MUSIC STORE ANALYSIS

MY SQL PROJECT

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OBJECTIVE

1. The primary aim is to analyze sales , trends, popular music genres , customer preferences for better understanding to enhance profitability.

2. We will examine the dataset with SQL while answering simple questions for business growth.

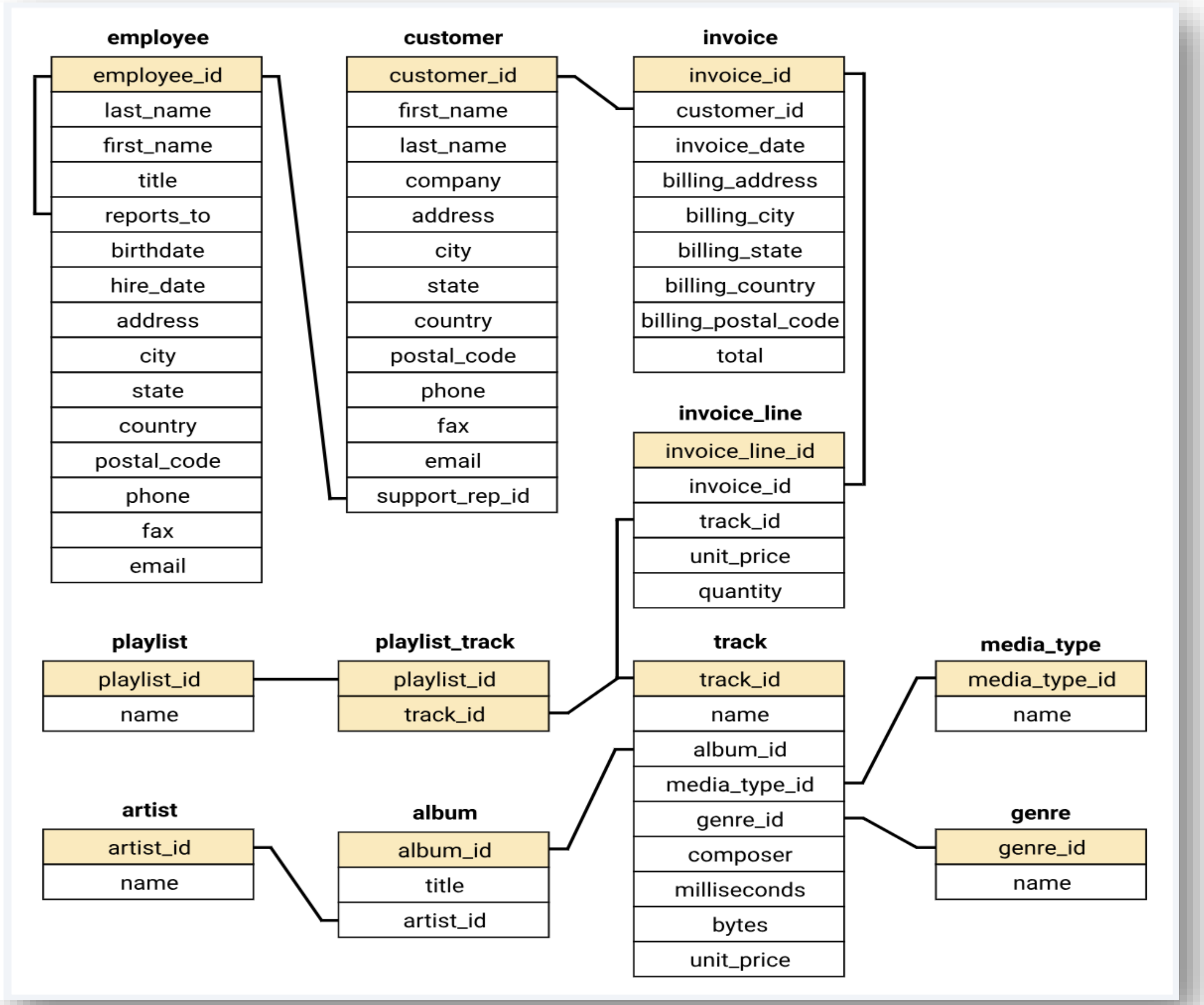
Commands used for queries

SET 1 :- GROUP BY , ORDER BY , Aggregate functions

SET 2:- JOINS ,SUBQUERY, GROUP BY , ORDER BY , Aggregate functions

SET 3:- CTE (Common Table Expressions)

