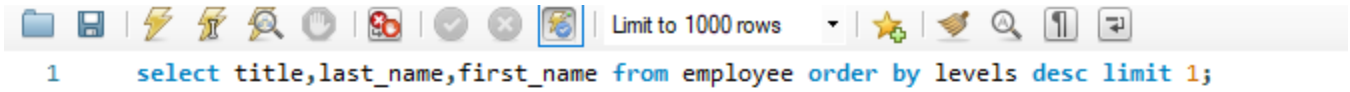
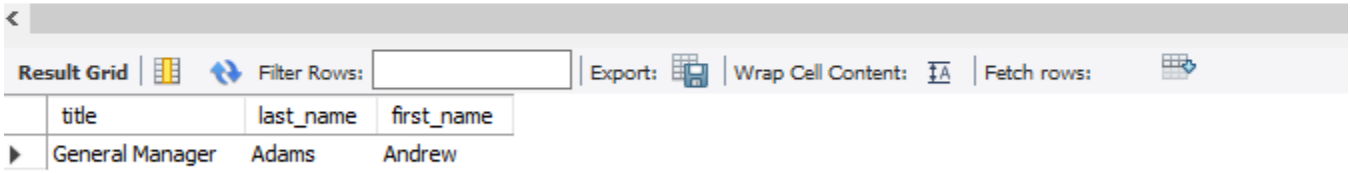
MUSIC STORE DATA ANALYSIS

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

Ans.

select title,last_name,first_name from employee order by levels desc limit 1;



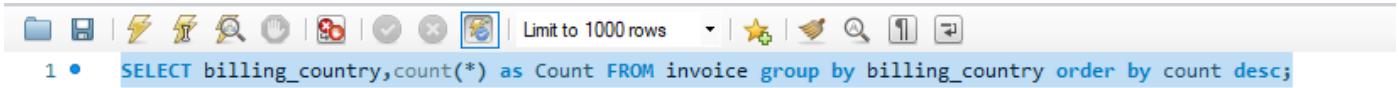


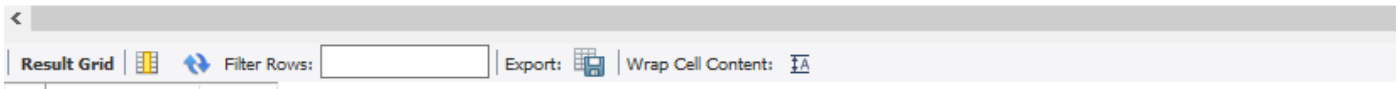
title	last_name	first_name
General Manager	Adams	Andrew

2. Which countries have the most Invoices.

Ans.

SELECT billing_country,count(*) as Count FROM invoice group by billing_country order by count desc;



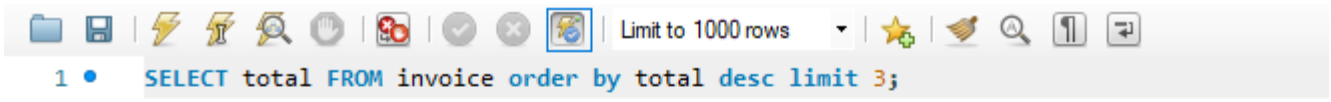


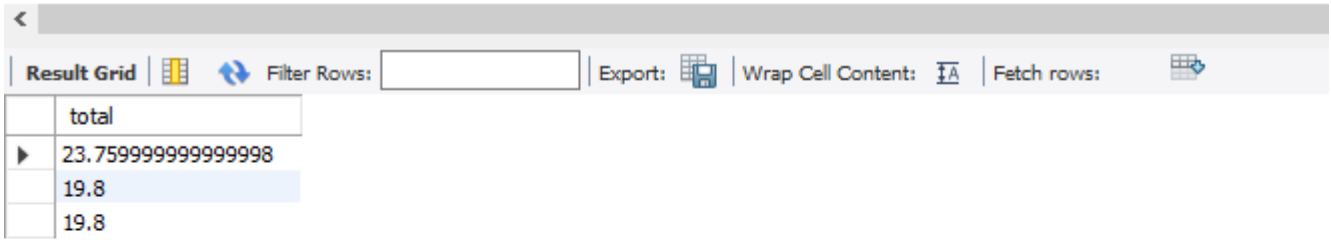
billing_country	Count
USA	131
Canada	76
Brazil	61
France	50
Germany	41
Czech Republic	30
Portugal	29
United Kingdom	28
India	21
Ireland	13
Chile	13

