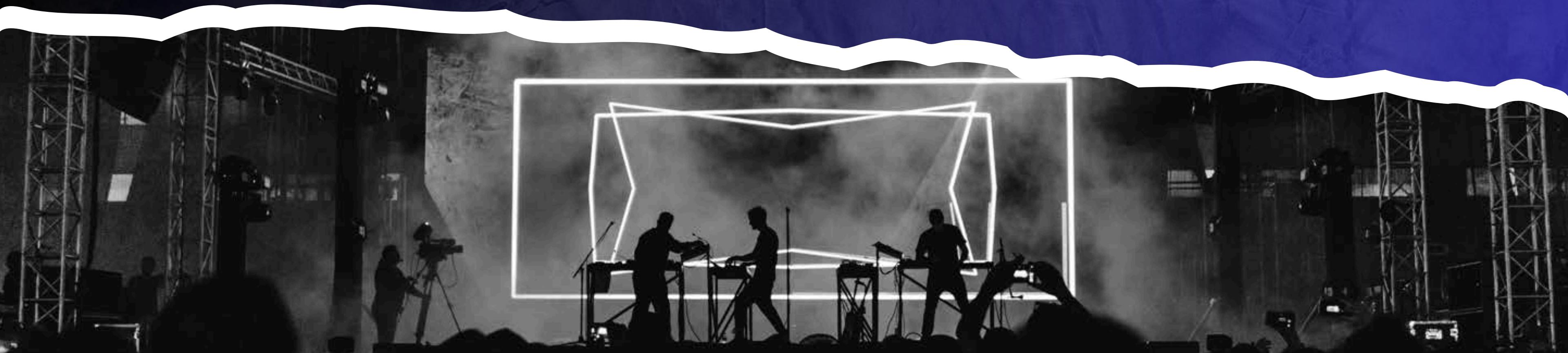


# SQL PROJECT

# MUSIC STORE ANALYSIS

- M A N I S H D I V E K A R



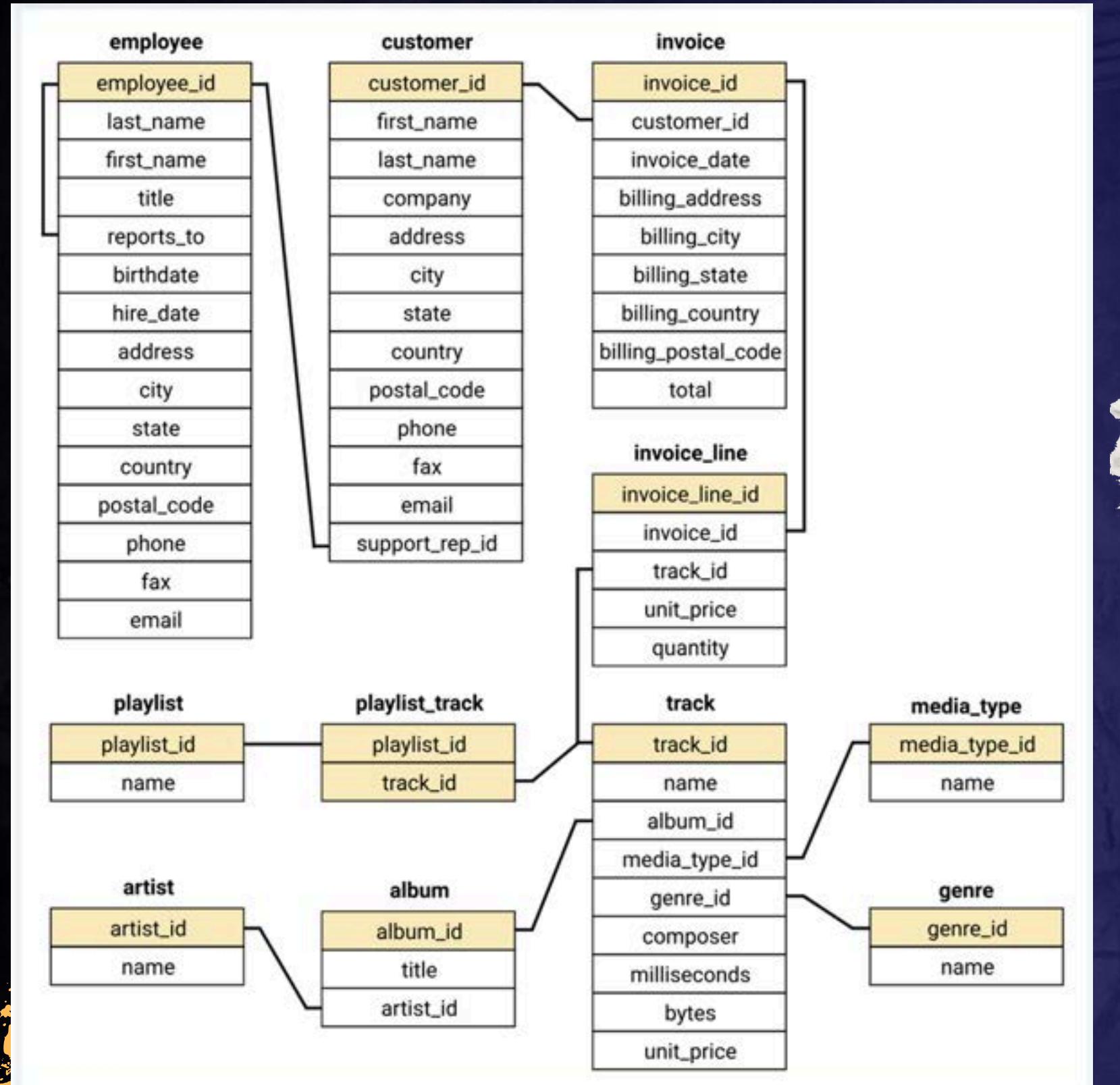


by C. J. Devittier and Joint Book Authors

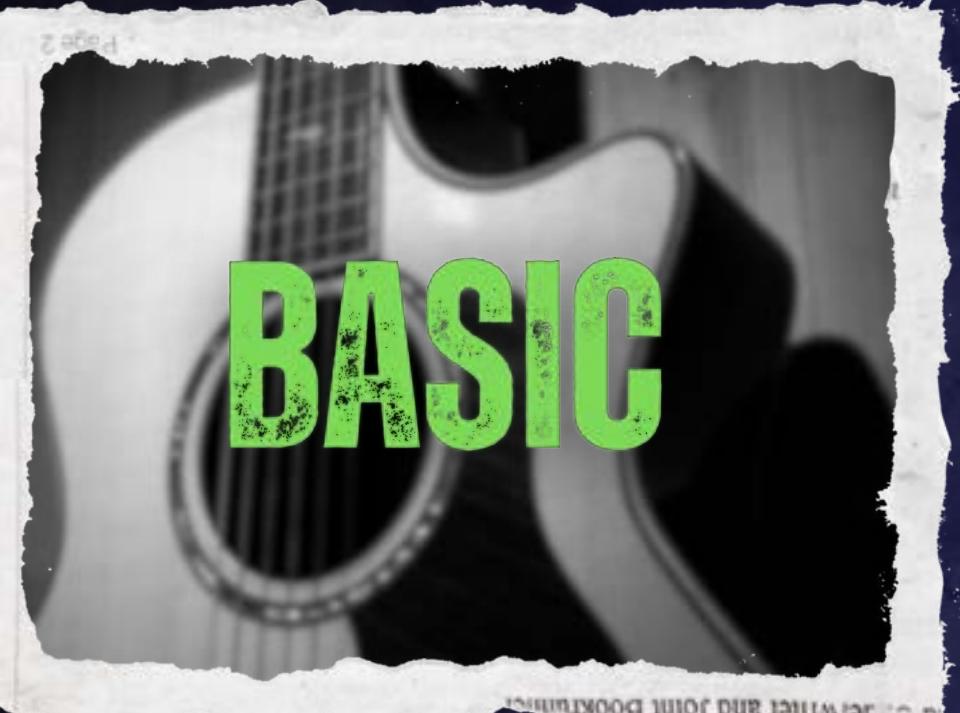
## OBJECTIVE

- You are hired as a data analyst at a music store, let's call it "Spotify". You're given access to a database with information about customers, singers, and more.
- As you explore connections between the data, your manager shares exciting news: the company plans to launch a new product! They need insights from the data to guide their decision-making.
- Your task is to analyse the database and provide answers to your manager's problem statements

# DATABASE SCHEMA



# CHALLENGES



**BASIC**



**INTERMEDIATE**



**ADVANCE**

Queries Include

SELECT, GROUP BY, ORDER BY  
LIMIT, DESC

Queries Include

JOINS, GROUP BY, ORDER BY, LIMIT,  
DESC

Queries Include

CTE (COMMON TABLE EXPRESSION)

# QUESTION 1

Who is the senior most employee based on job title?

```
SELECT first_name,  
       last_name,  
       title  
  FROM music_database.employee  
 ORDER BY levels DESC LIMIT 1;
```

first_name	last_name	title
Andrew	Adams	General Manager



## QUESTION 2

Which countries have the most Invoices?

```
• SELECT count(*) as count,  
    billing_country  
FROM music_database.invoice  
group by billing_country  
order by count desc;
```

count	billing_country
131	USA
76	Canada
61	Brazil
50	France



## QUESTION 3

What are top 3 values of total invoice?

```
SELECT total  
FROM music_database.invoice  
order by total desc limit 3;
```

total
23.7599999999...
19.8
19.8



using subquery and join book unit

## QUESTION 4

Which city has the best customers? We would like to throw a promotional Music Festival in the city we made the most money.

```
1 • SELECT billing_city,  
2           sum(total) as Inovice_total  
3   FROM music_database.invoice  
4  group by billing_city  
5 order by Inovice_total desc limit 1;
```

billing_city	Inovice_total
Prague	273.2400000000...



