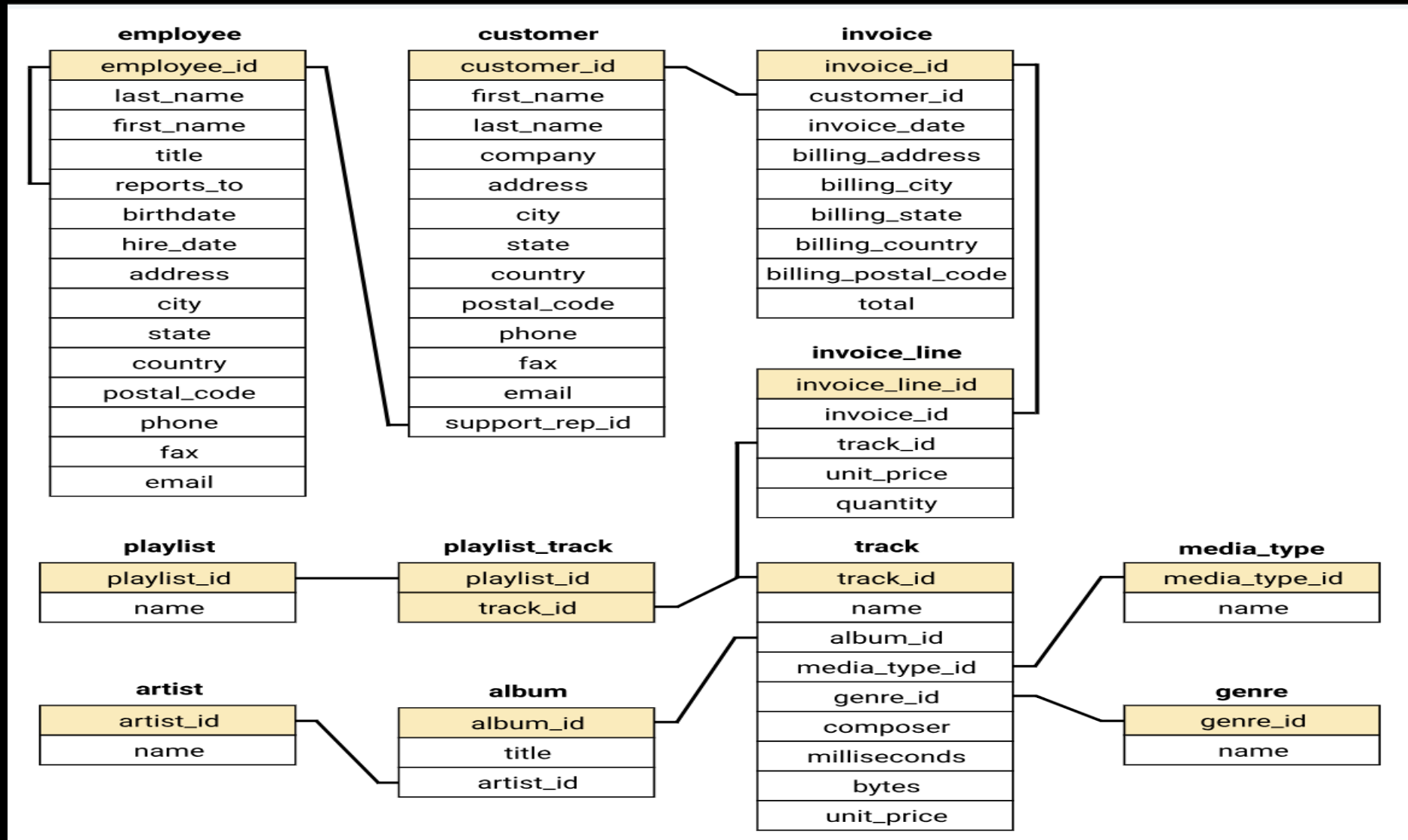


SQL PROJECT

MUSIC STORE ANALYSIS



Database Schema





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

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

	employee_id	last_name	first_name	title	reports_to	levels
▶	1	Adams	Andrew	General Manager	9	L6