MUSIC DATABASE SCHEMA DIAGRAM



employee

employee_id
last_name
first_name
title
reports_to
birthdate
hire_date
address
city
state
country
postal_code
phone
fax
email

customer

customer_id
first_name
last_name
company
address
city
state
country
postal_code
phone
fax
email
support_rep_id

invoice

invoice_id
customer_id
invoice_date
billing_address
billing_city
billing_state
billing_country
billing_postal_code
total

invoice_line

invoice_line_id
invoice_id
track_id
unit_price
quantity

playlist

playlist_id
name

playlist_track

playlist_id
track_id

track

track_id
name
album_id
media_type_id
genre_id
composer
milliseconds
bytes
unit_price

media_type

media_type_id
name

artist

artist_id
name

album

album_id
title
artist_id

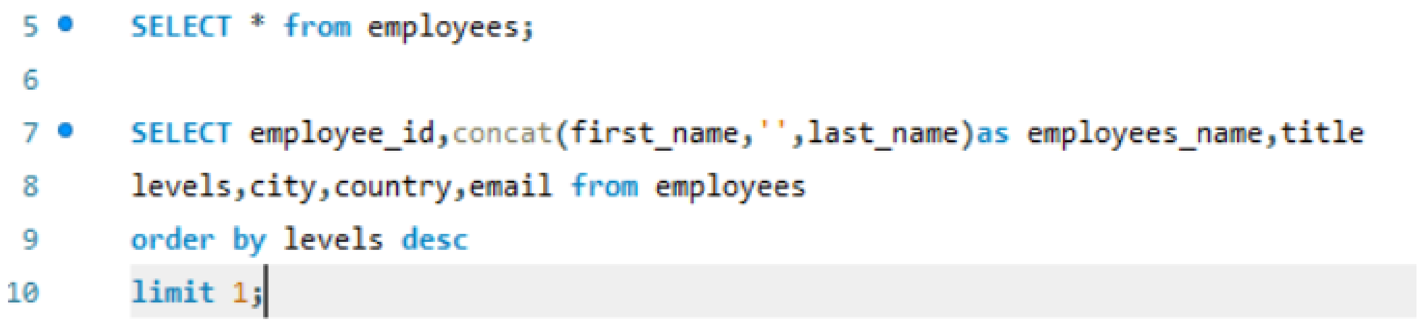
genre

genre_id
name

SET 1

Q1. Who is the senior most employee based on Job tittle ?

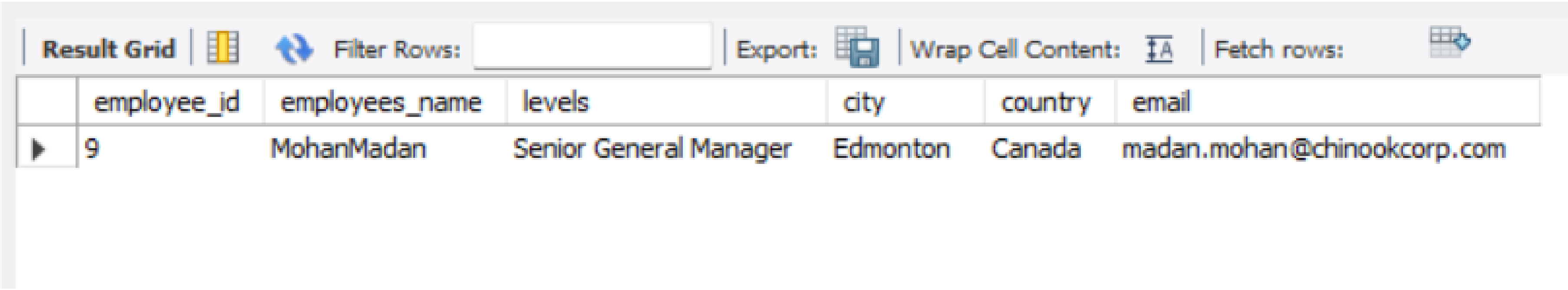
Input



```sql
SELECT * from employees;

SELECT employee_id,concat(first_name,'',last_name)as employees_name,title
levels,city,country,email from employees
order by levels desc
limit 1;
```

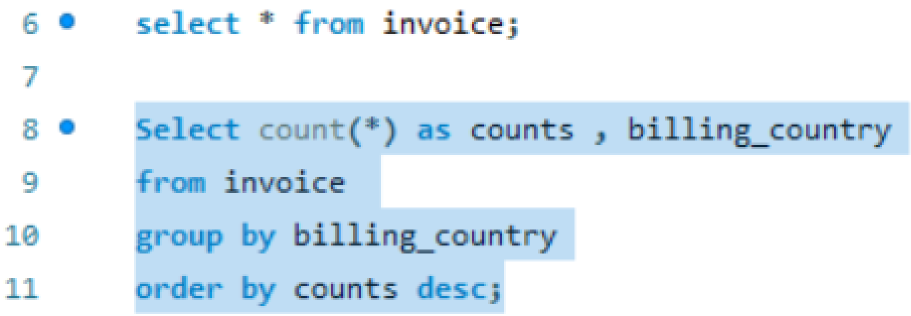
Output



employee_id	employees_name	levels	city	country	email
9	MohanMadan	Senior General Manager	Edmonton	Canada	madan.mohan@chinookcorp.com

Q2. Which countries have the most invoices?