# INTERMEDIATE



## QUESTION 5

Who is the best customer? The customer who has spent the most money will be declared the best customer.

```
SELECT customer.customer_id,  
       first_name,  
       last_name,  
       sum(invoice.total) as Amount  
  FROM music_database.customer  
  JOIN music_database.invoice  
    ON customer.customer_id=invoice.customer_id  
 GROUP BY customer.customer_id,  
          customer.first_name,  
          customer.last_name  
 ORDER BY Amount DESC  
 LIMIT 1;
```

customer_id	first_name	last_name	Amount
5	František	Wichterlová	144.5400000000...

## QUESTION 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.

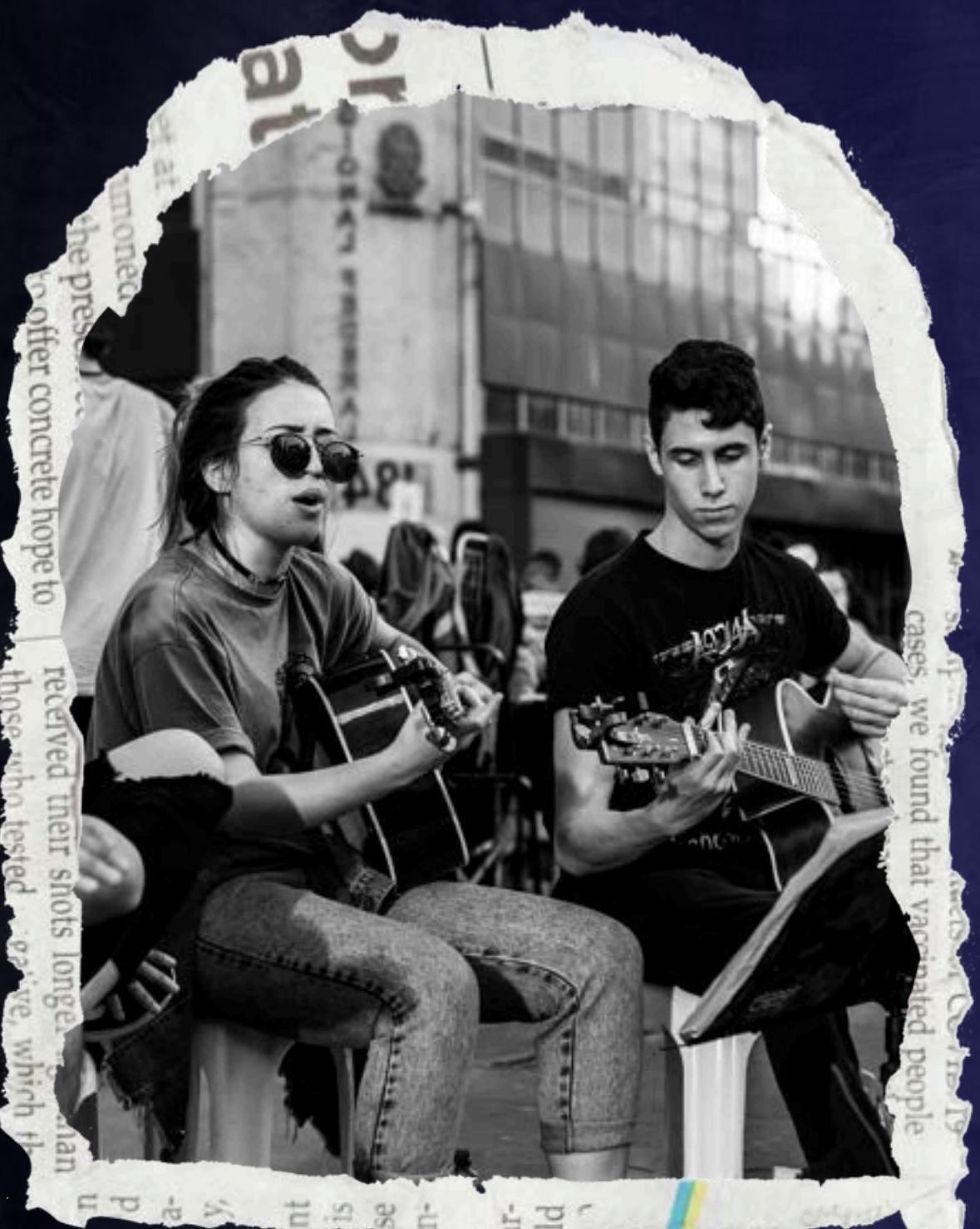


```
SELECT DISTINCT c.first_name,  
                c.last_name,  
                c.email,  
                g.name AS genre  
FROM music_database.customer c  
JOIN music_database.invoice i  
    ON c.customer_id = i.customer_id  
JOIN music_database.invoice_line il  
    ON i.invoice_id = il.invoice_id  
JOIN music_database.track t  
    ON il.track_id = t.track_id  
JOIN music_database.genre g  
    ON t.genre_id = g.genre_id  
WHERE g.name = 'Rock'  
ORDER BY c.email ASC;
```

