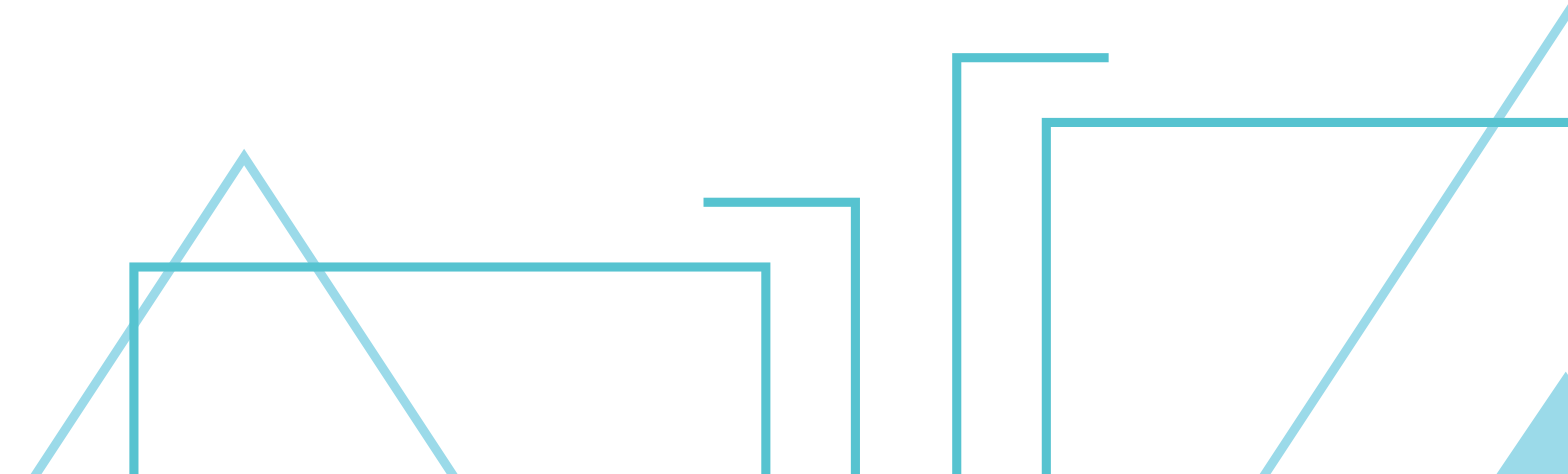


SQL Project on Digital Music Store Analysis

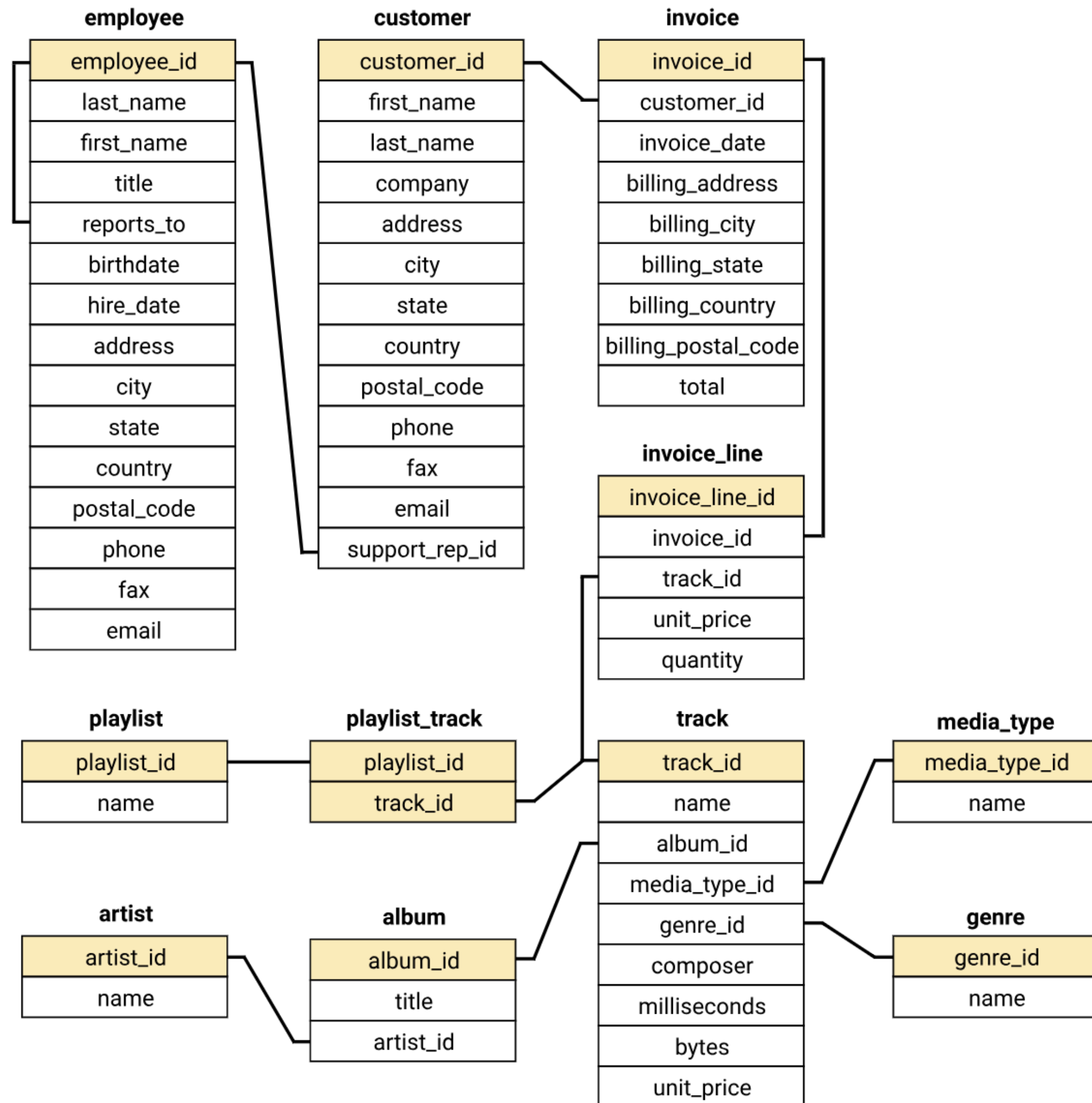
using Microsoft SQL Server
Management Studio