2. Which countries have the most invoices?

```
SELECT C.country, COUNT(I.invoice_id)ASmost_invoices
FROM customer AS C
JOIN invoice AS I USING(customer_id)
GROUP BY C.country
ORDER BY COUNT(I.invoice_id) DESC;
```

	country	ASmost_invoices
▶	USA	131
	Canada	76
	Brazil	61
	France	50
	Germany	41
	Czech Republic	30
	Portugal	29
	United Kingdom	28
	India	21
	Ireland	13



- Q3. What are the top three values of total invoice?

```
SELECT total FROM invoice  
order by total desc  
limit 3
```

	total
▶	23.759999999999998
	19.8
	19.8





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 a query that returns one city that has the highest sum of invoice totals. Return both the city name and sum of all invoice totals?

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

	billing_city	InvoiceTotal
▶	Prague	273.24000000000007





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 c.customer_id, first_name, last_name, ROUND(SUM(i.total),2) AS Total_Spending
FROM customer c
JOIN invoice i
ON c.customer_id = i.customer_id
GROUP BY c.customer_id, first_name, last_name
ORDER BY Total_Spending DESC
LIMIT 1;
```

	customer_id	first_name	last_name	Total_Spending
▶	5	František	Wichterlovský	144.54



6. Write query to return the e-mail, first name, last name, genre of all rock music listeners. Return your list ordered alphabetically by e-mail starting with A.

```
SELECT DISTINCT c.email AS Email, c.first_name, c.last_name, g.name AS Genre
FROM customer c
JOIN invoice i ON i.customer_id = c.customer_id
JOIN invoice_line vl ON vl.invoice_id = i.invoice_id
JOIN track t ON t.track_id = vl.track_id
JOIN genre g ON g.genre_id = t.genre_id
WHERE g.name LIKE 'Rock'
ORDER BY Email;
```

	Email	first_name	last_name	Genre
►	aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock
	alero@uol.com.br	Alexandre	Rocha	Rock
	astrid.gruber@apple.at	Astrid	Gruber	Rock
	bjorn.hansen@yahoo.no	Björn	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.com	Dominique	Lefebvre	Rock
	edfrancis@yahoo.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
	fernadaramos4@uol.com.br	Fernanda	Ramos	Rock
	fharris@google.com	Frank	Harris	Rock
	fralston@gmail.com	Frank	Ralston	Rock
	frantisekw@jetbrains.com	František	Wichterlov	Rock
	ftremblay@gmail.com	François	Tremblay	Rock
	zimmermann@yahoo.de	Eynn	Zimmermann	Rock



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.name AS Artists, COUNT(track.track_id) as Total_track
FROM artist
JOIN album2 ON album2.album_id = artist.artist_id
JOIN track ON track.album_id = album2.album_id
JOIN genre ON genre.genre_id = track.genre_id
WHERE genre.name LIKE 'Rock'
GROUP BY Artists
ORDER BY Total_track DESC
LIMIT 10;
```

Artists	Total_track
Alice In Chains	15
Billy Cobham	14
Jorge Vercilo	14
Antônio Carlos Jobim	13
Apocalyptica	12
AC/DC	10
Baby Consuelo	9
Alanis Morissette	8
Aerosmith	3
Accept	1



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?

```
SELECT name, milliseconds
FROM track
WHERE milliseconds > (
    SELECT AVG (milliseconds) AS Avg_milliseconds
    FROM track)
ORDER BY milliseconds DESC;
```

	name	milliseconds
▶	How Many More Times	711836
	Advance Romance	677694
	Sleeping Village	644571
	You Shook Me(2)	619467
	Talkin' 'Bout Women Obviously	589531
	Stratus	582086
	No More Tears	555075
	The Alchemist	509413
	Wheels Of Confusion / The Straightener	494524
	Book Of Thel	494393
	You Oughta Know (Alternate)	491885
	Terra	482429
	Snoopy's search-Red baron	456071
	Sozinho (Hitmakers Classic Mix)	436636
	Master Of Puppets	436453
	Stone Crazy	433397
	Snowblind	420022



