

SQL Project

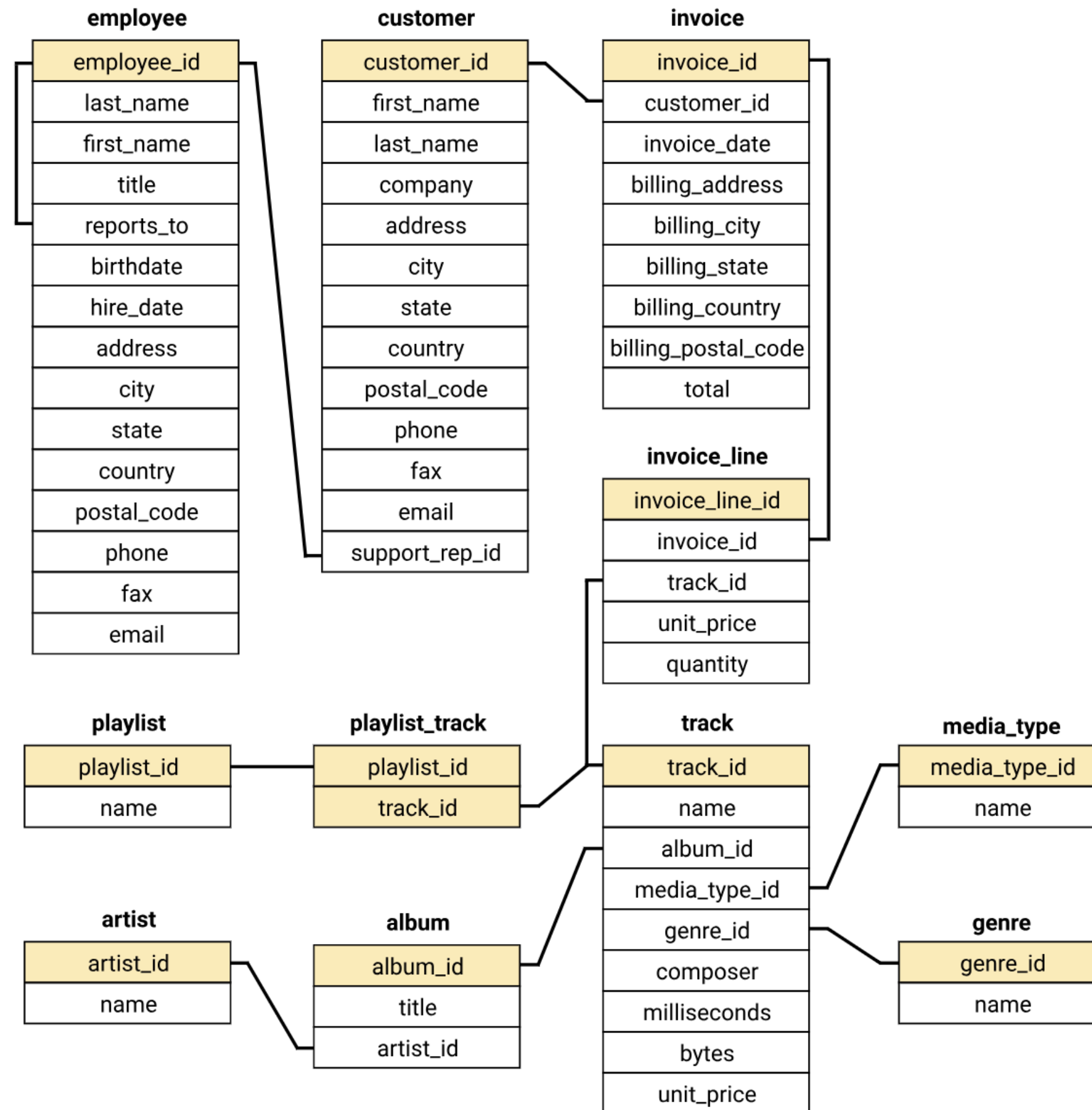
Music Store Analysis (SQL)

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Objective

To help the music store overcome its challenges and help them to grow their business

Database Schema

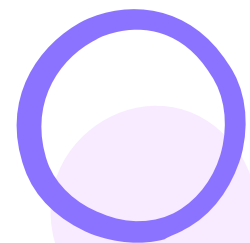
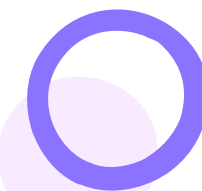
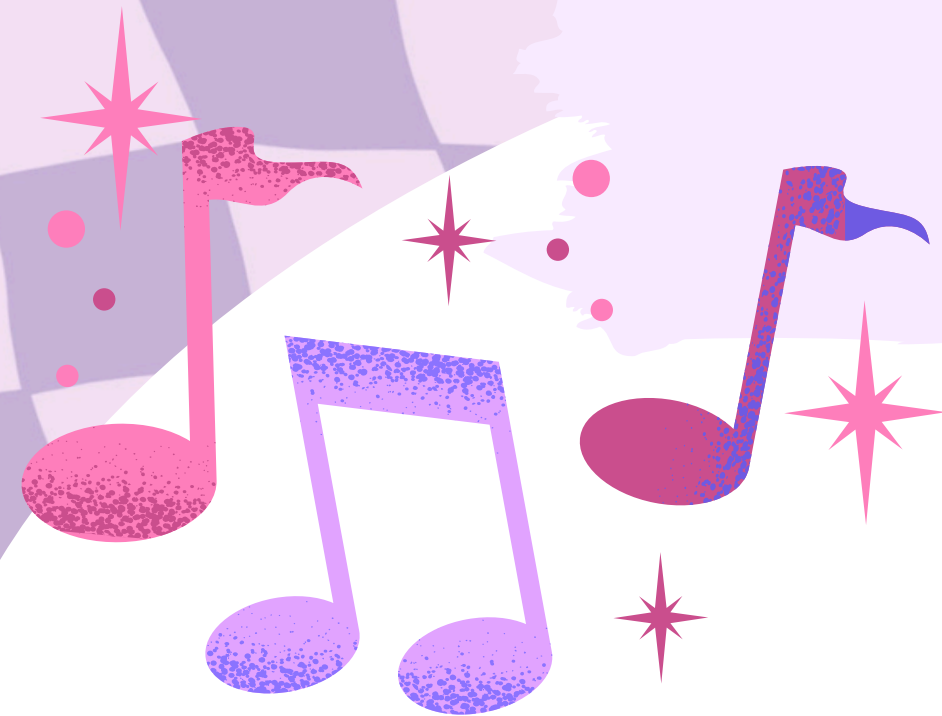


