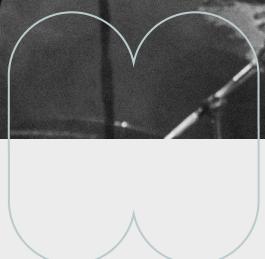


Feel the Energy, Rock
the Night Away

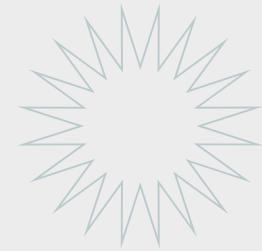
SQL PROJECT

MUSIC PLAYLIST ANALYSIS

-Adarsh_sahu



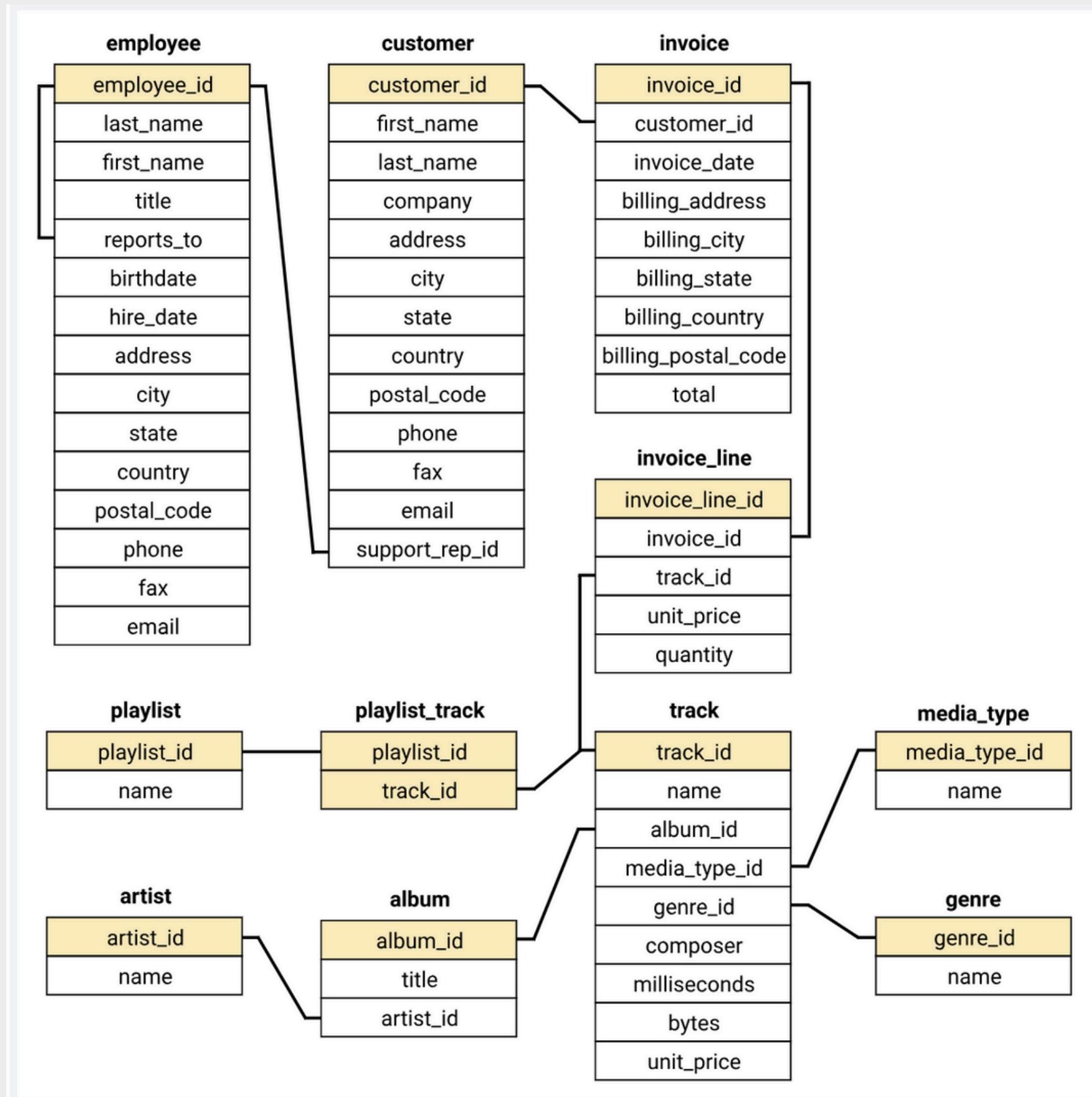
OBJECTIVE



- ❖ 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 question



MUSIC PLAYLIST DATABASE SCHEMA



Q1: Who is the senior most employee based on job title

Query Query History

```
1
2 --Q1: Who is the senior most employee based on job title
3
4 select first_name, last_name, levels from employee
5 order by levels desc
6 limit 1;
```

Data Output Messages Notifications

first_name character (50) last_name character (50) levels character varying (10)

	first_name character (50)	last_name character (50)	levels character varying (10)
1	Mohan	Madan	L7

Q2: Which countries have the most Invoices?