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

```
WITH best_selling_artist AS(
SELECT artist.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 album2 ON album2.album_id = track.album_id
JOIN artist ON artist.artist_id = album2.artist_id
GROUP BY 1,2
ORDER BY 3 DESC
LIMIT 1
)
SELECT c.customer_id, c.first_name, c.last_name, bsa.artist_name,
ROUND(SUM(il.unit_price*il.quantity),2) AS Total_Spent
FROM customer c
JOIN invoice i ON i.customer_id = c.customer_id
JOIN invoice_line il ON il.invoice_id = i.invoice_id
JOIN track t ON t.track_id = il.track_id
JOIN album2 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;
```

	customer_id	first_name	last_name	artist_name	Total_Spent
▶	54	Steve	Murray	AC/DC	17.82
	53	Phil	Hughes	AC/DC	10.89
	21	Kathy	Chase	AC/DC	10.89
	49	Stanisław	Wójcik	AC/DC	9.9
	1	Luís	Gonçalves	AC/DC	7.92
	24	Frank	Ralston	AC/DC	7.92
	31	Martha	Silk	AC/DC	3.96
	16	Frank	Harris	AC/DC	2.97
	42	Wyatt	Girard	AC/DC	2.97
	6	Helena	Holmér	AC/DC	2.97
	38	Niklas	Schröder	AC/DC	2.97
	35	Madalena	Sampaio	AC/DC	2.97
	44	Terhi	Hämäläinen	AC/DC	2.97
	9	Kara	Nielsen	AC/DC	1.98
	34	João	Fernandes	AC/DC	1.98
	57	Luis	Rojas	AC/DC	1.98
	27	Patrick	Gray	AC/DC	1.98
	20	Dan	Miller	AC/DC	1.98
	30	Edward	Francis	AC/DC	1.98
	5	František	Wichterlov	AC/DC	1.98
	47	Lucas	Mancini	AC/DC	0.99
	43	Isabelle	Mercier	AC/DC	0.99
	19	Tim	Goyer	AC/DC	0.99
	39	Camille	Bernard	AC/DC	0.99
	8	Daan	Peeters	AC/DC	0.99
	15	Jennifer	Peterson	AC/DC	0.99
	58	Manoj	Pareek	AC/DC	0.99





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 is shared return all genres?

```
SELECT G.name AS genre_name, C.country, COUNT(IL.quantity) AS TOTAL
FROM genre AS G
JOIN track USING(genre_id)
JOIN invoice_line AS IL USING(track_id)
JOIN invoice USING(invoice_id)
JOIN customer AS C USING(customer_id)
GROUP BY C.country, G.name
ORDER BY C.country ASC, COUNT(IL.quantity) DESC;
```

	genre_name	country	TOTAL
▶	Rock	Argentina	1
	Rock	Australia	18
	Metal	Australia	1
	Rock	Austria	6
	Metal	Austria	3
	Rock	Belgium	5
	Metal	Belgium	3
	Rock	Brazil	26
	Jazz	Brazil	14
	Metal	Brazil	12
	Latin	Brazil	4
	Alternative ...	Brazil	1
	Rock	Canada	57
	Metal	Canada	22



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.

```
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
```

customer_id	first_name	last_name	billing_country	total_spending	RowNo
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	František	Wichterlov	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
47	Lucas	Mancini	Italy	50.49	1
48	Johannes	Van der Berg	Netherlands	65.34	1
4	Björn	Hansen	Norway	72.27000000000001	1
49	Stanisław	Wójcik	Poland	76.22999999999999	1
34	João	Fernandes	Portugal	102.96000000000001	1
50	Enrique	Muñoz	Spain	98.01	1
51	Joakim	Johansson	Sweden	75.24	1
53	Phil	Hughes	United Kingdom	98.01	1
17	Jack	Smith	USA	98.01	1





**THANK
YOU**