3. What are top 3 values of total invoice.

Ans.

SELECT total FROM invoice order by total desc limit 3;

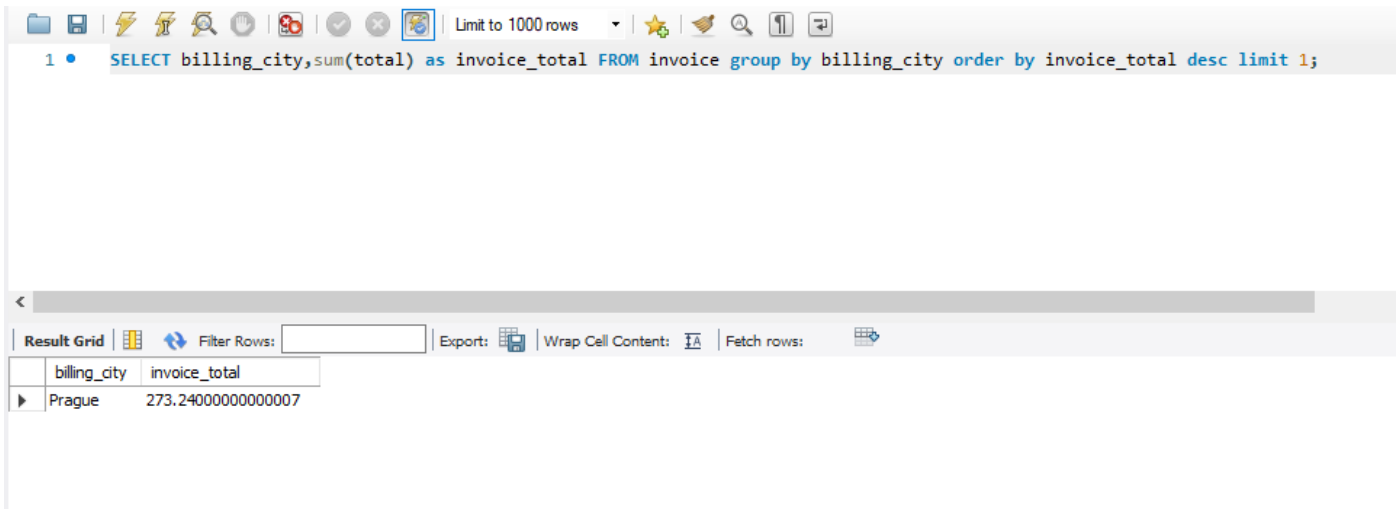




4. Which city has the best customers? We would like to throw a promotional Music Festival in the city we made the most money. Write a query that returns one city that has the highest sum of invoice totals. Return both the city name & sum of all invoice totals.

Ans.