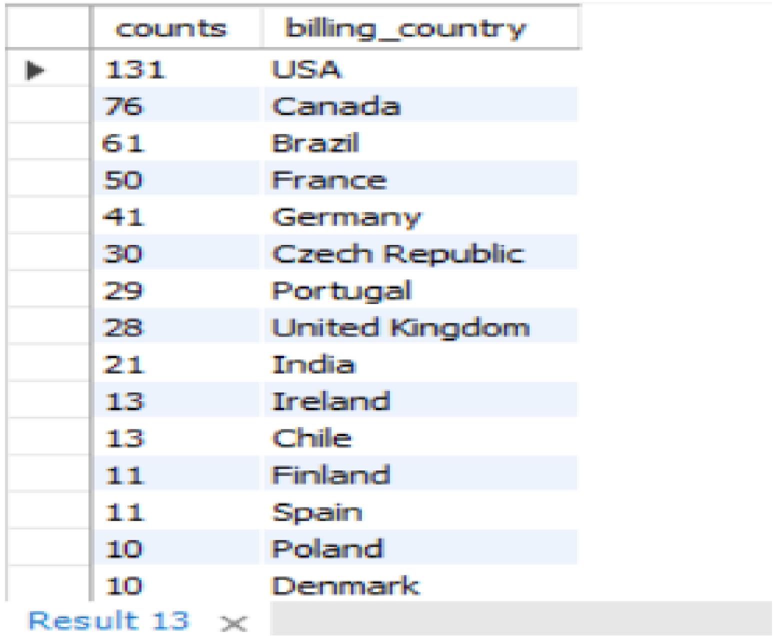
Input



```
select * from invoice;

Select count(*) as counts , billing_country
from invoice
group by billing_country
order by counts desc;
```

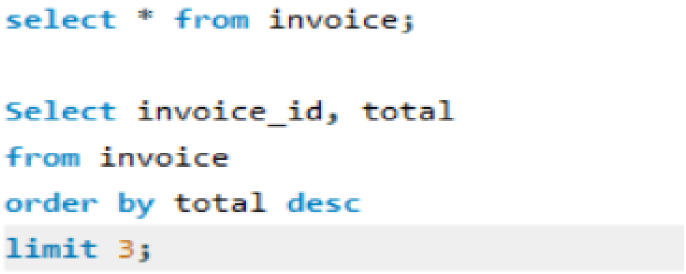
Output



counts	billing_country
131	USA
76	Canada
61	Brazil
50	France
41	Germany
30	Czech Republic
29	Portugal
28	United Kingdom
21	India
13	Ireland
13	Chile
11	Finland
11	Spain
10	Poland
10	Denmark

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

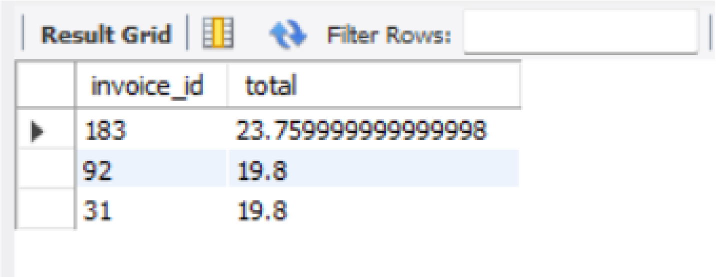
Input



```
select * from invoice;

Select invoice_id, total
from invoice
order by total desc
limit 3;
```

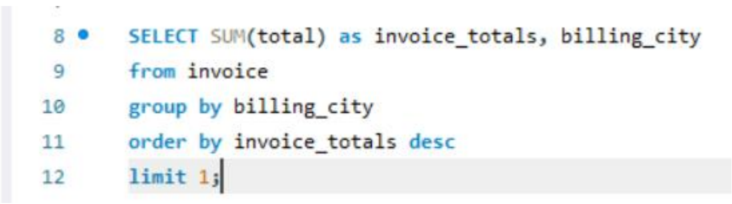
Output



	invoice_id	total
▶	183	23.759999999999998
	92	19.8
	31	19.8

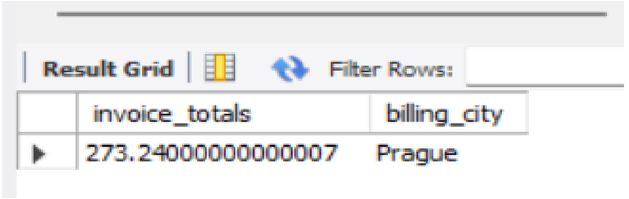
Q4. Which city has the best customers? We would like to host a promotional music festival in the city which made the most money .
Write a query that returns one city that has the highest sum of invoice totals . Return both the city name and sum of all invoice totals.

Input



```sql
SELECT SUM(total) as invoice_totals, billing_city
from invoice
group by billing_city
order by invoice_totals desc
limit 1;
```

