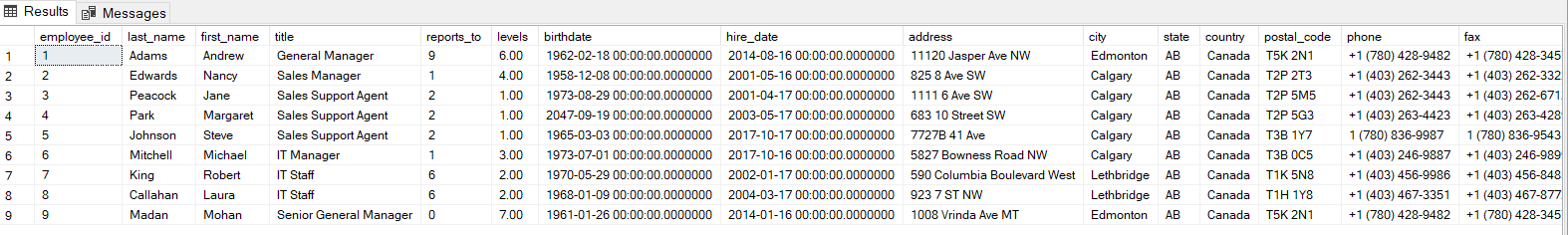
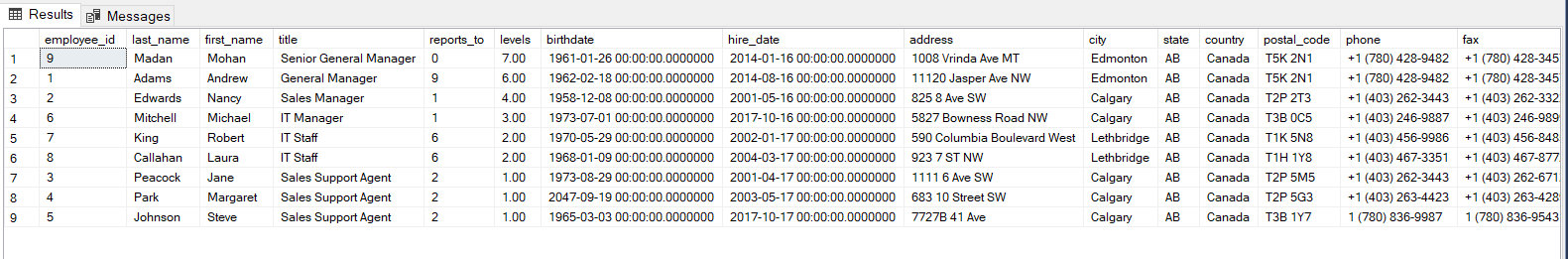
**SQL Project on Music Data**