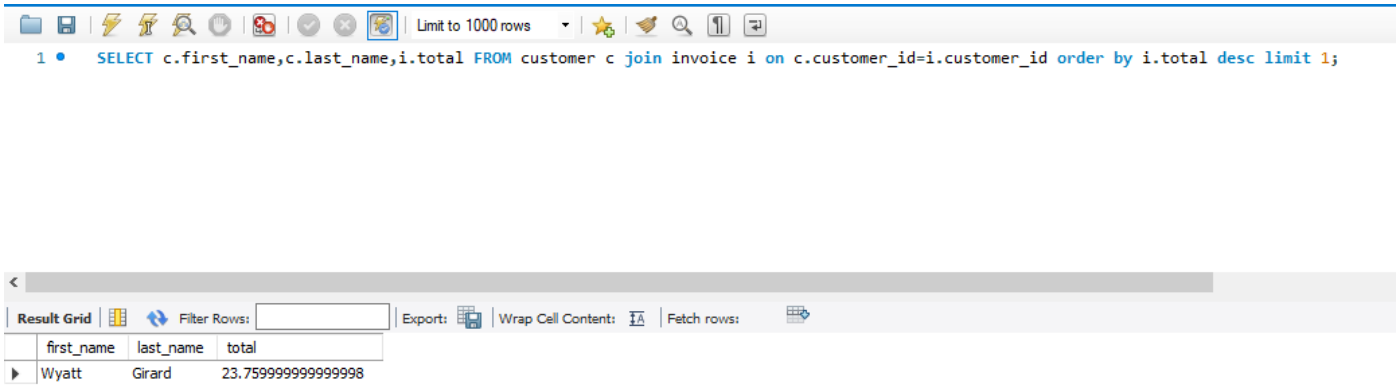
SELECT billing_city,sum(total) as invoice_total FROM invoice group by billing_city order by invoice_total desc limit 1;



5. 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.

Ans.

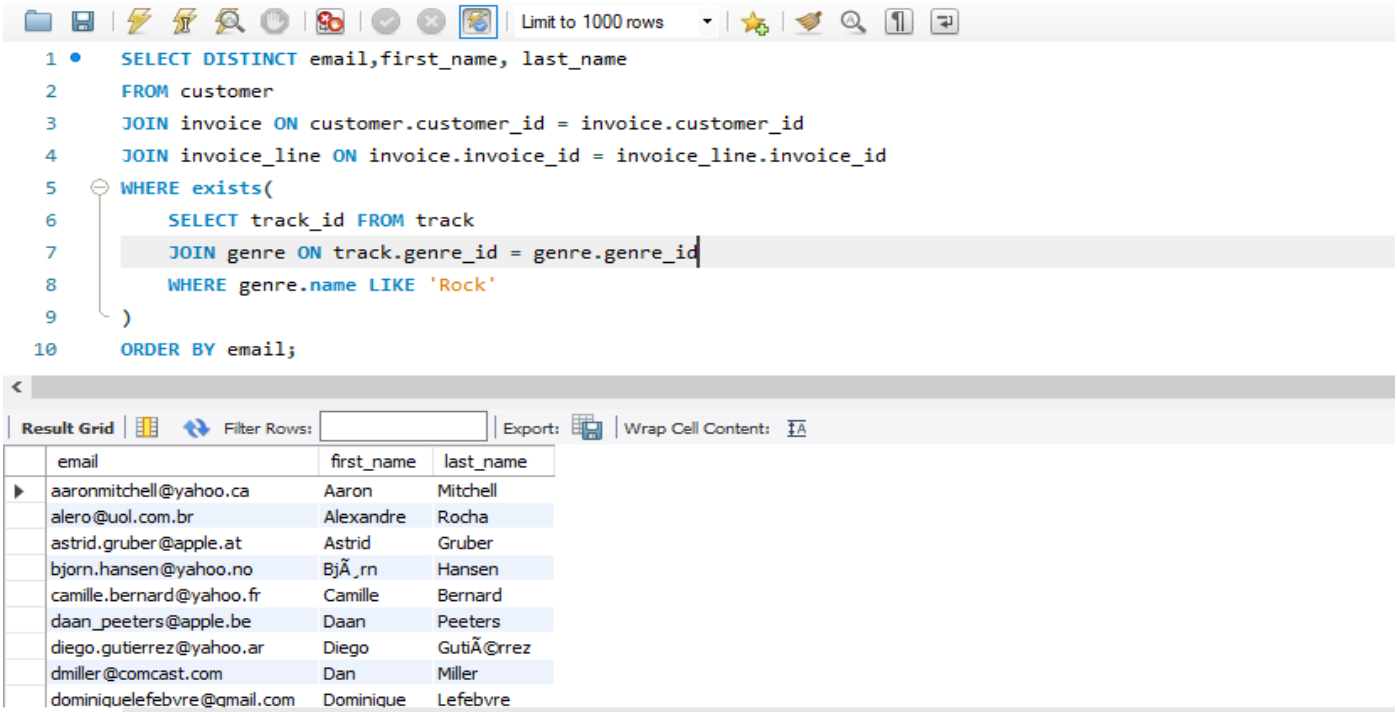
SELECT c.first_name,c.last_name,i.total FROM customer c join invoice i on c.customer_id=i.customer_id order by i.total desc limit 1;