Output

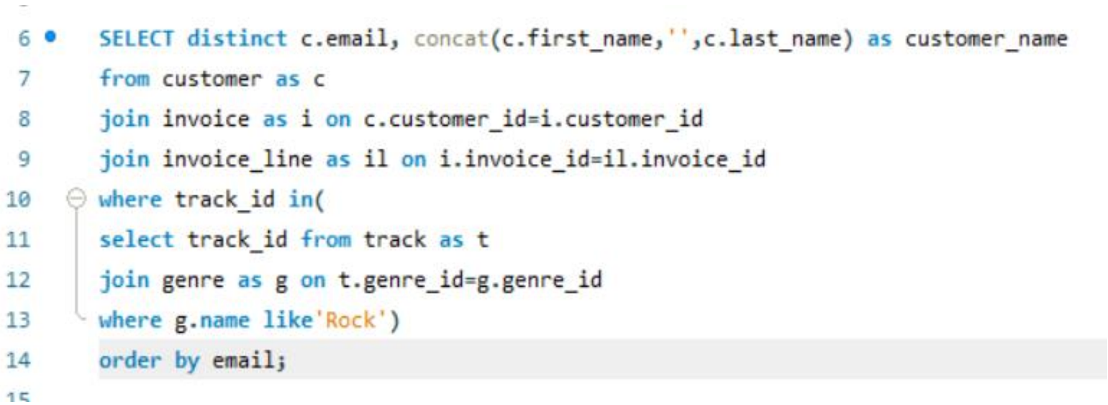


	invoice_totals	billing_city
▶	273.24000000000007	Prague

SET 2

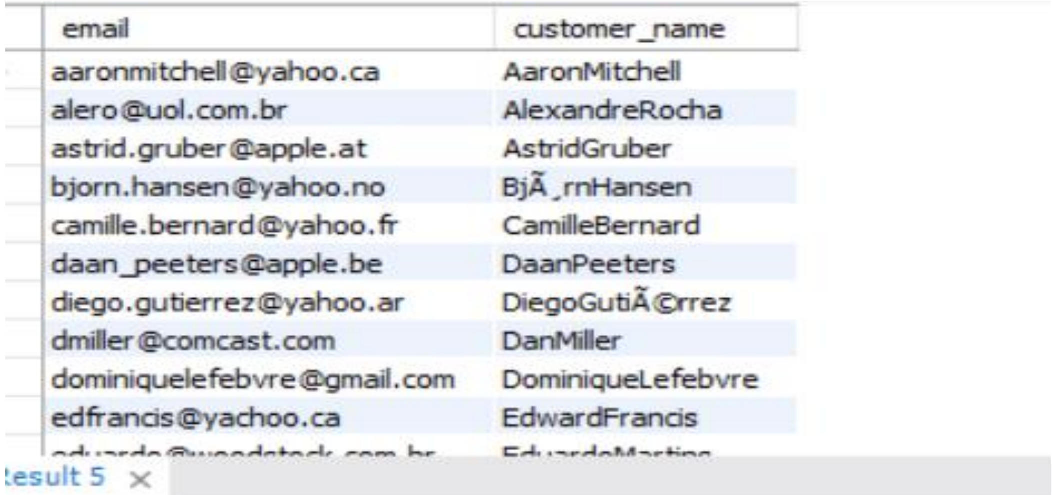
Q1. Write query to return email , first name , last name & Genre of all Rock Music listeners. Return your list ordered alphabetically by email starting with A .

Input



```
SELECT distinct c.email, concat(c.first_name,'',c.last_name) as customer_name
from customer as c
join invoice as i on c.customer_id=i.customer_id
join invoice_line as il on i.invoice_id=il.invoice_id
where track_id in(
select track_id from track as t
join genre as g on t.genre_id=g.genre_id
where g.name like'Rock')
order by email;
```

Output

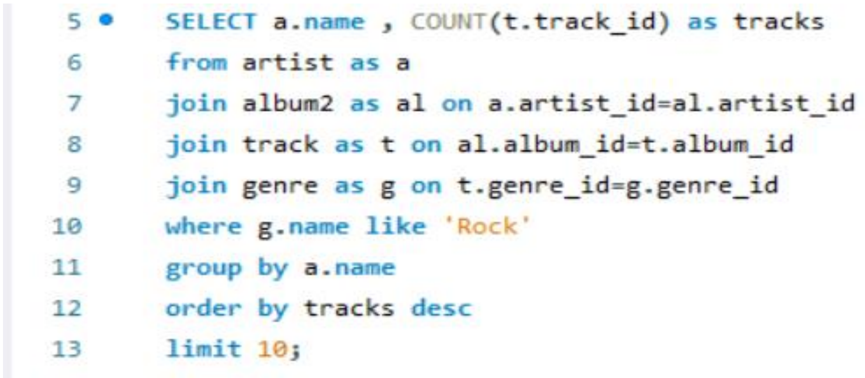


email	customer_name
aaronmitchell@yahoo.ca	AaronMitchell
alero@uol.com.br	AlexandreRocha
astrid.gruber@apple.at	AstridGruber
bjorn.hansen@yahoo.no	BjÃ¸rnHansen
camille.bernard@yahoo.fr	CamilleBernard
daan_peeters@apple.be	DaanPeeters
diego.gutierrez@yahoo.ar	DiegoGutiÃ©rrez
dmiller@comcast.com	DanMiller
dominiquelefebvre@gmail.com	DominiqueLefebvre
edfrancis@yachoo.ca	EdwardFrancis
eduardo@woodstock.com.br	EduardoMartins

