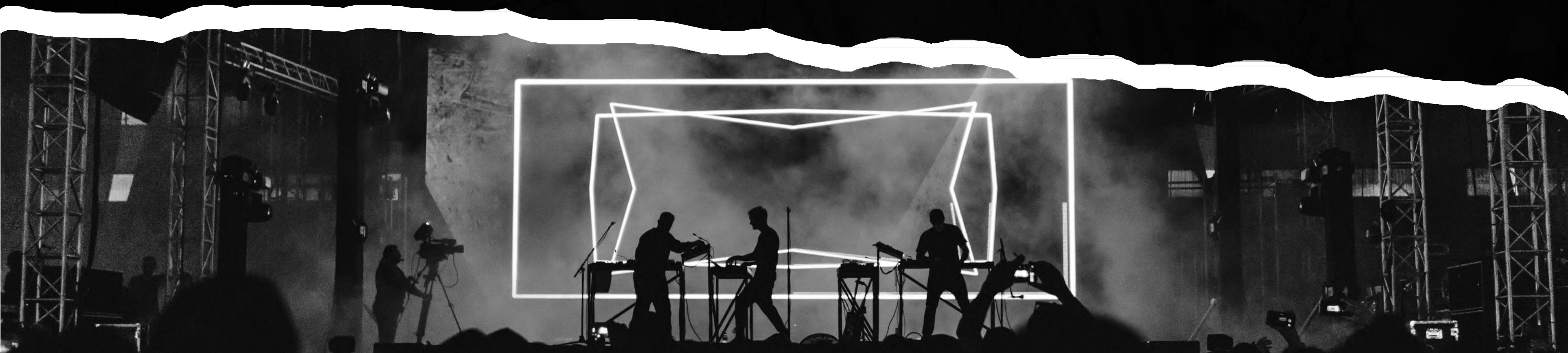


SQL PROJECT

# MUSIC STORE ANALYSIS

-RAJ ACHARYA

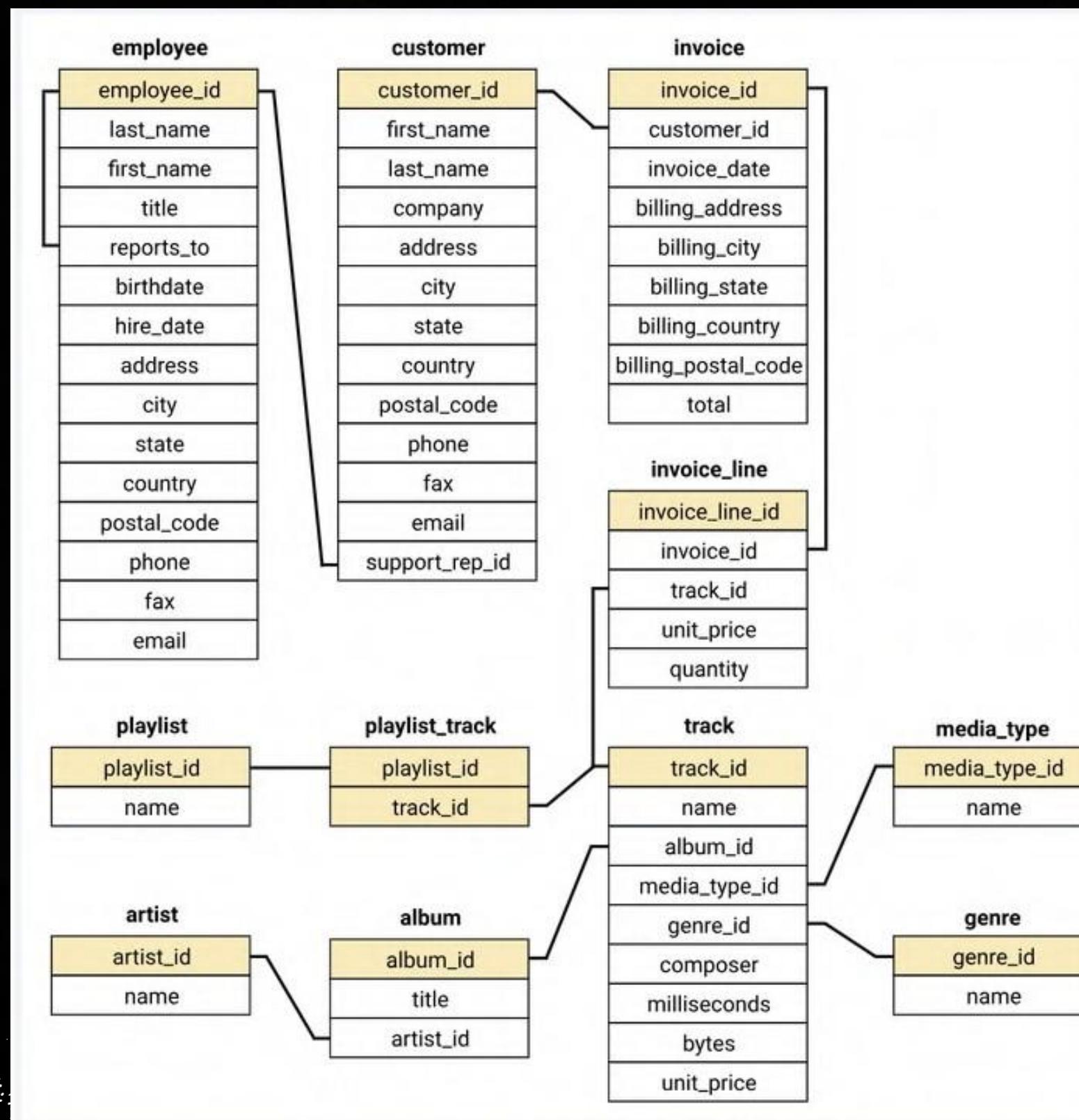


# OBJECTIVES



- ❖ The primary objective of the music store is to achieve sustainable business growth while addressing existing challenges.
- ❖ We need to examine the dataset with SQL and help the music store understand its business growth by answering simple questions

# MUSIC PLAYLIST DATABASE SCHEMA



A collage of two black and white photos showing musicians performing.