6. 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.

Ans.

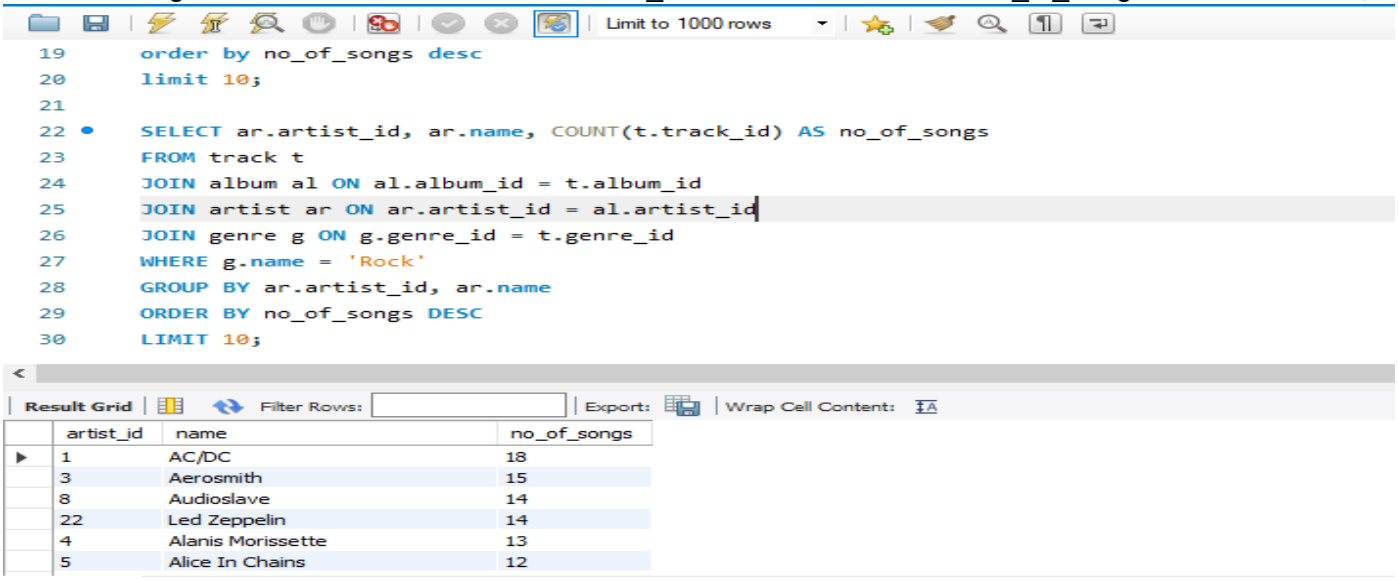
SELECT DISTINCT email,first_name, last_name FROM customer
JOIN invoice ON customer.customer_id = invoice.customer_id
JOIN invoice_line ON invoice.invoice_id = invoice_line.invoice_id
WHERE exists (SELECT track_id FROM track JOIN genre ON track.genre_id = genre.genre_id
WHERE genre.name LIKE 'Rock') ORDER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



7. 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.