Result 5 ×

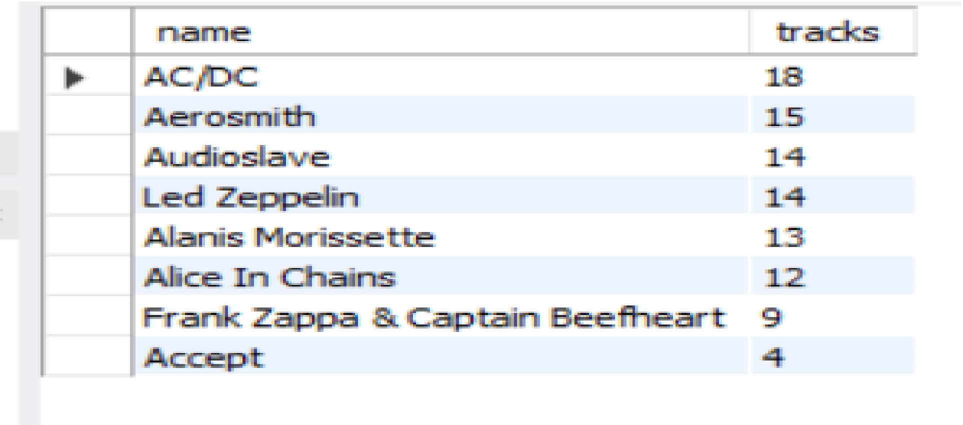
Q2. Let’s invite the artists who have written the most rock music in our data set . Write a query that returns the Artist name & total track count of the top 10 rock bands.

Input



```sql
SELECT a.name , COUNT(t.track_id) as tracks
from artist as a
join album2 as al on a.artist_id=al.artist_id
join track as t on al.album_id=t.album_id
join genre as g on t.genre_id=g.genre_id
where g.name like 'Rock'
group by a.name
order by tracks desc
limit 10;
```

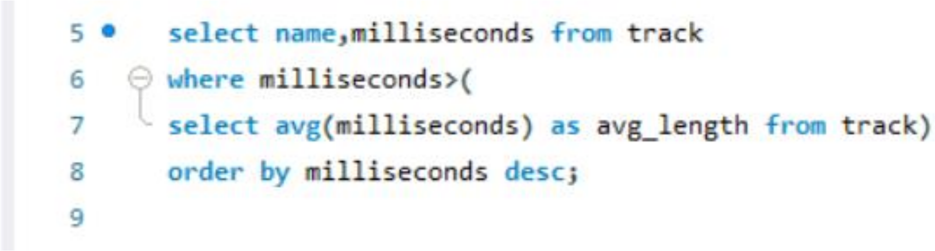
Output



	name	tracks
▶	AC/DC	18
	Aerosmith	15
	Audioslave	14
	Led Zeppelin	14
	Alanis Morissette	13
	Alice In Chains	12
	Frank Zappa & Captain Beefheart	9
	Accept	4

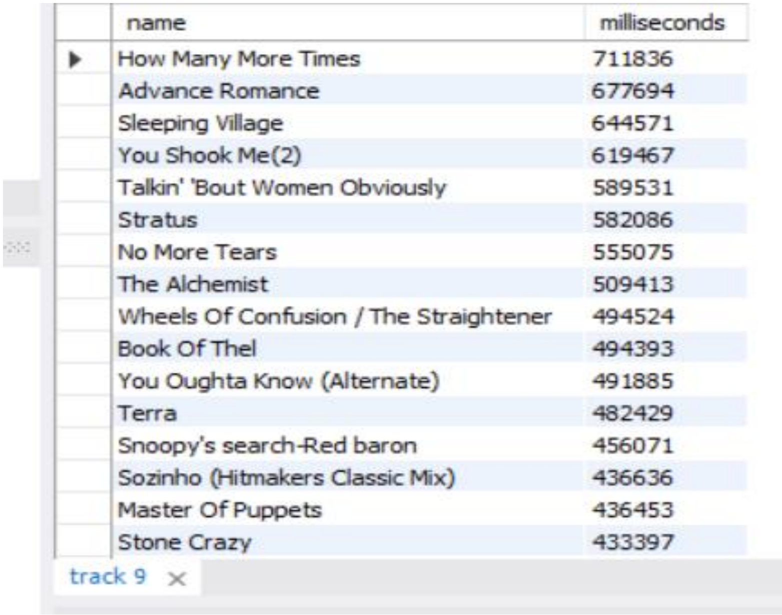
Q3. Return all the track names that have a song length longer than average song length . Return Name & Milliseconds for each track . Order by the song length with the longest songs listed first.