Level of queries

Easy

Moderate

Advance



Who is the senior most employee based on job title?

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

```
select top 1 first_name, last_name  
from employee  
order by levels desc
```

	first_name	last_name
1	Mohan	Madan

Which countries have the most Invoices?

```
/* Q2: Which countries have the most Invoices? */  
  
select billing_country, count(*) c  
from invoice  
group by billing_country  
order by c desc
```

	billing_country	c
1	USA	131
2	Canada	76
3	Brazil	61
4	France	50
5	Germany	41
6	Czech Republic	30

What are top 3 values of total invoice?

/ Q3: What are top 3 values of total invoice? */*

```
select top 3 total  
from invoice  
order by total desc
```

	total
1	23.7600002288818
2	19.79999992370605
3	19.79999992370605

Which city has the best customers?

/* 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 top 1 billing_city, sum(total) invoice_total  
from invoice  
group by billing_city  
order by invoice_total desc
```

	billing_city	invoice_total
1	Prague	273.240000247955

Who is the best customer?

/* Q5: 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.customer_id, first_name, last_name, sum(total) inv_total from invoice i
join customer c on i.customer_id=c.customer_id
group by c.customer_id, first_name, last_name
order by inv_total desc
```

	customer_id	first_name	last_name	inv_total
1	5	František	Wichterlová	144.539998054504

Return the email, first name, last name, & Genre of all Rock Music listeners

```
/* Q1: 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. */
```

```
select distinct email,first_name,last_name from customer c  
join invoice i on c.customer_id=i.customer_id  
join invoice_line il on i.invoice_id=il.invoice_id  
join track t on il.track_id=t.track_id  
join genre g on t.genre_id=g.genre_id  
where g.name='Rock'  
order by c.email
```

	email	first_name	last_name
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



invite the artists who have written the most rock music in our dataset

/* Q2: 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 ar.name, count(track_id) track_count from artist ar  
join album2 al on ar.artist_id=al.artist_id  
join track t on al.album_id=t.album_id  
join genre g on t.genre_id=g.genre_id  
where g.name like 'Rock'  
group by ar.name  
order by track_count desc
```

	name	track_count
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...	41
9	Creedence ...	40
10	Kiss	35



Return all the track names that have a song length longer than the average song length

```
/* Q3: 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) from track)  
order by milliseconds desc
```

	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

how much amount spent by each customer on artists?

/* Q1: Find how much amount spent by each customer on artists?
Write a query to return customer name, artist name and total spent */

```
select c.first_name,c.last_name,ar.name,sum(il.unit_price*il.quantity) total
from customer c
join invoice i on c.customer_id=i.customer_id
join invoice_line il on i.invoice_id=il.invoice_id
join track t on il.track_id=t.track_id
join album2 al on t.album_id=al.album_id
join artist ar on al.artist_id=ar.artist_id
group by c.first_name,c.last_name,ar.name
order by total desc
```

	first_name	last_name	name	total
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

find out the most popular music Genre for each country

/* Q2: 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 popular_genre as(  
  select count(il.quantity) purchases,c.country,g.name ,  
  rank() over(partition by c.country order by count(il.quantity) desc) rowno  
  from invoice_line il  
  join invoice i on i.invoice_id=il.invoice_id  
  join customer c on c.customer_id=i.customer_id  
  join track t on il.track_id=t.track_id  
  join genre g on t.genre_id=g.genre_id  
  group by c.country,g.name)
```

```
select * from popular_genre where rowno=1
```

	purchases	country	name	rowno
1	17	Argentina	Alternative & Punk	1
2	34	Australia	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
9	24	Denmark	Rock	1

determine the customer that has spent the most on music for each country

/* Q3: 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 customer_with_country as(  
select c.first_name,c.last_name,c.country,sum(i.total) total_spending,  
rank() over(partition by c.country order by sum(i.total) desc) top_cust  
from customer c  
join invoice i on c.customer_id=i.customer_id  
group by c.first_name,c.last_name,c.country  
)  
  
select * from customer_with_country where top_cust =1
```



	first_name	last_name	country	total_spending	top_cust
1	Diego	Gutiérrez	Argentina	39.5999991893768	1
2	Mark	Taylor	Australia	81.1800003051758	1
3	Astrid	Gruber	Austria	69.299998998642	1
4	Daan	Peeters	Belgium	60.3899998664856	1
5	Luís	Gonçalves	Brazil	108.899999380112	1
6	François	Tremblay	Canada	99.9899981021881	1



Thank you!