Ans.

SELECT ar.artist_id, ar.name, COUNT(t.track_id) AS no_of_songs FROM track t
JOIN album al ON al.album_id = t.album_id
JOIN artist ar ON ar.artist_id = al.artist_id
JOIN genre g ON g.genre_id = t.genre_id
WHERE g.name = 'Rock' GROUP BY ar.artist_id, ar.name ORDER BY no_of_songs DESC LIMIT 10;



```
19      order by no_of_songs desc
20      limit 10;
21
22      SELECT ar.artist_id, ar.name, COUNT(t.track_id) AS no_of_songs
23      FROM track t
24      JOIN album al ON al.album_id = t.album_id
25      JOIN artist ar ON ar.artist_id = al.artist_id
26      JOIN genre g ON g.genre_id = t.genre_id
27      WHERE g.name = 'Rock'
28      GROUP BY ar.artist_id, ar.name
29      ORDER BY no_of_songs DESC
30      LIMIT 10;
```

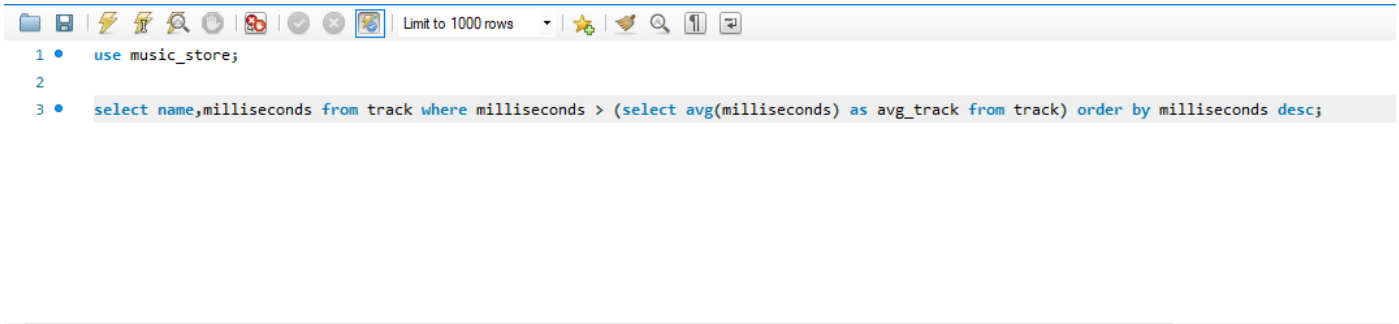
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

artist_id	name	no_of_songs
1	AC/DC	18
3	Aerosmith	15
8	Audioslave	14
22	Led Zeppelin	14
4	Alanis Morissette	13
5	Alice In Chains	12

8. 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.

Ans.

select name,milliseconds from track where milliseconds > (select avg(milliseconds) as avg_track from track) order by milliseconds desc;



```
1   use music_store;
2
3   select name,milliseconds from track where milliseconds > (select avg(milliseconds) as avg_track from track) order by milliseconds desc;
```

