Music Store SQL Project

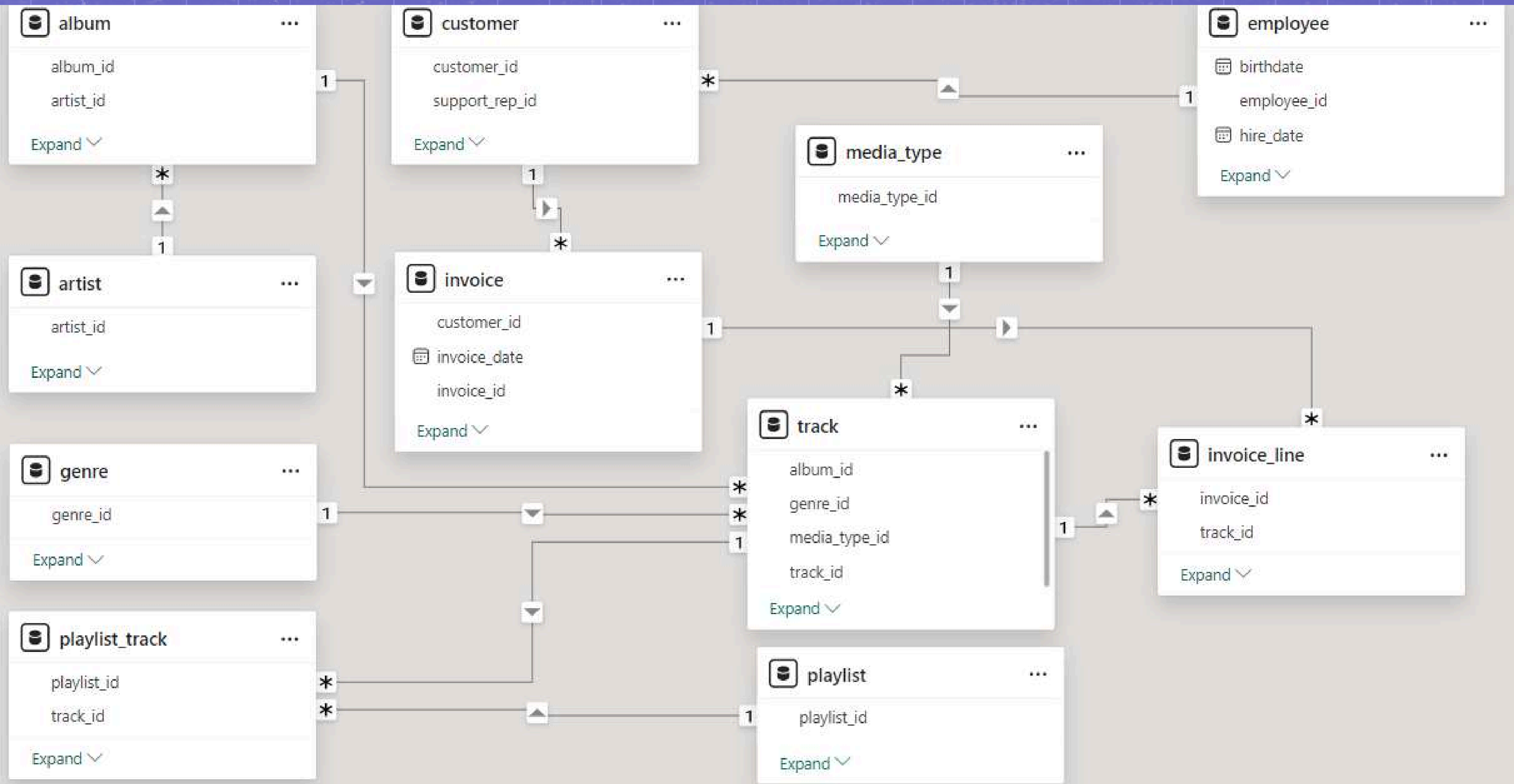
SQL PROJECT # 3

@waleedilyas

Introduction

My name is Waleed Ilyas, a Data Analyst. In this project, I utilized SQL Queries to Solve Questions related to a Music Store.

Data Model


album
album_id
artist_id
Expand
customer
customer_id
support_rep_id
Expand
employee
birthdate
employee_id
hire_date
Expand
media_type
media_type_id
Expand
artist
artist_id
Expand
invoice
customer_id
invoice_date
invoice_id
Expand
track
album_id
genre_id
media_type_id
track_id
Expand
invoice_line
invoice_id
track_id
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genre
genre_id
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playlist_track
playlist_id
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playlist
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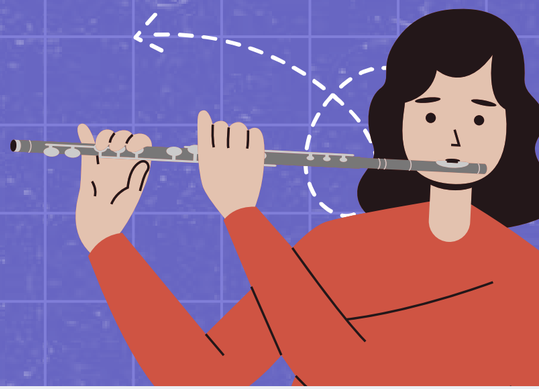
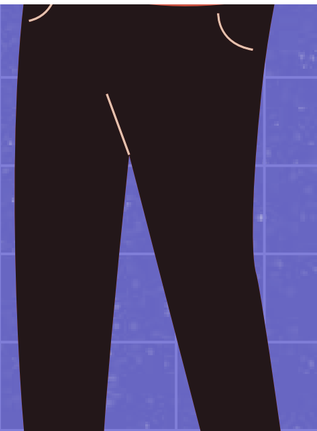
1
*

