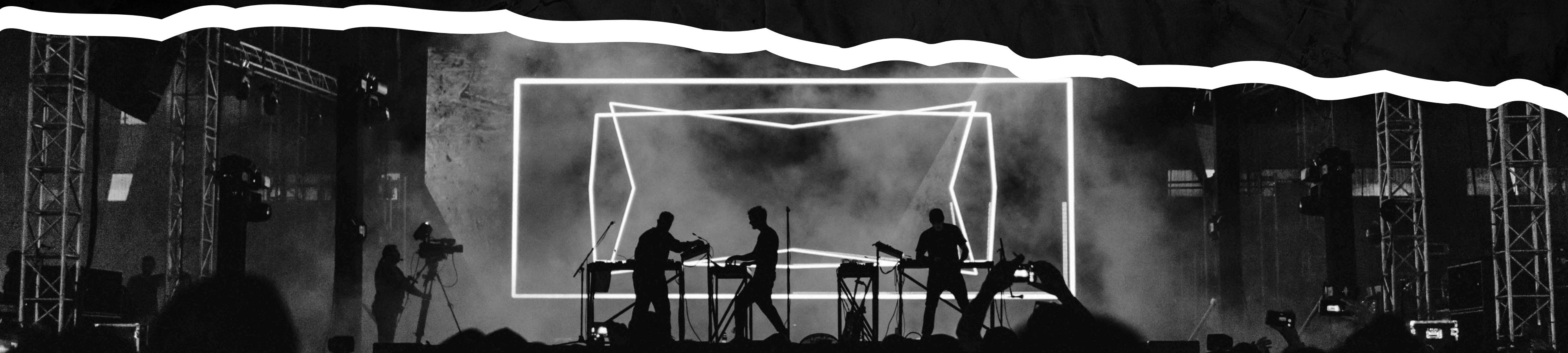


SQL PROJECT

MUSIC STORE ANALYSIS

-ROMIT SONI

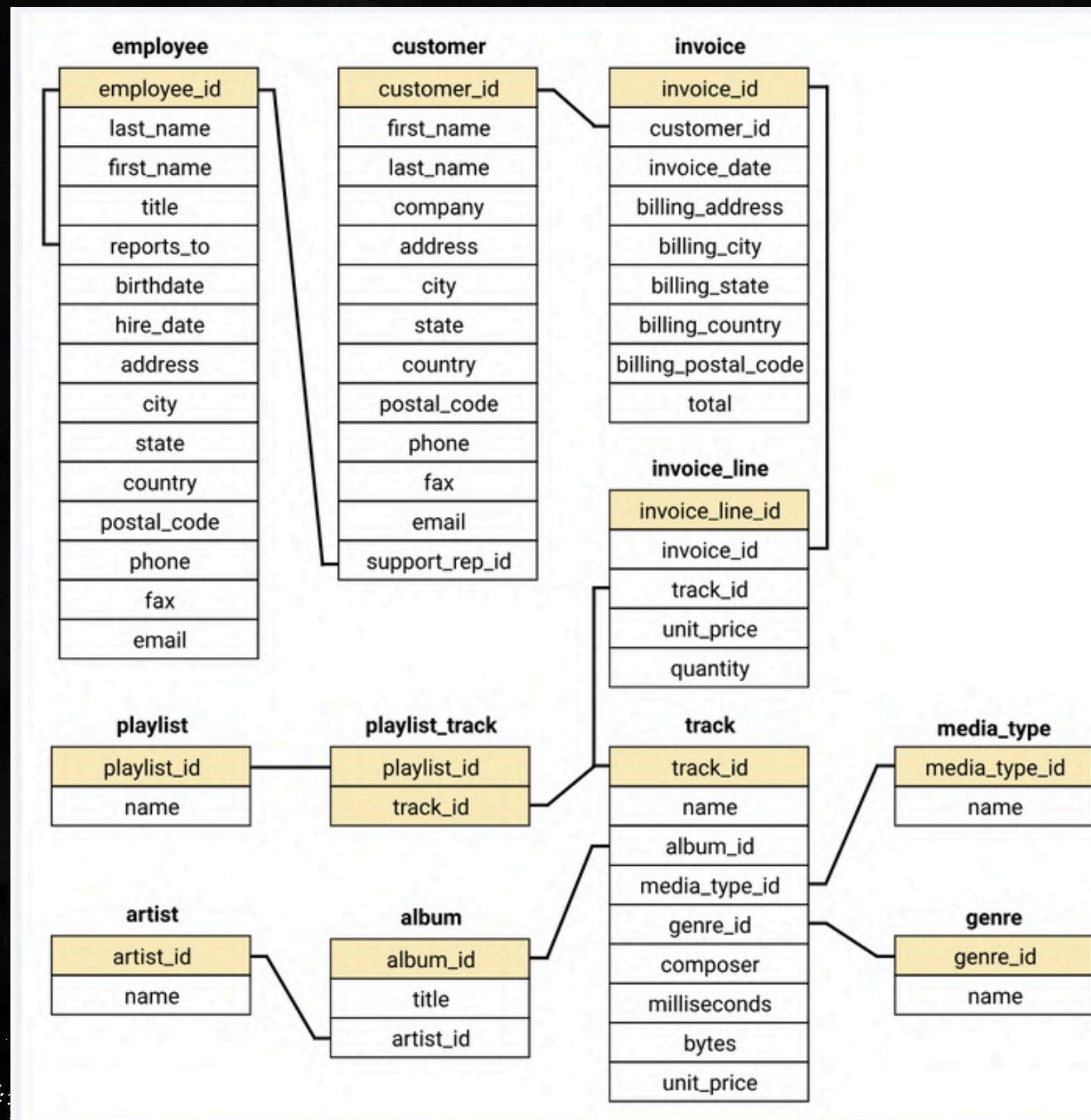


OBJECTIVES



- ❖ 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 photographs.

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	milliseconds
character varying (150)	
Wicked Ways	393691
Concerto for Clarinet in A Major, K. 622: II. Adagio	394482
The Shortest Straw	395389
The Unforgiven II	395520
22 Acacia Avenue	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

romitsoni143@gmail.com