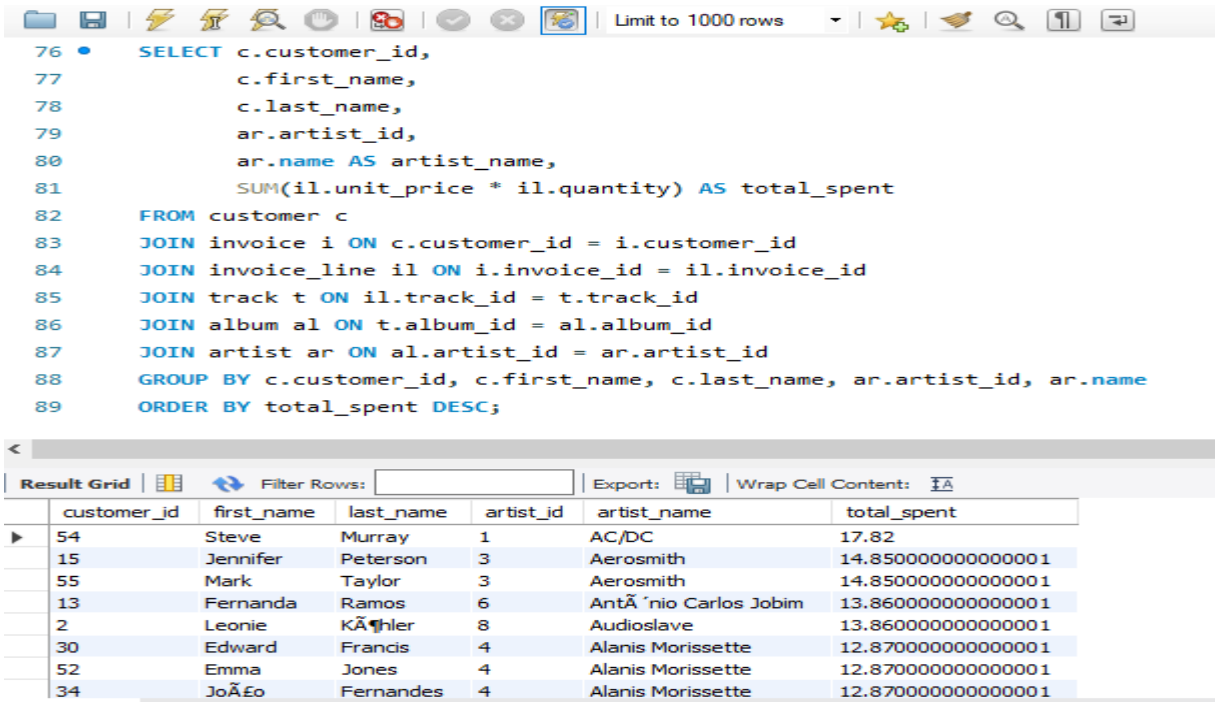
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

name	milliseconds
How Many More Times	711836
Advance Romance	677694
Sleeping Village	644571
You Shook Me(2)	619467
Talkin' 'Bout Women Obviously	589531
Stratus	582086
No More Tears	555075
The Alchemist	509413
Wheels Of Confusion / The Straightener	494524

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

Ans.

SELECT c.customer_id, c.first_name, c.last_name, ar.artist_id, ar.name AS artist_name, SUM(il.unit_price * il.quantity) AS total_spent FROM customer c
JOIN invoice i ON c.customer_id = i.customer_id
JOIN invoice_line il ON i.invoice_id = il.invoice_id
JOIN track t ON il.track_id = t.track_id
JOIN album al ON t.album_id = al.album_id
JOIN artist ar ON al.artist_id = ar.artist_id
GROUP BY c.customer_id, c.first_name, c.last_name, ar.artist_id, ar.name
ORDER BY total_spent DESC;



```
Limit to 1000 rows

76  SELECT c.customer_id,
77         c.first_name,
78         c.last_name,
79         ar.artist_id,
80         ar.name AS artist_name,
81         SUM(il.unit_price * il.quantity) AS total_spent
82  FROM customer c
83  JOIN invoice i ON c.customer_id = i.customer_id
84  JOIN invoice_line il ON i.invoice_id = il.invoice_id
85  JOIN track t ON il.track_id = t.track_id
86  JOIN album al ON t.album_id = al.album_id
87  JOIN artist ar ON al.artist_id = ar.artist_id
88  GROUP BY c.customer_id, c.first_name, c.last_name, ar.artist_id, ar.name
89  ORDER BY total_spent DESC;
```