Input



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

Output

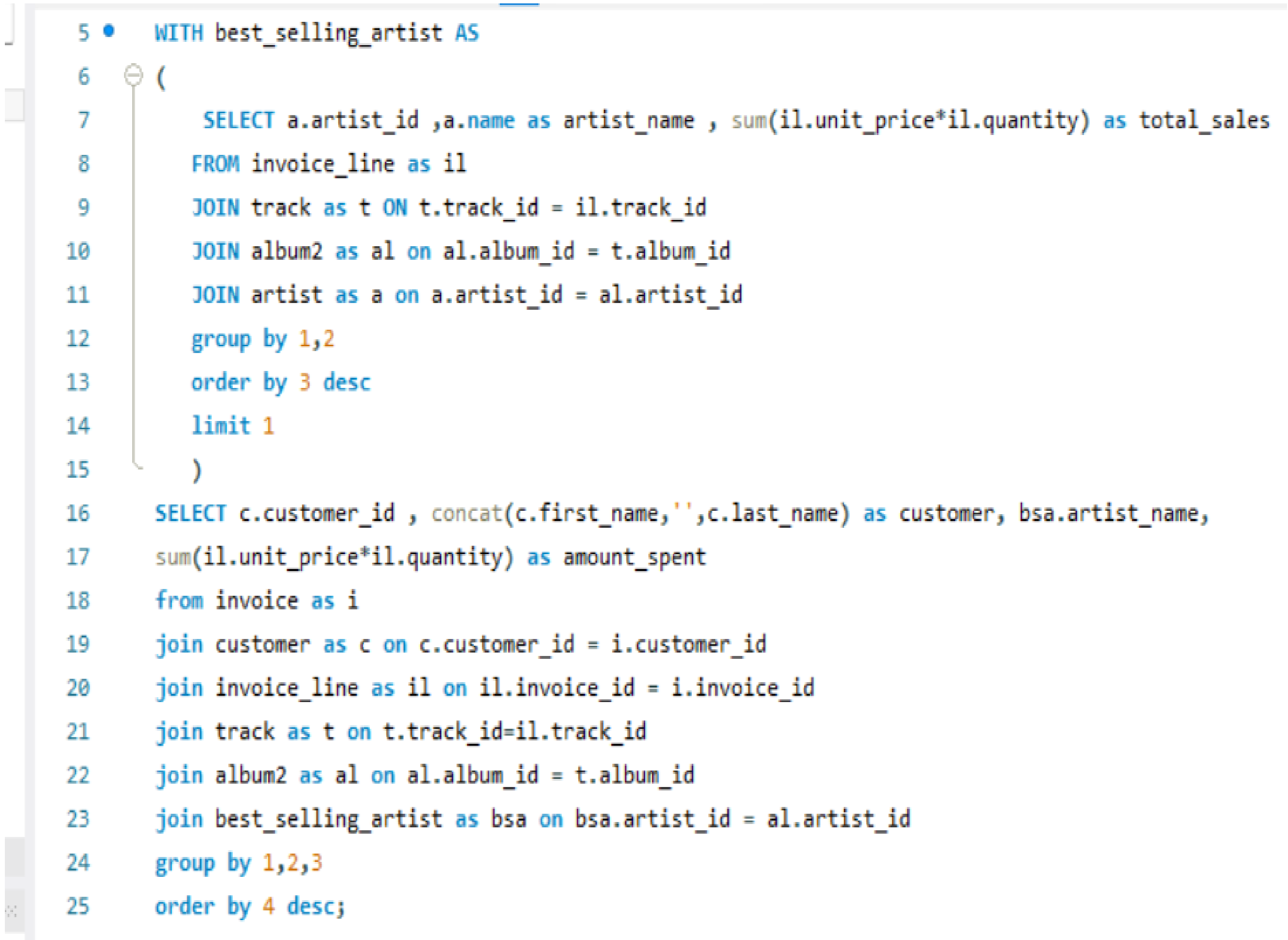


name	milliseconds
How Many More Times	711836
Advance Romance	677694
Sleeping Village	644571
You Shook Me(2)	619467
Talkin' 'Bout Women Obviously	589531
Stratus	582086
No More Tears	555075
The Alchemist	509413
Wheels Of Confusion / The Straightener	494524
Book Of Thel	494393
You Oughta Know (Alternate)	491885
Terra	482429
Snoopy's search-Red baron	456071
Sozinho (Hitmakers Classic Mix)	436636
Master Of Puppets	436453
Stone Crazy	433397

SET 3

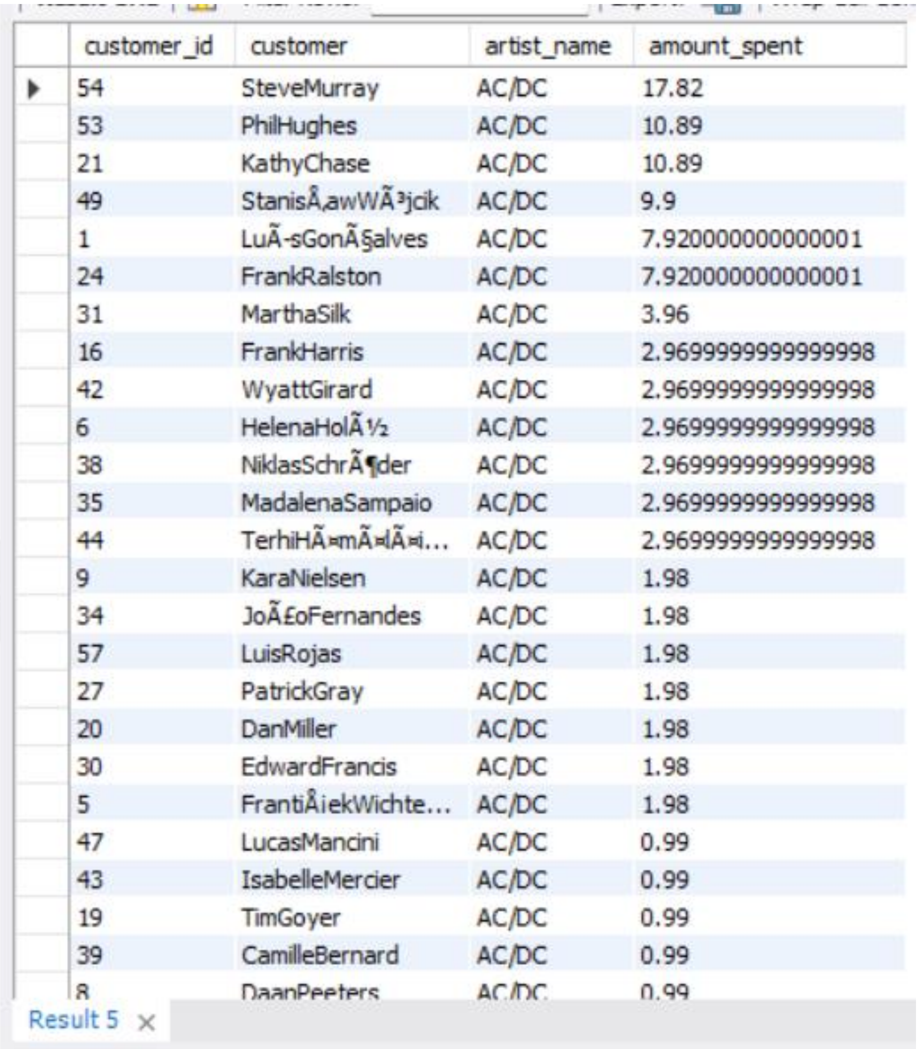
Q1. Find how much amount spend by each customer on artists? Write a query to return Customer name , artist name & total spent.