Query Query History

```
1 --Q2: Which countries have the most Invoices?
2 select billing_country, count(invoice_id) as count_invoice from invoice
3 group by billing_country
4 order by count_invoice desc;
5
```

Data Output Messages Notifications

SQL

	billing_country character varying (30)	count_invoice bigint
1	USA	131
2	Canada	76
3	Brazil	61
4	France	50
5	Germany	41



Q3: What are top 3 values of total invoice?

Query Query History

```
1 --Q3: What are top 3 values of total invoice?
2 select invoice_id, customer_id, total from invoice
3 order by total desc
4 limit 3;
```

Data Output Messages Notifications

SQL

	invoice_id [PK] integer	customer_id integer	total double precision
1	183	42	23.759999999999998
2	92	32	19.8
3	31	3	19.8

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 totals

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

Output Messages Notifications



billing_city	top_sales
character varying (30)	double precision
Prague	273.24000000000007

Q 5: 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.

```
3 ✓ select customer.customer_id, customer.first_name, customer.last_name, sum(invoice.total) as top_customer
4   from customer
5   join invoice
6   on customer.customer_id = invoice.customer_id
7   group by customer.customer_id
8   order by top_customer desc
9   limit 1;
10
```

Data Output Messages Notifications

SQL

	customer_id [PK] integer	first_name character (50)	last_name character (50)	top_customer double precision
1	5	R	Madhav	144.54000000000002

Q 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

```
3 ✓ select distinct email, first_name, last_name
4   from customer c join invoice i on c.customer_id = i.customer_id
5   join invoice_line il on i.invoice_id = il.invoice_id
6   where track_id In
7   (
8     select track_id from track
9     join genre on track.genre_id = genre.genre_id
10    where genre.name like 'Rock'
11  )
12  order by email;
13
```

Data Output Messages Notifications

	email character varying (50)	first_name character (50)	last_name character (50)	
1	aaronmitchell@yahoo.ca	Aaron	Mitchell	...
2	alero@uol.com.br	Alexandre	Rocha	...
3	astrid.gruber@apple.at	Astrid	Gruber	...
4	bjorn.hansen@yahoo.no	Bjørn	Hansen	...
5	camille.bernard@yahoo.fr	Camille	Bernard	...
6	daan_peeters@apple.be	Daan	Peeters	...
7	diego.gutierrez@yahoo.ar	Diego	Gutiérrez	...

Q 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

```
12
13 -method 2`  
14 select distinct email, first_name, last_name , genre.name  
15 from customer  
16 join invoice on customer.customer_id = invoice.customer_id  
17 join invoice_line on invoice.invoice_id = invoice_line.invoice_id  
18 join track on invoice_line.track_id  = track.track_id  
19 join genre on track.genre_id = genre.genre_id  
20 where genre.name like 'Rock'  
21 order by email;  
22
```

Data Output Messages Notifications

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	email character varying (50)	first_name character (50)	last_name character (50)	name character varying (120)
1	aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock
2	alero@uol.com.br	Alexandre	Rocha	Rock
3	astrid.gruber@apple.at	Astrid	Gruber	Rock
4	bjorn.hansen@yahoo.no	Bjørn	Hansen	Rock
5	camille.bernard@yahoo.fr	Camille	Bernard	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

```
3 v select artist.artist_id, artist.name, count(track_id) as no_of_track
4   from artist
5     join album on artist.artist_id = album.artist_id
6     join track on album.album_id = track.album_id
7     join genre on track.genre_id = genre.genre_id
8   where genre.name like 'Rock'
9   group by artist.name, artist.artist_id
10  order by no_of_track desc
11  limit 10;
```

Data Output Messages Notifications

	artist_id [PK] character varying (50)	name character varying (120)	no_of_track bigint
1	22	Led Zeppelin	114
2	150	U2	112
3	58	Deep Purple	92
4	90	Iron Maiden	81
5	118	Pearl Jam	54
6	152	Van Halen	52
7	51	Queen	45
8	142	The Rolling Stones	41
9	76	Creedence Clearwater Revival	40
10	52	Kiss	35