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

customer_id	first_name	last_name	artist_id	artist_name	total_spent
54	Steve	Murray	1	AC/DC	17.82
15	Jennifer	Peterson	3	Aerosmith	14.850000000000001
55	Mark	Taylor	3	Aerosmith	14.850000000000001
13	Fernanda	Ramos	6	AntÃ´nio Carlos Jobim	13.860000000000001
2	Leonie	KÃ¶hler	8	Audioslave	13.860000000000001
30	Edward	Francis	4	Alanis Morissette	12.870000000000001
52	Emma	Jones	4	Alanis Morissette	12.870000000000001
34	JoÃ£o	Fernandes	4	Alanis Morissette	12.870000000000001

10. 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.

Ans.

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

```
92
93  WITH popular_genre AS
94  (
95      SELECT COUNT(invoice_line.quantity) AS purchases, customer.country, genre.name, genre.genre_id,
96      ROW_NUMBER() OVER(PARTITION BY customer.country ORDER BY COUNT(invoice_line.quantity) DESC) AS RowNo
97      FROM invoice_line
98      JOIN invoice ON invoice.invoice_id = invoice_line.invoice_id
99      JOIN customer ON customer.customer_id = invoice.customer_id
100     JOIN track ON track.track_id = invoice_line.track_id
101     JOIN genre ON genre.genre_id = track.genre_id
102     GROUP BY 2,3,4
103     ORDER BY 2 ASC, 1 DESC
104 )
105 SELECT * FROM popular_genre WHERE RowNo <= 1
```

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

purchases	country	name	genre_id	RowNo
1	Argentina	Rock	1	1
18	Australia	Rock	1	1
6	Austria	Rock	1	1
5	Belgium	Rock	1	1
26	Brazil	Rock	1	1
57	Canada	Rock	1	1
7	Chile	Rock	1	1
14	Czech Republic	Rock	1	1

11. Write a query that determines the customer that has spent the most on music for each country. Write a query that returns the country along with the top customer and how much they spent. For countries where the top amount spent is shared, provide all customers who spent this amount.

Ans.

```
WITH RECURSIVE customter_with_country AS (
        SELECT customer.customer_id,first_name,last_name,billing_country,SUM(total) AS
total_spending
FROM invoice
        JOIN customer ON customer.customer_id = invoice.customer_id
        GROUP BY 1,2,3,4 ORDER BY 2,3 DESC),country_max_spending AS(
        SELECT billing_country,MAX(total_spending) AS max_spending
        FROM customter_with_country GROUP BY billing_country)

SELECT cc.billing_country, cc.total_spending, cc.first_name, cc.last_name, cc.customer_id
FROM customter_with_country cc
JOIN country_max_spending ms
ON cc.billing_country = ms.billing_country
WHERE cc.total_spending = ms.max_spending
ORDER BY 1;
```

```
144         GROUP BY 1,2,3,4
145         ORDER BY 2,3 DESC),
146
147     country_max_spending AS(
148         SELECT billing_country,MAX(total_spending) AS max_spending
149         FROM customter_with_country
150         GROUP BY billing_country)
151
152 SELECT cc.billing_country, cc.total_spending, cc.first_name, cc.last_name, cc.customer_id
153 FROM customter_with_country cc
154 JOIN country_max_spending ms
155 ON cc.billing_country = ms.billing_country
156 WHERE cc.total_spending = ms.max_spending
157 ORDER BY 1;
```

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

billing_country	total_spending	first_name	last_name	customer_id
Argentina	39.6	Diego	GutiÃ©rrez	56
Australia	81.18	Mark	Taylor	55
Austria	69.3	Astrid	Gruber	7
Belgium	60.38999999999999	Daan	Peeters	8
Brazil	108.89999999999998	LuÃ-s	GonÃ§alves	1
Canada	99.99	FranÃ§ois	Tremblay	3
Chile	97.02000000000001	Luis	Rojas	57
Czech Republic	144.54000000000002	FrantiÅ¡ek	WichterlovÃ¡	5