INTRODUCTION

In this project I have used SQL queries to solve questions related to pizza sales, to get valuable information from data in 11 different tables.

SCHEMA



Who is the senior most employee based on job title?

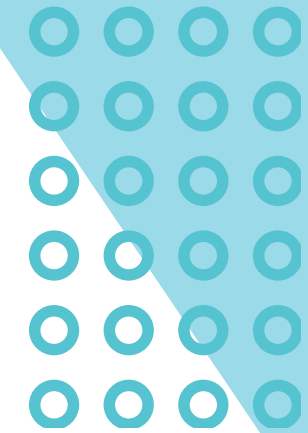
```
Select Top 1 first_name, last_name  
FROM employee  
ORDER BY levels DESC
```

Results			Messages		
	first_name	last_name			
1	Mohan	Madan			

Which countries have the most Invoices?

```
Select TOP 1 billing_country as Country, COUNT(*) as No_of_Bills  
FROM invoice  
GROUP BY billing_country  
ORDER BY Country DESC
```

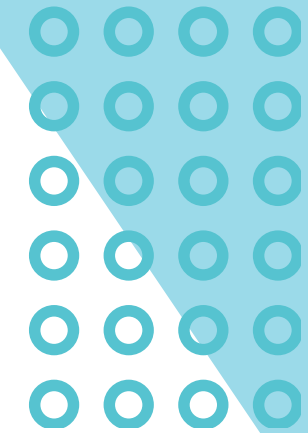
Results			Messages	
	Country	No_of_Bills		
1	USA	131		



What are top 3 values of total invoice?

```
Select TOP 3 ROUND(Total,2) as Total  
FROM Invoice  
ORDER BY Total DESC
```

Results		Messages
	Total	
1	23.76	
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. 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 Top 1 billing_city as City, ROUND(SUM(total),2) as Total  
From Invoice  
GROUP BY billing_city  
ORDER BY Total DESC
```

Results Messages		
	City	Total
1	Prague	273.24

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 Top 1 C.first_name, C.last_name, C.customer_id, ROUND(SUM(I.total),2) as Total
FROM Customer as C
JOIN Invoice as I
ON C.customer_id = I.customer_id
GROUP BY C.first_name, C.last_name, C.customer_id
ORDER BY Total DESC
```

Results Messages				
	first_name	last_name	customer_id	Total
1	František	Wichterlová	5	144.54

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

```
WITH CTE AS
(select customer.email, customer.first_name, customer.last_name, genre.name
FROM customer JOIN invoice
ON customer.customer_id = invoice.customer_id
JOIN invoice_line ON invoice_line.invoice_id = invoice.invoice_id
JOIN track ON track.track_id = invoice_line.track_id
JOIN genre ON genre.genre_id = track.genre_id
WHERE genre.name LIKE 'Rock')

select email, first_name, last_name, name
FROM CTE
ORDER BY email
```

Results Messages				
	email	first_name	last_name	name
1	aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock
2	aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock
3	aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock
4	aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock
5	aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock
6	aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock
7	aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock
8	aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock
9	aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock
10	aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock

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 TOP 10 artist.name, count(artist.artist_id) as Number_of_songs
FROM artist JOIN album
ON artist.artist_id = album.artist_id
JOIN track ON track.album_id = album.album_id
JOIN genre ON genre.genre_id = track.genre_id
WHERE genre.name LIKE 'Rock'
GROUP BY artist.name
ORDER BY Number_of_songs DESC
```

Results Messages		
	name	Number_of_songs
1	Led Zeppelin	114
2	U2	112
3	Deep Purple	92
4	Iron Maiden	81
5	Pearl Jam	54
6	Van Halen	52
7	Queen	45
8	The Rolling Stones	41
9	Creedence Clearwater Revival	40
10	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.