Input



```
WITH best_selling_artist AS
(
     SELECT a.artist_id ,a.name as artist_name , sum(il.unit_price*il.quantity) as total_sales
    FROM invoice_line as il
    JOIN track as t ON t.track_id = il.track_id
    JOIN album2 as al on al.album_id = t.album_id
    JOIN artist as a on a.artist_id = al.artist_id
    group by 1,2
    order by 3 desc
    limit 1
    )
SELECT c.customer_id , concat(c.first_name,'',c.last_name) as customer, bsa.artist_name,
sum(il.unit_price*il.quantity) as amount_spent
from invoice as i
join customer as c on c.customer_id = i.customer_id
join invoice_line as il on il.invoice_id = i.invoice_id
join track as t on t.track_id=il.track_id
join album2 as al on al.album_id = t.album_id
join best_selling_artist as bsa on bsa.artist_id = al.artist_id
group by 1,2,3
order by 4 desc;
```

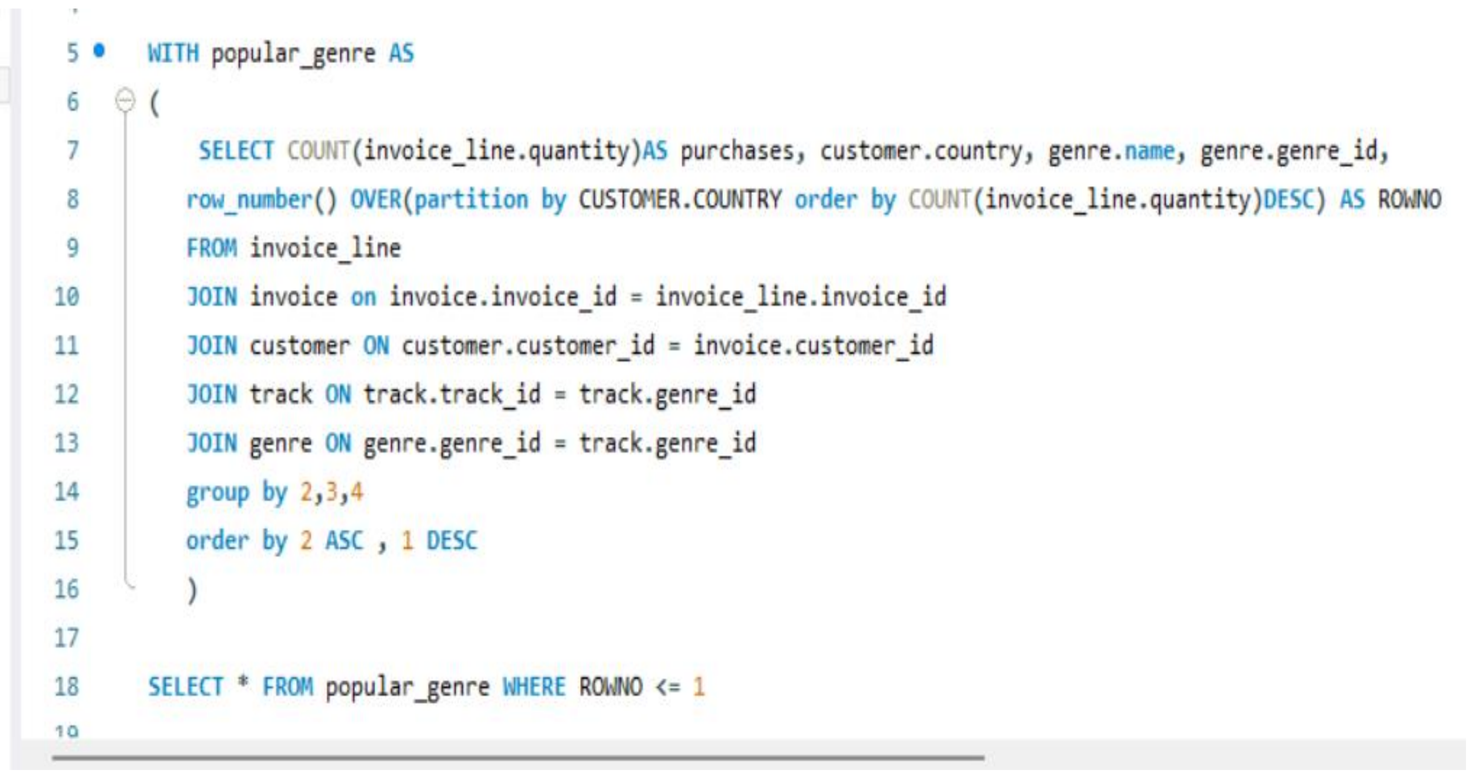
Output



customer_id	customer	artist_name	amount_spent
54	SteveMurray	AC/DC	17.82
53	PhilHughes	AC/DC	10.89
21	KathyChase	AC/DC	10.89
49	StanisÅ‚awWÃ³jcik	AC/DC	9.9
1	LuÃsGonÃ§alves	AC/DC	7.92000000000001
24	FrankRalston	AC/DC	7.92000000000001
31	MarthaSilk	AC/DC	3.96
16	FrankHarris	AC/DC	2.9699999999999998
42	WyattGirard	AC/DC	2.9699999999999998
