

# SQL Project

## AN SQL ANALYSIS OF

## MUSIC STORE

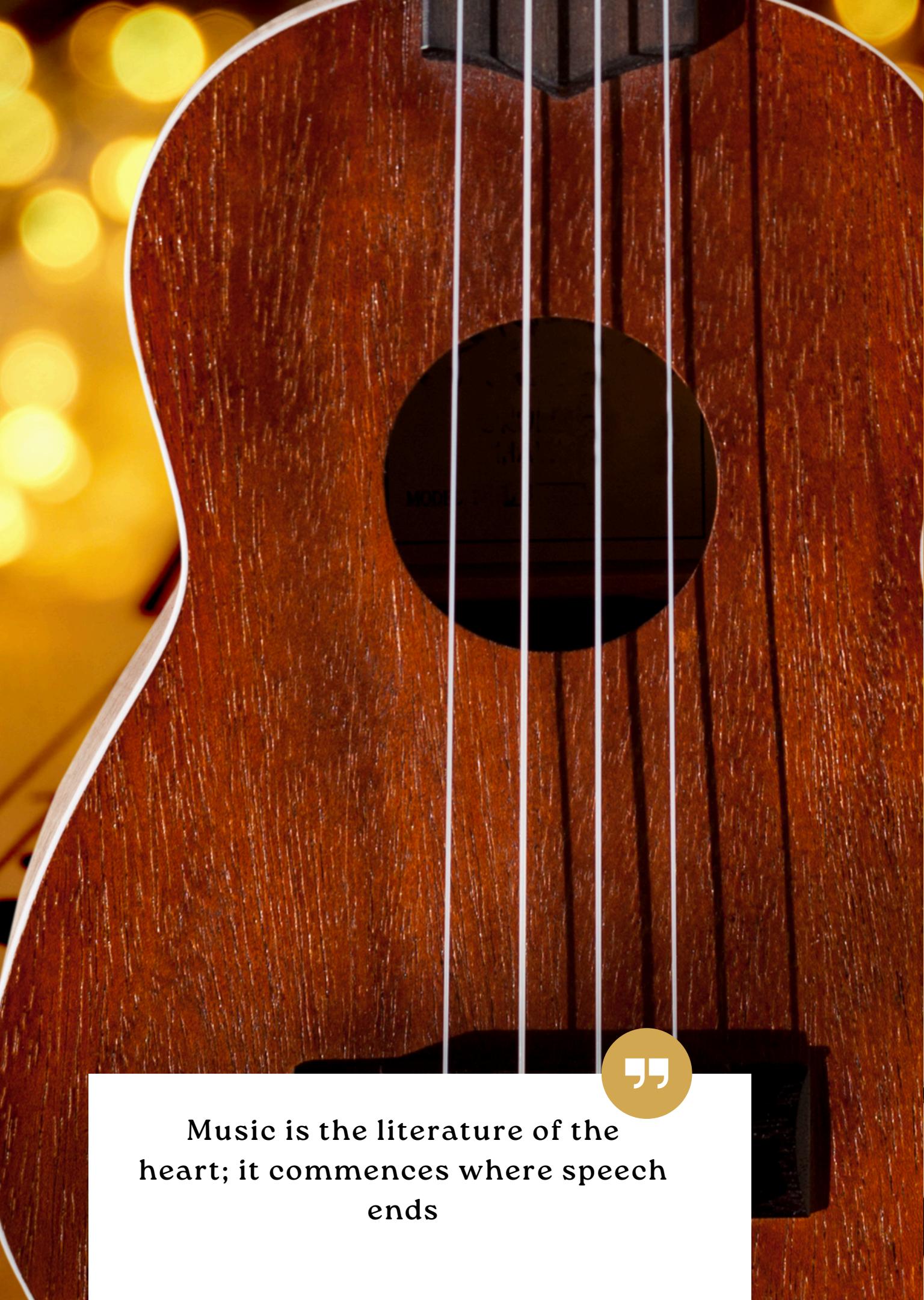
Rock

Jazz

HIP HOP



“Music is the literature of the heart; it commences where speech ends”



KUNAL KUMAR

DATA ANALYST ENTHUSIAST



# About Me

I am an aspiring data analyst with a strong foundation in data management, analysis, and visualization. Proficient in Excel, Power BI, SQL, Python, and statistics, I bring a well-rounded skill set for transforming complex data into actionable insights. My expertise in these tools and techniques allows me to efficiently clean, analyze, and visualize data to support data-driven decision-making.