```
Select name, Milliseconds
FROM track
WHERE milliseconds > (
Select AVG(milliseconds) as Average_Length
FROM track)
ORDER BY Milliseconds DESC
```

Results Messages		
	name	Milliseconds
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	2925008
12	The Magnificent Warriors	2924716
13	The Living Legend, Pt. 1	2924507
14	The Gun On Ice Planet Zero, Pt. 2	2924341
15	The Hand of God	2924007

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

```
Select customer.first_name, customer.last_name, artist.name as Artist_Name,  
SUM(invoice_line.unit_price * invoice_line.quantity) as Total_Spent  
FROM customer  
JOIN invoice ON customer.customer_id = invoice.customer_id  
JOIN invoice_line ON invoice_line.invoice_id = invoice.invoice_id  
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 customer.first_name, customer.last_name, artist.name  
ORDER BY SUM(invoice line.unit price * invoice line.quantity) DESC
```



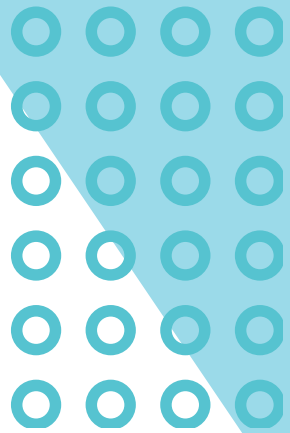
Results Messages				
	first_name	last_name	Artist_Name	Total_Spent
1	Hugh	O'Reilly	Queen	27.7200002670288
2	Wyatt	Girard	Frank Sinatra	23.7600002288818
3	Robert	Brown	Creedence Clearwater Revival	19.8000001907349
4	Helena	Holý	Red Hot Chili Peppers	19.8000001907349
5	František	Wichterlová	Kiss	19.8000001907349
6	Aaron	Mitchell	James Brown	19.8000001907349
7	François	Tremblay	The Who	19.8000001907349
8	Heather	Leacock	House Of Pain	18.8100001811981
9	Hugh	O'Reilly	Nirvana	18.8100001811981
10	Niklas	Schröder	Queen	18.8100001811981

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 CTE 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 customer
JOIN invoice ON customer.customer_id = invoice.customer_id
JOIN invoice_line ON invoice_line.invoice_id = invoice.invoice_id
JOIN track ON track.track_id = invoice_line.track_id
JOIN genre ON genre.genre_id = track.genre_id
GROUP BY customer.country, genre.name, genre.genre_id
)

Select Purchases, Country, Name
FROM CTE
Where RowNo =1
ORDER BY Purchases DESC
```

Results		Messages	
	Purchases	Country	Name
1	561	USA	Rock
2	333	Canada	Rock
3	211	France	Rock
4	205	Brazil	Rock
5	194	Germany	Rock
6	166	United Kingdom	Rock
7	143	Czech Republic	Rock
8	108	Portugal	Rock
9	102	India	Rock
10	72	Ireland	Rock



**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 CTE AS(
Select customer.first_name, customer.last_name, invoice.billing_country as Country,
invoice.customer_id, ROUND(SUM(invoice.total),2) as Total,
Row_Number() OVER (Partition BY invoice.billing_country ORDER BY SUM(invoice.total) DESC) as RN
FROM customer
JOIN invoice ON customer.customer_id = invoice.customer_id
GROUP BY customer.first_name, customer.last_name, invoice.billing_country, invoice.customer_id)

Select customer_id, first_name, last_name, country, Total
FROM CTE
WHERE RN = 1
```

	customer_id	first_name	last_name	country	Total
1	56	Diego	Gutiérrez	Argentina	39.6
2	55	Mark	Taylor	Australia	81.18
3	7	Astrid	Gruber	Austria	69.3
4	8	Daan	Peeters	Belgium	60.39
5	1	Luís	Gonçalves	Brazil	108.9
6	3	François	Tremblay	Canada	99.99
7	57	Luis	Rojas	Chile	97.02
8	5	František	Wichterlová	Czech Republic	144.54
9	9	Kara	Nielsen	Denmark	37.62
10	44	Terhi	Hämäläinen	Finland	79.2
11	42	Wyatt	Girard	France	99.99
12	37	Fynn	Zimmermann	Germany	94.05
13	45	Ladislav	Kovács	Hungary	78.21

The background features a light gray field with abstract teal geometric elements. In the top-left, there are nested rectangular outlines and a diagonal line. The top-right corner contains a 4x5 grid of small teal circles. The bottom-left has a 5x4 grid of similar circles. The bottom-right features more nested rectangular outlines. A diagonal teal line runs from the top-right towards the bottom-left, intersecting the other elements.

THANK YOU