96
11	23	John	Gordon	Queen	2.9699999999999998
12	54	Steve	Murray	Queen	2.9699999999999998
13	31	Martha	Silk	Queen	2.9699999999999998
14	16	Frank	Harris	Queen	1.98

Total rows: 43 of 43 | Query complete 00:00:00.093

Q10. We want to find out the most popular music Genre for each country. We determine the most popular genre as the genre with the highest amount of purchases. Write a query that returns each country along with the top Genre. For countries where the maximum number of purchases is shared return all Genres.

```
WITH popular_genre AS
(
   SELECT COUNT(invoice_line.quantity) AS purchases, customer.country, genre.name, genre.genre_id,
          ROW_NUMBER() OVER(PARTITION BY customer.country ORDER BY
COUNT(invoice_line.quantity) DESC) AS RowNo
   FROM invoice_line
          JOIN invoice ON invoice.invoice_id = invoice_line.invoice_id
          JOIN customer ON customer.customer_id = invoice.customer_id
          JOIN track ON track.track_id = invoice_line.track_id
          JOIN genre ON genre.genre_id = track.genre_id
          GROUP BY 2,3,4
          ORDER BY 2 ASC, 1 DESC
)
SELECT * FROM popular_genre WHERE RowNo <= 1
```



Data Output | Messages | Notifications

	purchases bigint	country character varying (50)	name character varying (120)	genre_id character varying (50)	rowno bigint
1	17	Argentina	Alternative & Punk	4	1
2	34	Australia	Rock	1	1
3	40	Austria	Rock	1	1
4	26	Belgium	Rock	1	1
5	205	Brazil	Rock	1	1
6	333	Canada	Rock	1	1
7	61	Chile	Rock	1	1
8	143	Czech Republic	Rock	1	1
9	24	Denmark	Rock	1	1
10	46	Finland	Rock	1	1
11	211	France	Rock	1	1
12	194	Germany	Rock	1	1
13	44	Hungary	Rock	1	1
14	102	India	Rock	1	1
15	72	Ireland	Rock	1	1

Total rows: 24 of 24 Query complete 00:00:00.139