## OUT PUT



first_name	last_name	email	genre
Aaron	Mitchell	aaronmitchell@yahoo.ca	Rock
Alexandre	Rocha	alerol@uol.com.br	Rock
Astrid	Gruber	astrid.gruber@apple.at	Rock
Björn	Hansen	bjorn.hansen@yahoo.no	Rock
Camille	Bernard	camille.bernard@yahoo.fr	Rock
Daan	Peeters	daan_peeters@apple.be	Rock
Diego	Gutiérrez	diego.gutierrez@yahoo.ar	Rock
Dan	Miller	dmiller@comcast.com	Rock
Dominique	Lefebvre	dominiquelefebvre@gmail.com	Rock
Edward	Francis	edfrancis@yahoo.ca	Rock
Eduardo	Martins	eduardo@woodstock.com.br	Rock
Ellie	Sullivan	ellie.sullivan@shaw.ca	Rock
Emma	Jones	emma_jones@hotmail.com	Rock
Enrique	Muñoz	enrique_munoz@yahoo.es	Rock
Fernanda	Ramos	fernadararamos4@uol.com.br	Rock
Frank	Harris	farris@google.com	Rock
Frank	Ralston	fralston@gmail.com	Rock



## QUESTION 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.

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



## OUT PUT

artist_name	total_tracks
AC/DC	18
Aerosmith	15
Audioslave	14
Led Zeppelin	14
Alanis Morissette	13
Alice In Chains	12
Frank Zappa & Captain Beefhe...	9
Accept	4

# ADVANCE



## QUESTION 8

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 invoice.billing_country,
    SUM(invoice_line.quantity) quantity,
    genre.name as genre,
    ROW_NUMBER()
    over(PARTITION BY invoice.billing_country
        ORDER BY SUM(invoice_line.quantity) DESC) AS row_num
FROM music_database.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 genre.genre_id=track.genre_id
GROUP BY 1,3
ORDER BY 2 DESC)
SELECT * FROM popular_genre
  
```

billing_country	quantity	genre	row_num
USA	70	Rock	1
Canada	57	Rock	1
United Kingdom	47	Rock	1
Germany	78	Rock	1

# QUESTION 9

Determine which customer has spent the most on music for each country.

OR

Write a query that returns the country along with the top customer and how much they spent.



```

WITH customer_with_country AS
(SELECT customer.customer_id,
first_name,
last_name,
email,
billing_country as country,
SUM(total) AS purchased,
ROW_NUMBER()
OVER(partition by billing_country order by SUM(total)desc) as row_num
FROM music_database.customer
JOIN invoice
ON customer.customer_id=invoice.customer_id
GROUP BY 1,2,3,4,5)
SELECT * FROM customer_with_country
WHERE row_num<=1
    
```

customer_id	first_name	last_name	email	country	purchased	row_num
56	Diego	Gutiérrez	diego.gutierrez@yahoo.ar	Argentina	39.6	1
55	Mark	Taylor	mark.taylor@yahoo.au	Australia	81.18	1
7	Astrid	Gruber	astrid.gruber@apple.at	Austria	69.3	1
8	Daan	Peeters	daan_peeters@apple.be	Belgium	60.38999999999999	1
1	Luís	Gonçalves	luisg@embraer.com.br	Brazil	108.89999999999998	1
3	François	Tremblay	ftremblay@gmail.com	Canada	99.99	1
57	Luis	Rojas	luisrojas@yahoo.cl	Chile	97.02000000000001	1
5	František	Wichterlová	frantisekw@jetbrains.com	Czech Republic	144.54000000000002	1
2	John	Doe	john.doe@musicstore.com	United States	22.610000000000002	1

# THANK YOU



Music Store and Joint Bookmarks

-Manish Divekar.