**Q1. Who is the senior most employee based on job title?**

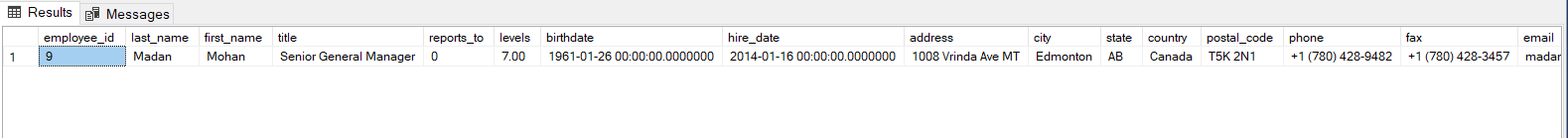
**Answer: Here the employee table**

****

**select \* from employee  
order by levels desc**

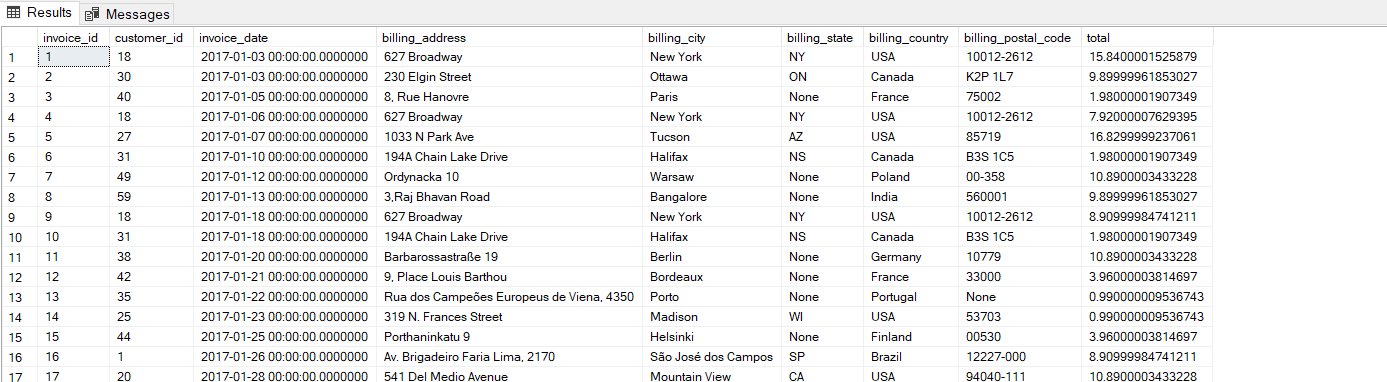
****

**select top 1 \*   
from employee  
order by levels desc;**

****

**Q2. Which Countries have the most invoices?**

**Select \* from invoice;**

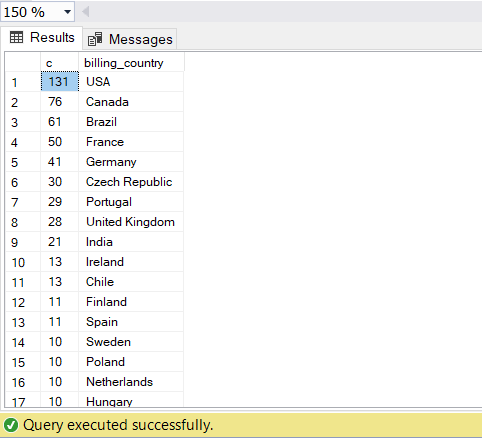
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**Select count(\*) as c,billing\_country**

**from invoice**

**group by billing\_country**

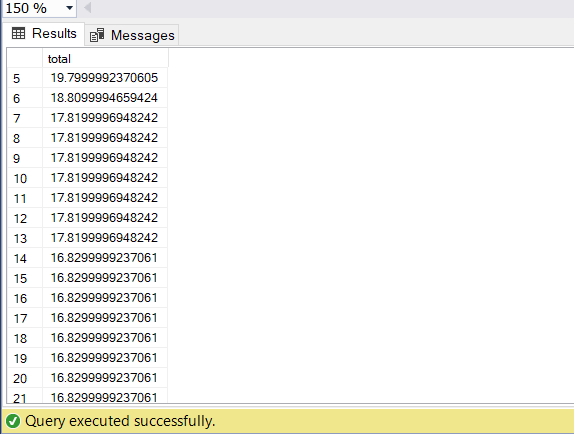
**order by c desc;**

****

**Q3. What are top 3 values of total invoice?**

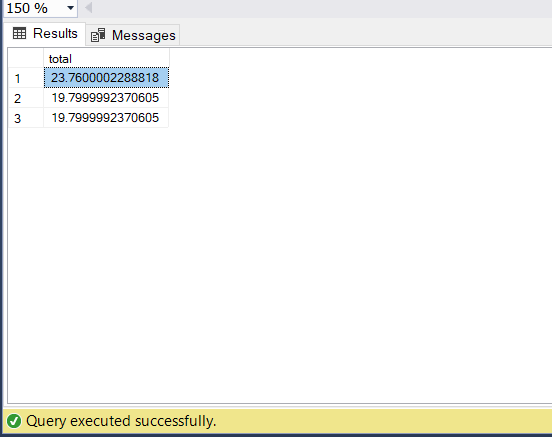
**Select total from invoice**

**order by total desc**

****

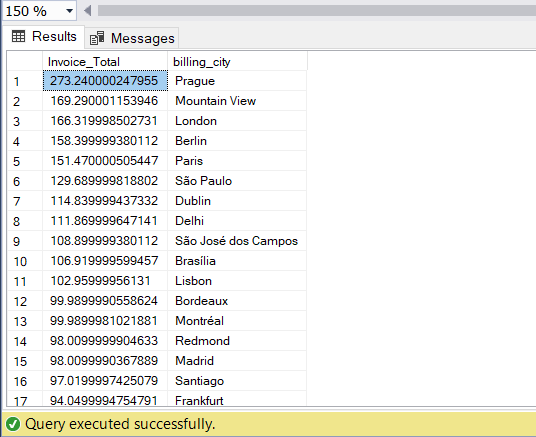
**Select top 3 total from invoice**

**order by total desc**

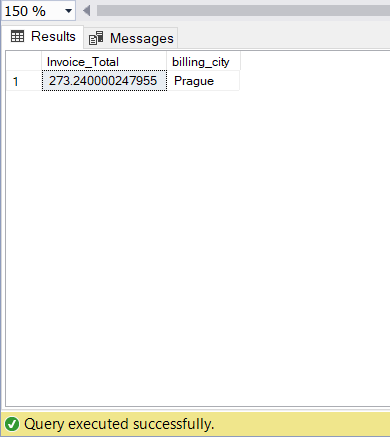
****

**Q4. Which city had 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.**

**Select sum(total)as Invoice\_Total, billing\_city  
from invoice   
group by billing\_city  
Order by Invoice\_Total DESC**

