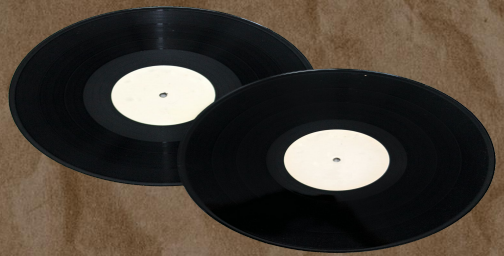
Music Store Sales and Customer Behavior Project Using SQL



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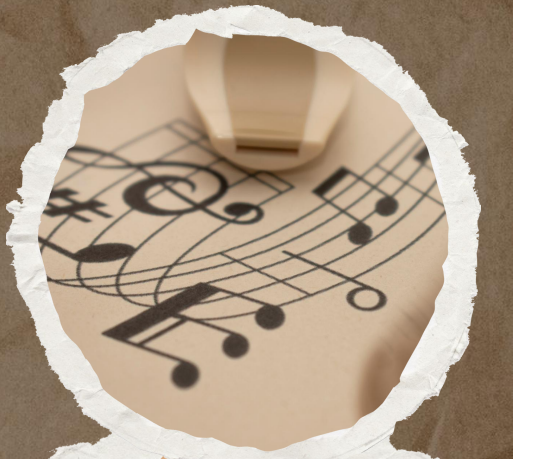
Project Overview

The project is based on a sample music store database containing information on customers, employees, invoices, tracks, artists, albums, genres, media types, and playlists



Business Goals

To find important insights about how customers spend, what music they like, and which artists perform well across different genres and countries

Q:1 Who is the senior most employee based on job title?

```sql
SELECT  CONCAT(last_name,' ', first_name) AS full_Name, title
FROM employee
ORDER BY levels DESC
LIMIT 1;
```

OUTPUT

Data Output | Messages | Notifications

	full_name text	title character varying (50)
1	Madan	Senior General Manager

Q2: Which top 5 countries have the most Invoices?

```sql
SELECT COUNT(*) AS Invoice_Count, billing_country
FROM invoice
GROUP BY billing_country
ORDER BY Invoice_Count DESC
LIMIT 5;
```

OUTPUT

invoice_count bigint	billing_country character varying (30)
131	USA
76	Canada
61	Brazil
50	France
41	Germany

Q:3 What are top 3 values of total invoice?

```
SELECT total
FROM invoice
ORDER BY total DESC
LIMIT 3;
```

OUTPUT

total double precision
23.759999999999998
19.8
19.8

Q:4 Which city has the highest sum of invoice totals?

```sql
SELECT billing_city,SUM(total) AS Invoice_Total
FROM invoice
GROUP BY billing_city
ORDER BY Invoice_Total DESC
LIMIT 1;
```

OUTPUT

billing_city character varying (30)	invoice_total double precision
Prague	273.24000000000007

Q:5 Write a query that returns the person who has spent the most money.

```sql
SELECT customer.customer_id, first_name, last_name, SUM(total) AS total_spending
FROM customer
JOIN invoice ON customer.customer_id = invoice.customer_id
GROUP BY customer.customer_id
ORDER BY total_spending DESC
LIMIT 1;
```

OUTPUT

customer_id [PK] integer	first_name character (50)	last_name character (50)	total_spending double precision
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

```sql
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;
```

OUTPUT

email character varying (50)	firstname character (50)	lastname character (50)	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
camille.bernard@yahoo.fr	Camille	Bernard	Rock
daan_peeters@apple.be	Daan	Peeters	Rock
diego.gutierrez@yahoo.ar	Diego	Gutiérrez	Rock
dmiller@comcast.com	Dan	Miller	Rock
dominiquelefebvre@gmail.c...	Dominique	Lefebvre	Rock
edfrancis@yachoo.ca	Edward	Francis	Rock
eduardo@woodstock.com.br	Eduardo	Martins	Rock
ellie.sullivan@shaw.ca	Ellie	Sullivan	Rock
emma_jones@hotmail.com	Emma	Jones	Rock
enrique_munoz@yahoo.es	Enrique	Muñoz	Rock

Q:7 Write a query that returns the Artist name and total track count of the top 5 rock bands

```sql
SELECT artist.artist_id, artist.name,COUNT(artist.artist_id) AS number_of_songs
FROM track
JOIN album ON album.album_id = track.album_id
JOIN artist ON artist.artist_id = album.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 5;
```

artist_id [PK] character varying (50)	name character varying (120)	number_of_songs bigint
22	Led Zeppelin	114
150	U2	112
58	Deep Purple	92
90	Iron Maiden	81
118	Pearl Jam	54

Q:8 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.

```sql
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
```

OUTPUT

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
61	Chile	Rock	1	1
143	Czech Republic	Rock	1	1
24	Denmark	Rock	1	1
46	Finland	Rock	1	1
211	France	Rock	1	1
194	Germany	Rock	1	1
44	Hungary	Rock	1	1
102	India	Rock	1	1
72	Ireland	Rock	1	1
35	Italy	Rock	1	1

Thank You

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