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

```
Select * from employee
ORDER BY levels desc limit 1
```



employee_id [PK] character varying (50)	last_name character (50)	first_name character (50)	title character varying (50)	reports_to character varying (30)	levels character
9	Madan	Mohan	Senior General Manager	[null]	L7



Q:2 Which country have the most invoices?

```
Select COUNT(*) as c, billing_country
from invoice
group by billing_country
order by c DESC
```

	c bigint	billing_country character varying (30)
1	131	USA
2	76	Canada
3	61	Brazil
4	50	France
5	41	Germany
6	30	Czech Republic
7	29	Portugal

Q:3 What are the top 3 values of total invoices?

```
Select total From invoice
order by total DESC
LIMIT 3
```

	total double precision
1	23.759999999999998
2	19.8
3	19.8

Q:4 Which City has the best Customers? We Would like to throw a promotional Music Festival in the city we made the most money. Write the Query that returns one city that has the highest sum of invoice totals. Resturn both the city name & sum of all invoice totals.

```
Select SUM(total) as invoice_total, billing_city
From invoice Group by billing_city
Order By invoice_total DESC
```

	invoice_total double precision	billing_city character varying (30)
1	273.24000000000007	Prague
2	169.29	Mountain View
3	166.32	London
4	158.4	Berlin
5	151.47	Paris
6	129.69	São Paulo
7	114.83999999999997	Dublin

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.

```
Select customer.customer_id, customer.first_name, customer.last_name,
SUM(invoice.total) as total
From Customer Join invoice ON
customer.customer_id = invoice.customer_id
GROUP BY customer.customer_id
ORDER BY total DESC Limit 1
```

customer_id [PK] integer	first_name character (50)	last_name character (50)	total 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;
```

email character varying (50)	first_name character (50)	last_name character (50)
aaronmitchell@yahoo.ca	Aaron	Mitchell
alero@uol.com.br	Alexandre	Rocha
astrid.gruber@apple.at	Astrid	Gruber

Q:7 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, 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 10
```

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
152	Van Halen	52
51	Queen	45
142	The Rolling Stones	41
76	Creedence Clearwater Revival	40
52	Kiss	35

Q:8 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

```sql
Select name, milliseconds
From track
Where milliseconds > (
    Select AVG(milliseconds) AS avg_track_lenght
    From track
)
Order By milliseconds DESC
Limit 10;
```

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

Q:9 Find how much amount spent by each customer on artists? Write a query to return customer name, artist name and total spent.

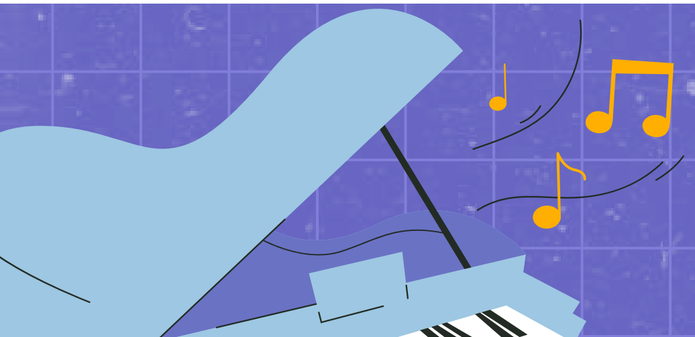
```sql
With best_selling_artist AS(
    Select artist.artist_id AS artist_id, artist.name AS artist_name,
    Sum(invoice_line.unit_price*invoice_line.quantity)
    From invoice_line join track ON track.track_id = invoice_line.track_id
    Join album ON album.album_id = track.album_id
    Join artist 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;
```

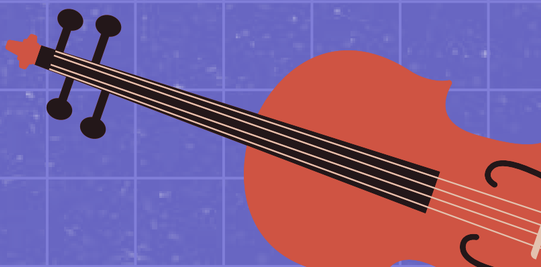
RESULT OF Q:9

customer_id integer	first_name character (50)	last_name character (50)	artist_name character varying (120)	amount_spent double precision
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
53	Phil	Hughes	Queen	11.88
41	Marc	Dubois	Queen	11.88
47	Lucas	Mancini	Queen	10.89
33	Ellie	Sullivan	Queen	10.89
20	Dan	Miller	Queen	3.96
5	R	Madhav	Queen	3.96
23	John	Gordon	Queen	2.9699999999999998
54	Steve	Murray	Queen	2.9699999999999998
31	Martha	Silk	Queen	2.9699999999999998
16	Frank	Harris	Queen	1.98
17	Jack	Smith	Queen	1.98

Q:10 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.

```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
```





RESULT OF Q:10

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

Q:11 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

```sql
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
```

RESULT OF Q:11

customer_id integer	first_name character (50)	last_name character (50)	billing_country character varying (30)	total_spending double precision	rowno bigint
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
3	François	Tremblay	Canada	99.99	1
57	Luis	Rojas	Chile	97.02000000000001	1
5	R	Madhav	Czech Republic	144.54000000000002	1
9	Kara	Nielsen	Denmark	37.61999999999999	1
44	Terhi	Hämäläinen	Finland	79.2	1
42	Wyatt	Girard	France	99.99	1
37	Fynn	Zimmermann	Germany	94.05000000000001	1
45	Ladislav	Kovács	Hungary	78.21	1
58	Manoj	Pareek	India	111.86999999999999	1
46	Hugh	O'Reilly	Ireland	114.83999999999997	1

Thank You

I appreciate your time in reviewing my SQL project.

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