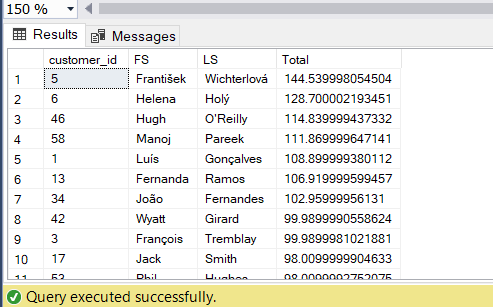
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**Select top 1 sum(total)as Invoice\_Total, billing\_cityfrom invoice   
group by billing\_city  
Order by Invoice\_Total DESC**

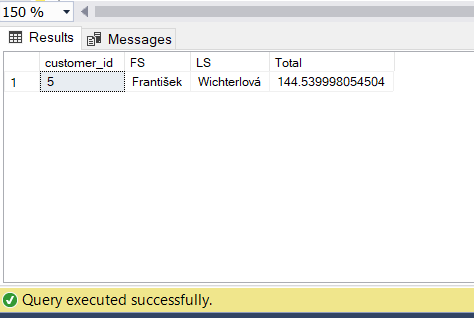
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**Q5. Who is the best customer? the customer who has spent the most money will be declared the best customer. Write a query that returns the person who has spent the most money.**

**Select invoice.customer\_id,customer.first\_name as FS, customer.last\_name as LS,sum(invoice.total) as Total   
from invoice  
FULL Join customer on invoice.customer\_id = customer.customer\_id  
group by invoice.customer\_id, customer.first\_name, customer.last\_name  
Order by Total desc**

****

**Select top 1 invoice.customer\_id,customer.first\_name as FS, customer.last\_name as LS,sum(invoice.total) as Total   
from invoice  
FULL Join customer on invoice.customer\_id = customer.customer\_id  
group by invoice.customer\_id, customer.first\_name, customer.last\_name  
Order by Total desc**

****

**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.**

**SELECT DISTINCT**

**customer.email AS email,**

**customer.last\_name,**

**genre.name AS genre\_name**

**FROM customer**

**JOIN invoice ON customer.customer\_id = invoice.customer\_id**

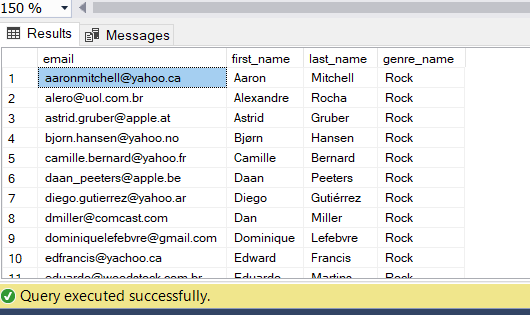
**JOIN invoice\_line ON invoice.invoice\_id = invoice\_line.invoice\_id**

**JOIN track ON invoice\_line.track\_id = track.track\_id**

**JOIN genre ON track.genre\_id = genre.genre\_id**

**WHERE genre.name LIKE 'Rock'**

**ORDER BY email;**

****

**Q7. Lets invite the artists who have written the most rock music in our dataset. write a query that return the artist name and total track count of the top 10 rock bands.**

**Select top 10**

**artist.artist\_id,**

**artist.name as N,**

**count(artist.artist\_id) as number\_of\_songs**

**From track**

**Join album on album.album\_id = track.album\_id**

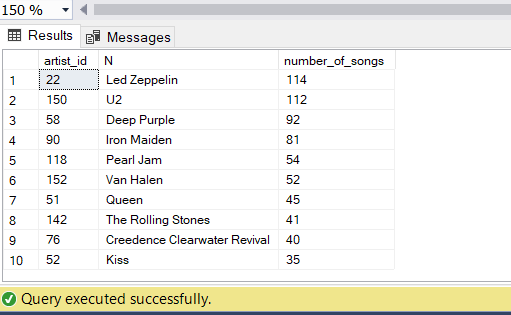
**Join artist on artist.artist\_id = album.artist\_id**