Q8: Find how much amount spent by each customer on artists? Write a query to return customer name, artist name and total spent

```
3
4 with artist_spend as (select artist.artist_id as artist_id, artist.name as artist_name,
5 sum(invoice_line.unit_price * invoice_line.quantity) as money_spent
6 from invoice_line join track on invoice_line.track_id = track.track_id
7 join album on album.album_id = track.album_id
8 join artist on artist.artist_id = album.artist_id
9 group by artist.name, artist.artist_id
10 order by money_spent desc
11 limit 1)
12 select customer.first_name, artist_spend.artist_name,
13 sum(invoice_line.unit_price * invoice_line.quantity) as money_spent
14 from customer join invoice on customer.customer_id = invoice.customer_id
15 join invoice_line on invoice.invoice_id = invoice_line.invoice_id
16 join track on invoice_line.track_id = track.track_id
17 join album on album.album_id = track.album_id
18 join artist_spend on album.artist_id = artist_spend.artist_id
19 group by 1, 2
20 order by money_spent desc;
21
```

Data Output Messages Notifications

	first_name character (50)	artist_name character varying (120)	money_spent double precision
1	Hugh	Queen	27.719999999999985
2	Niklas	Queen	18.81
3	François	Queen	17.82
4	João	Queen	16.830000000000002
5	Phil	Queen	11.88

Q9: 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 recursive sales_per_country as
(select customer.country as country, genre.name, genre.genre_id, count(invoice_line.quantity) as quantity
from invoice_line join invoice on invoice_line.invoice_id = invoice.invoice_id
join customer on invoice.customer_id = customer.customer_id
join track on invoice_line.track_id = track.track_id
join genre on genre.genre_id = track.genre_id
group by 1,2,3
order by 1),
max_genre_per_country as (select max(quantity)as top_genre , country
                           from sales_per_country
                           group by 2
                           order by 2)
select sales_per_country.*
      from sales_per_country join max_genre_per_country
      on sales_per_country.country = max_genre_per_country.country
      where sales_per_country.quantity = max_genre_per_country.top_genre
```

Output Messages Notifications



country character varying (50)	name character varying (120)	genre_id character varying (50)	quantity bigint
Argentina	Alternative & Punk	4	17
Australia	Rock	1	34
Austria	Rock	1	40
Belgium	Rock	1	26
Brazil	Rock	1	205
Canada	Rock	1	333
Chile	Rock	1	61
Czech Republic	Rock	1	142

Q10: 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

```
4 v with recursive top_customer as
5   (select customer.customer_id, customer.first_name as customer_name, invoice.billing_country as country,
6    sum(invoice.total) as total_spend
7    from invoice join customer on invoice.customer_id = customer.customer_id
8    group by 1,billing_country, customer_name
9    order by 2 asc, 3 desc),
10   spend as
11     (select max(total_spend) as spends, country
12      from top_customer
13      group by country
14      order by country)
15   select top_customer.*
16     from spend join top_customer on spend.country = top_customer.country
17   where top_customer.total_spend = spend.spends
18   order by 3;
```

Data Output Messages Notifications

SQL

	customer_id	customer_name	country	total_spend
	integer	character (50)	character varying (30)	double precision
1	56	Diego	Argentina	39.6
2	55	Mark	Australia	81.18
3	7	Astrid	Austria	69.3
4	8	Daan	Belgium	60.38999999999999
5	1	Luís	Brazil	108.89999999999998
6	3	François	Canada	99.99
7	57	Luis	Chile	97.02000000000001

Q10: 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-

METHOD 2- CTE

```
4 v with a as
5   (select customer.customer_id, customer.first_name, invoice.billing_country as country, sum(invoice.total) as total,
6    row_number() over(partition by country order by sum(invoice.total) desc) as row_no
7    from customer join invoice on customer.customer_id = invoice.customer_id
8    group by 1,2,3
9    order by 4 desc)
10   select a.* from a
11   where row_no <= 1
12   order by 3;
```

Data Output Messages Notifications

≡+ 📁 ⏮ 🗂️ ⏮ 🗑️ 📁 🔍 ↴ ↵ SQL

	customer_id	first_name	country	total	row_no
	integer	character (50)	character varying (30)	double precision	bigint
1	56	Diego	Argentina	39.6	1
2	55	Mark	Australia	81.18	1
3	7	Astrid	Austria	69.3	1
4	8	Daan	Belgium	60.38999999999999	1
5	1	Luís	Brazil	108.8999999999998	1

Feel the Energy, Rock
the Night Away

THANK YOU

MUSIC PLAYLIST

ANALYSIS

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