## Skills

Programming Languages: Python, SQL  
Packages: NumPy, Pandas, Matplotlib  
Databases: MySQL, PostgreSQL,  
Tools: Microsoft Power BI, Excel, Tableau  
Other Tools: VS Code, Pycharm, Git, Jupyter  
Hard Skills: Data Modelling, Data Visualization,  
Statistical Data Analysis, Data Analysis

# Who is the senior most employee based on job title?

## CODE

```
SELECT employee_id, first_name, last_name, title, levels FROM employee  
ORDER BY levels DESC  
LIMIT 1
```

## RESULT

	employee_id [PK] character character (10)	first_name character (50)	last_name character (50)	title character varying (50)	levels character varying
1	9	Mohan	Madan	Senior General Man...	L7

# Which countries have the most Invoices?

## CODE

```
SELECT COUNT(*) AS c, billing_country FROM invoice  
GROUP BY billing_country  
ORDER BY c DESC  
limit 1
```

## RESULT

	c	billing_country
	bigint	character varying (30)
1	131	USA

# What are top 3 values of total invoice?

## CODE

```
SELECT total FROM invoice  
ORDER BY total DESC  
Limit 3
```

## RESULT

1	23.759999999999998
2	19.8
3	19.8

Which city has the best customers? We would like to throw a promotional Music Festival in the city we made the most money, one city that has the highest sum of invoice totals. Return both the city name & sum of all invoice totals

## CODE

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

## RESULT

	invoice_total double precision	billing_city character varying (30)
1	273.2400000000007	Prague

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

## CODE

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

## RESULT

	customer_id [PK] integer	first_name character (50)	last_name character (50)	total double precision	lock
1	5	R...	Madhav...	144.5400000000002	🔒

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

CODE

```
select DISTINCT email,first_name,last_name from customer
join invoice on customer.customer_id=invoice.customer_id
join invoice_line on invoice.invoice_id=invoice_line.invoice_id
where track_id in(
select track_id from track
join genre on track.genre_id=genre.genre_id
where genre.name like 'Rock'
)
order by email
```

RESULT

email character varying (50)	first_name character (50)	last_name character (50)
aaronmitchell@yahoo.ca	Aaron	Mitchell
alerobr@uol.com.br	Alexandre	Rocha
astrid.gruber@apple.at	Astrid	Gruber
bjorn.hansen@yahoo.no	Bjørn	Hansen
camille.bernard@yahoo.fr	Camille	Bernard
daan_peeters@apple.be	Daan	Peeters
diego.gutierrez@yahoo.ar	Diego	Gutiérrez
dmiller@comcast.com	Dan	Miller
dominiquelefebvre@gmail.c...	Dominique	Lefebvre
edfrancis@yahoo.ca	Edward	Francis

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.

## CODE

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

## RESULT

	artist_id	name	no_of_songs
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 ...	41
9	76	Creedence C...	40
10	52	Kiss	35

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

## CODE

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

## RESULT

	name character varying (150)	milliseconds integer
1	Occupation / Precipice	5286953
2	Through a Looking Glass	5088838
3	Greetings from Earth, Pt. 1	2960293
4	The Man With Nine Lives	2956998
5	Battlestar Galactica, Pt. 2	2956081
6	Battlestar Galactica, Pt. 1	2952702
7	Murder On the Rising Star	2935894
8	Battlestar Galactica, Pt. 3	2927802
9	Take the Celestra	2927677
10	Fire In Space	2926593
11	The Long Patrol	2925000

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

## CODE

```
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 track.album_id = album.album_id
  join artist on album.artist_id = artist.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 i.customer_id = i.customer_id
join invoice_line il on i.invoice_id = il.invoice_id
join track t on t.track_id = il.track_id
join album alb on t.album_id = alb.album_id
join best_selling_artist bsa on alb.artist_id = bsa.artist_id
group by 1,2,3,4
order by 5 desc
```

## RESULT

customer_id	first_name	last_name	artist_name	amount_spent
22	Heather	Leacock	Queen	190.00
57	Luis	Rojas	Queen	190.00
30	Edward	Francis	Queen	190.00
43	Isabelle	Mercier	Queen	190.00
35	Madalena	Sampaio	Queen	190.00
41	Marc	Dubois	Queen	190.00
51	Joakim	Johansson	Queen	190.00
56	Diego	Gutiérrez	Queen	190.00
49	Stanisław	Wójcik	Queen	190.00
37	Fynn	Zimmermann	Queen	190.00
3	François	Tremblay	Queen	190.00

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

## CODE

```
WITH popular_genre AS
(
    SELECT COUNT(invoice_line.quantity) AS purchases, customer.country, genre.name, genre.genre_id,
    ROW_NUMBER() OVER(PARTITION BY customer.country ORDER BY COUNT(invoice_line.quantity) DESC) AS RowNo
    FROM invoice_line
    JOIN invoice ON invoice.invoice_id = invoice_line.invoice_id
    JOIN customer ON customer.customer_id = invoice.customer_id
    JOIN track ON track.track_id = invoice_line.track_id
    JOIN genre ON genre.genre_id = track.genre_id
    GROUP BY 2,3,4
    ORDER BY 2 ASC, 1 DESC
)
SELECT * FROM popular_genre WHERE RowNo <= 1
```

	purchas bigint	country character	name character varyi ng	genre_id character
1	17	Argenti...	Alternative...	4
2	34	Austral...	Rock	1
3	40	Austria	Rock	1
4	26	Belgium	Rock	1
5	205	Brazil	Rock	1
6	333	Canada	Rock	1
7	61	Chile	Rock	1
8	143	Czech ...	Rock	1

## RESULT

# THANK YOU



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