6	HelenaHolÃ½	AC/DC	2.9699999999999998
38	NiklasSchrÃ¶der	AC/DC	2.9699999999999998
35	MadalenaSampaio	AC/DC	2.9699999999999998
44	TerhiHÃ¤mÃ¤lÃ¤i...	AC/DC	2.9699999999999998
9	KaraNielsen	AC/DC	1.98
34	JoÃ£oFernandes	AC/DC	1.98
57	LuisRojas	AC/DC	1.98
27	PatrickGray	AC/DC	1.98
20	DanMiller	AC/DC	1.98
30	EdwardFrancis	AC/DC	1.98
5	FrantiÅ¡ekWichte...	AC/DC	1.98
47	LucasMancini	AC/DC	0.99
43	IsabelleMercier	AC/DC	0.99
19	TimGoyer	AC/DC	0.99
39	CamilleBernard	AC/DC	0.99
8	DaanPeeters	AC/DC	0.99

Q3. Find out the most popular music genre for each country. Popular genre = 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.

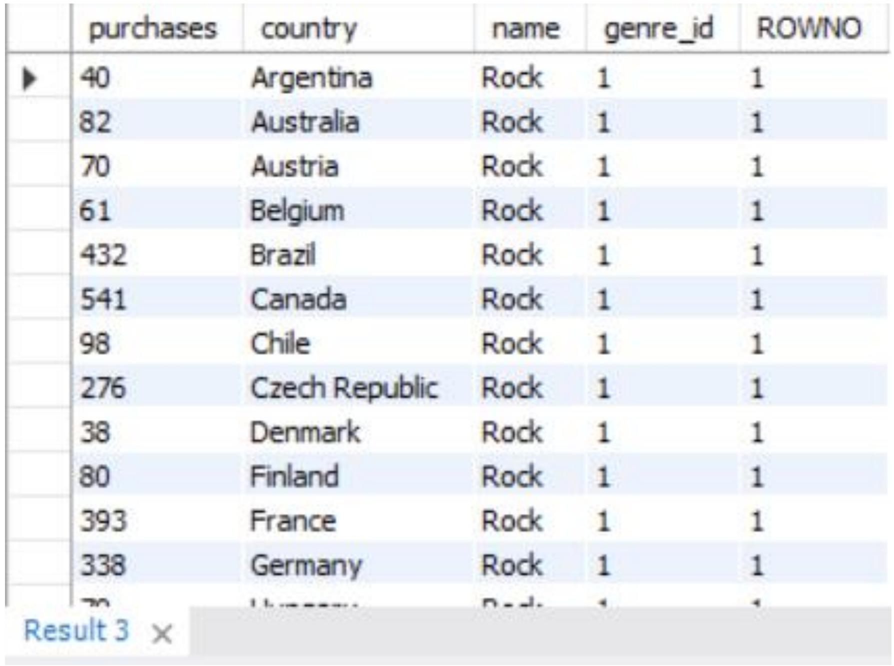
Input



```sql
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 = track.genre_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
```

Output



purchases	country	name	genre_id	ROWNO
40	Argentina	Rock	1	1
82	Australia	Rock	1	1
70	Austria	Rock	1	1
61	Belgium	Rock	1	1
432	Brazil	Rock	1	1
541	Canada	Rock	1	1
98	Chile	Rock	1	1
276	Czech Republic	Rock	1	1
38	Denmark	Rock	1	1
80	Finland	Rock	1	1
393	France	Rock	1	1
338	Germany	Rock	1	1
70	Hungary	Rock	1	1

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By Akanksha Kumari