# Q1- Who is the senior most employee based in job title ?

```
select first_name , last_name , levels from employee order by levels  
desc limit 3
```

first_name character	last_name character	levels character varying (10)
Mohan	Madan	L7
Andrew	Adams	L6
Nancy	Edwards	L4



Q2- Which countries have the highest invoice ?

```
select count(*) as c ,  
billing_country from invoice  
group by billing_country  
order by c desc  
limit 1
```

c	billing_country
131	USA



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

```
select sum(total) as total_invoice  
from invoice  
group by billing_country  
order by total_invoice desc  
limit 3
```

	total_invoice	
	double precision	🔒
1	1040.4899999999998	
2	535.5900000000001	
3	427.6800000000006	



**Q4 - 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 totalsWhat are the top 3 values of total invoice ?**

```
select sum(total) as invoice_total , billing_city  
from invoice  
group by billing_city  
order by invoice_total desc  
limit 1
```

	invoice_total double precision	billing_city character varying (30)
1	273.24000000000007	Prague



**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
    customer.first_name ,
    customer.last_name,
    customer.customer_id,
    sum(invoice.total)as total_sum
from customer
join invoice on customer.customer_id = invoice.customer_id
group by customer.customer_id
order by total_sum desc
limit 1
```

first_name character	last_name character	customer_id [PK] integer	total_sum double precision
R	Madhav	5	144.54000000000002



**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 email , first_name , last_name , genre.name as 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
```



email character varying (50)	first_name character	last_name character	name character varying (120)
aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock
alero@uol.com.br	Alexandre	Rocha	Rock
astrid.gruber@apple.at	Astrid	Gruber	Rock
bjorn.hansen@yahoo.no	Bjørn	Hansen	Rock

**Q7: 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 artist.artist_id ,count(artist.name) as number_of_songs from track
join album on album.album_id = track.album_id
join artist on album.artist_id = artist.artist_id
join genre on genre.genre_id = track.genre_id
where genre.name like 'Rock'
group by artist.artist_id
order by number_of_songs desc
limit 10
```

	artist_id [PK] character varying (50)	number_of_songs bigint
1	22	114
2	150	112
3	58	92
4	90	81
5	118	54
6	152	52
7	51	45
8	142	41
9	76	40
10	52	35



**Q8: 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.**

```
select name, milliseconds from track  
where milliseconds > ( select avg(milliseconds)  
as avg_track_length from track)  
order by milliseconds
```

name  
character varying (150)

Wicked Ways

Concerto for Clarinet in A Major, K. 622: II. Adagio

The Shortest Straw

The Unforgiven II

22 Acacia Avenue

	milliseconds
	integer
	393691
	394482
	395389
	395520
	395572



# 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 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 1
    ORDER BY 3 DESC
    LIMIT 1)
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 1,2,3,4
ORDER BY 5 DESC;
```

customer_id	first_name	last_name	artist_name	amount_spent
46	Hugh	O'Reilly	Queen	27.719999999999985
38	Niklas	Schröder	Queen	18.81
3	François	Tremblay	Queen	17.82
34	João	Fernandes	Queen	16.830000000000002



**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 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 best_selling_artist AS (
    SELECT 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 1
    ORDER BY 3 DESC
    LIMIT 1)
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 1,2,3,4
ORDER BY 5 DESC;
```

purchases bigint	country character varying (50)	name character varying (120)	genre_id character varying (50)	rowno bigint
17	Argentina	Alternative & Punk	4	1
34	Australia	Rock	1	1
40	Austria	Rock	1	1
26	Belgium	Rock	1	1
205	Brazil	Rock	1	1
333	Canada	Rock	1	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 customers who spent this amount.**

```
WITH Customer_with_country AS (
    SELECT customer.customer_id, first_name, last_name,
    billing_country, SUM(total) AS total_spending,
    ROW_NUMBER() OVER(PARTITION BY billing_country ORDER BY SUM(total) DESC) AS RowNo
    FROM invoice
    JOIN customer ON customer.customer_id = invoice.customer_id
    GROUP BY 1,2,3,4
    ORDER BY 4 ASC,5 DESC)
SELECT * FROM Customer_with_country WHERE RowNo <= 1
```

customer_id	first_name	last_name	billing_country	total_spending	rowno
56	Diego	Gutiérrez	Argentina	39.6	1
55	Mark	Taylor	Australia	81.18	1
7	Astrid	Gruber	Austria	69.3	1
8	Daan	Peeters	Belgium	60.38999999999999	1
1	Luís	Gonçalves	Brazil	108.89999999999998	1



# MUSIC SALES REPORT

THANK  
YOU

