

SQL PROJECT

MUSIC STORE ANALYSIS

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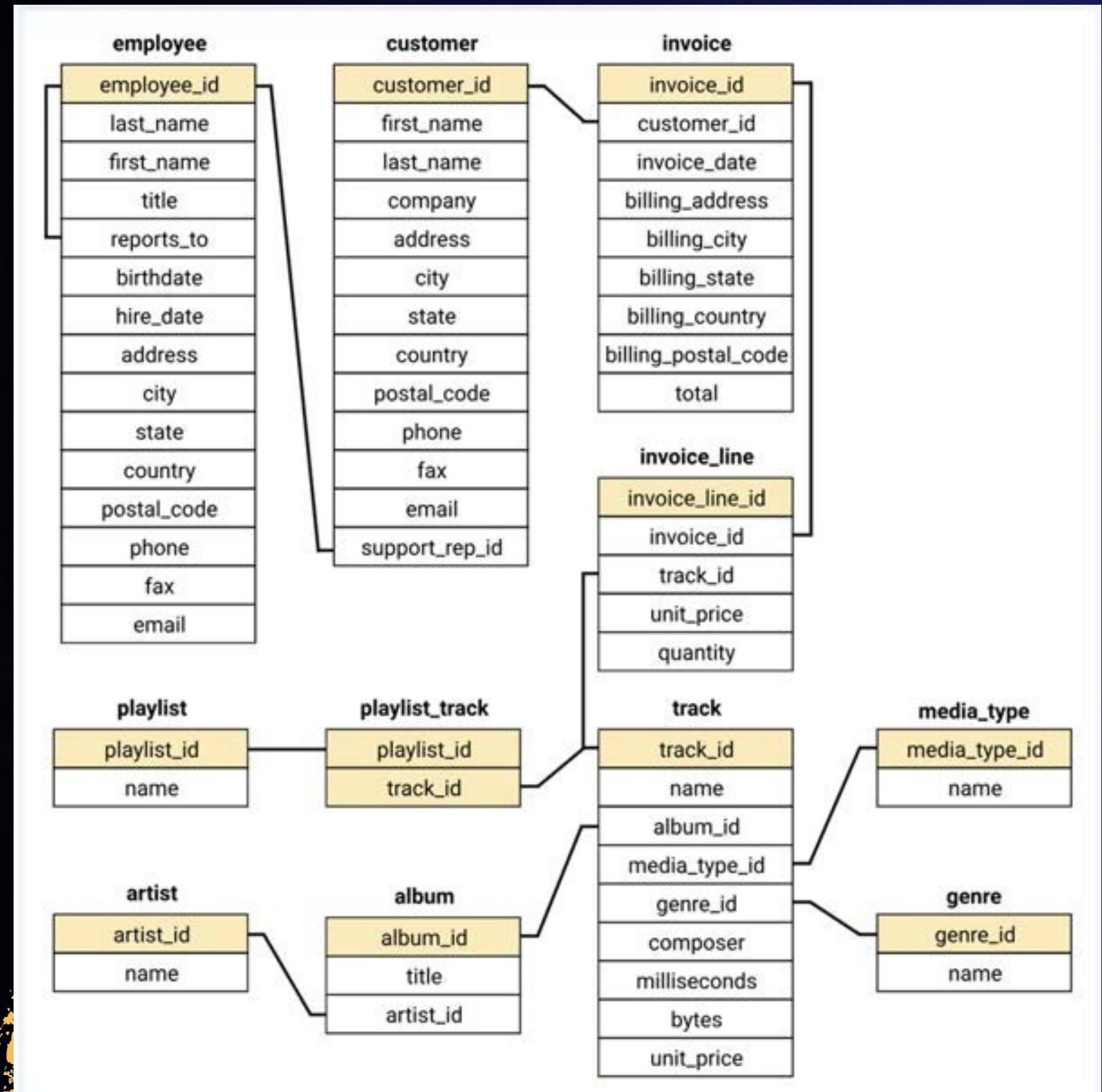


OBJECTIVE

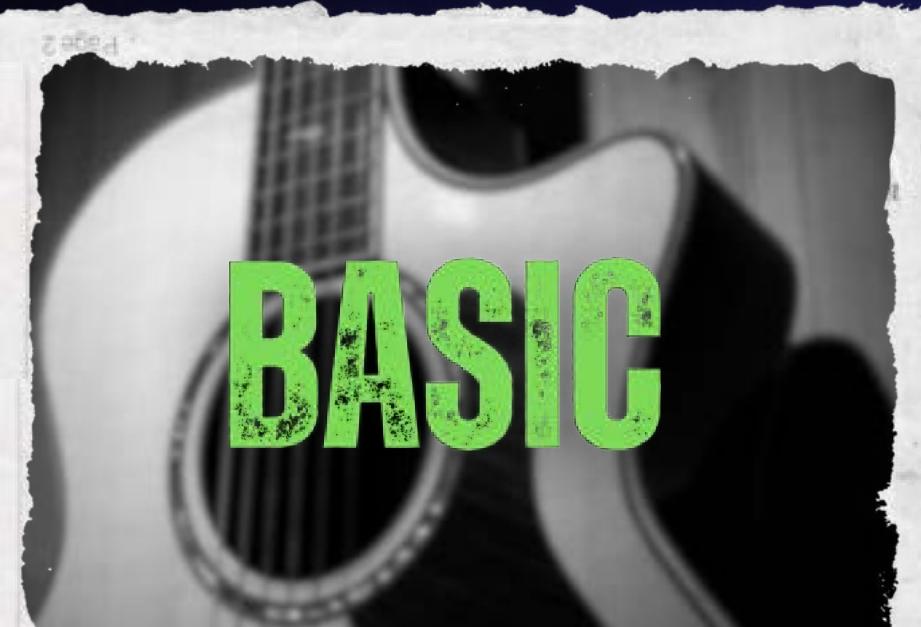
- You are hired as a data analyst at a music store, let's call it →Spotify". You're given access to a database with information about customers, singers, and more.
- As you explore connections between the data, your manager shares exciting news: the company plans to launch a new product← They need insights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

MUSIC STORE ANALYSIS

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

BASIC



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
23.75999999999999...
19.8
19.8



Multiple queries and joint bookings.

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	aler@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@yachoo.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	28	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	Guti��rrez	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	Lu��s	Gon��alves	luisg@embraer.com.br	Brazil	108.89999999999998	1
3	Fran��ois	Tremblay	ftremblay@gmail.com	Canada	99.99	1
57	Luis	Rojas	luisrojas@yahoo.cl	Chile	97.02000000000001	1
5	Franti��ek	Wichterlov��	frantisekw@jetbrains.com	Czech Republic	144.54000000000002	1

THANK YOU



an Ode to Music and Joint Bookbinding