**join genre on genre.genre\_id = track.genre\_id**

**where genre.name like 'Rock'**

**Group by artist.artist\_id, artist.name**

**order by number\_of\_songs desc**

****

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

**Select name,milliseconds**

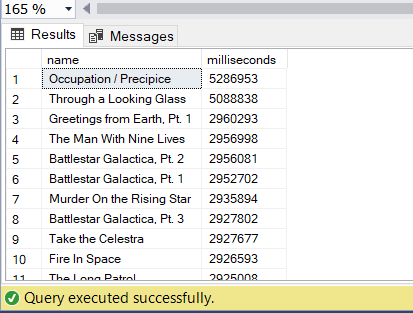
**from track**

**where milliseconds >(**

**Select AVG(milliseconds) as avg\_length**

**from track)**

**order by milliseconds desc**

****

**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 TOP 1**

**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 artist.artist\_id, artist.name**

**ORDER BY total\_sales DESC**

**)**

**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**

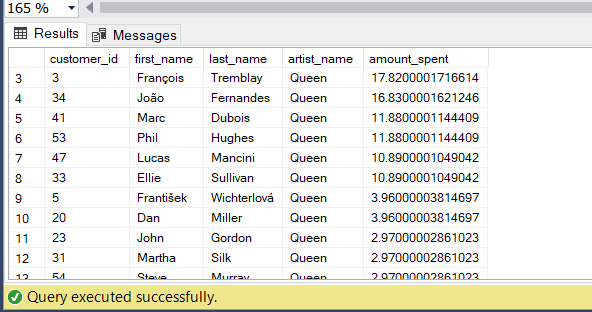
**JOIN track t ON t.track\_id = il.track\_id**

**JOIN album alb ON alb.album\_id = t.album\_id**

**JOIN best\_selling\_artist bsa ON bsa.artist\_id = alb.artist\_id**

**GROUP BY c.customer\_id, c.first\_name, c.last\_name, bsa.artist\_name**

**ORDER BY amount\_spent DESC;**

****

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 purchase. write a query that returns each country along with the top genre. For countries where the maximum number of purchases us shared return all genres.

WITH popular\_genre AS (

SELECT

COUNT(il.quantity) AS purchases,

c.customer\_id,

g.name AS genre\_name,

g.genre\_id,

ROW\_NUMBER() OVER (

PARTITION BY c.country

ORDER BY COUNT(il.quantity) DESC

) AS RowNo

FROM invoice\_line il

JOIN invoice i ON i.invoice\_id = il.invoice\_id

JOIN customer c ON c.customer\_id = i.customer\_id

JOIN track t ON t.track\_id = il.track\_id

JOIN genre g ON g.genre\_id = t.genre\_id

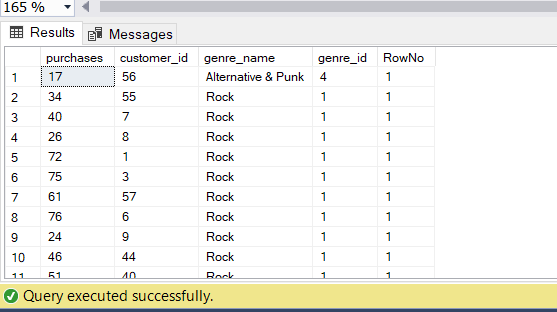
GROUP BY c.customer\_id, g.name, g.genre\_id, c.country

)

SELECT \*

FROM popular\_genre

WHERE RowNo <= 1;



Q11. 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 customer who spent this amount.

WITH customer\_with\_country AS (

SELECT

c.customer\_id,

c.first\_name,

c.last\_name,

i.billing\_country,

SUM(i.total) AS total\_spending

FROM invoice i

JOIN customer c ON c.customer\_id = i.customer\_id

GROUP BY c.customer\_id, c.first\_name, c.last\_name, i.billing\_country

),

country\_max\_spending AS (

SELECT

billing\_country,

MAX(total\_spending) AS max\_spending

FROM customer\_with\_country

GROUP BY billing\_country

)

SELECT

cc.billing\_country,

cc.total\_spending,

cc.first\_name,

cc.last\_name

FROM customer\_with\_country cc

JOIN country\_max\_spending ms

ON cc.billing\_country = ms.billing\_country

WHERE cc.total\_spending = ms.max\_spending

ORDER BY cc.billing\_country;

