Music Store Data Analysis

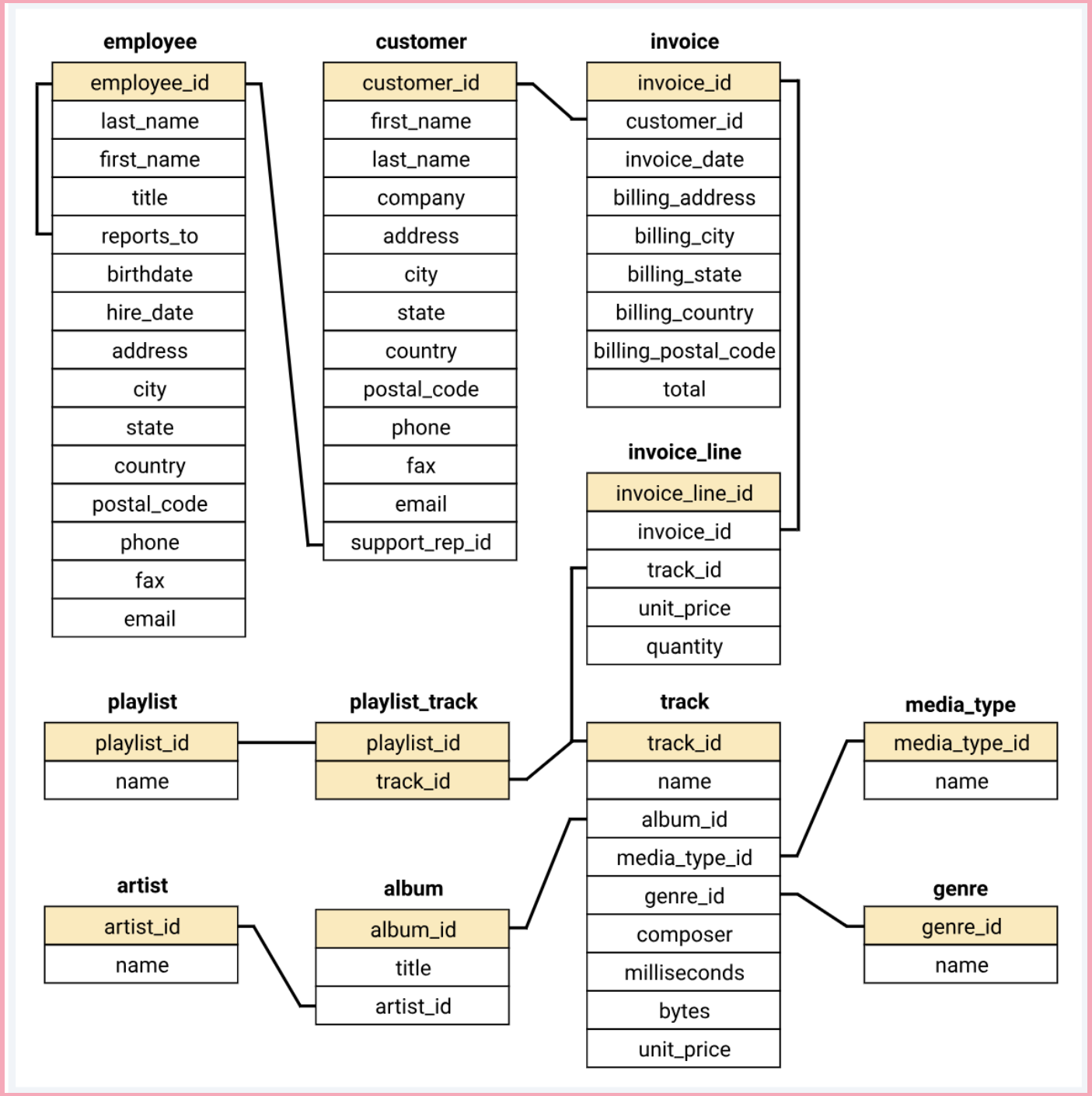
SQL project to analyse online music store data.

This project is in SQL and will teach you how to analyse the music playlist database.
You can examine the dataset with SQL and help the store understand its business growth by answering simple questions.

Database and Tools

MYSQL
MYSQL Workbench

Database Schema



senior most employee based on job title

```
4 •   select * from employee order by levels desc limit 1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

employee_id	last_name	first_name	title	reports_to	levels	birthdate	hire_date	address
1	Adams	Andrew	General Manager	9	L6	18-02-1962 00:00	14-08-2016 00:00	11120 Jasper Ave NW

countries having the most Invoices

```
1 •   select count(*) as cnt, billing_country from invoice
2     group by billing_country
3     order by cnt desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

cnt	billing_country
131	USA
76	Canada
61	Brazil
50	France
41	Germany
30	Czech Republic
29	Portugal
28	United Kingdom
21	India
13	Ireland
13	Chile
11	Finland
11	Spain
10	Poland
10	Denmark

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

```
1   select customer_id, sum(total) as total_sum from invoice
2   where customer_id in (select customer_id from customer)
3   group by customer_id
4   order by total_sum desc limit 1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fet

customer_id	total_sum
5	144.54000000000002

top 3 values of total invoice

```
1   select total from invoice order by total desc limit 3;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

total
23.759999999999998
19.8
19.8

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

```
1    select distinct customer.first_name,customer.last_name,customer.email, genre.name
2    from customer join invoice
3    using(customer_id) join invoice_line
4    using(invoice_id) join track
5    using(track_id) join genre
6    using(genre_id)
7    where genre.name='ROCK'
8    order by customer.email ASC;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

first_name	last_name	email	name
Aaron	Mitchell	aaronmitchell@yahoo.ca	Rock
Alexandre	Rocha	alero@uol.com.br	Rock
Astrid	Gruber	astrid.gruber@apple.at	Rock
BjÃ¸rn	Hansen	bjorn.hansen@yahoo.no	Rock
Camille	Bernard	camille.bernard@yahoo.fr	Rock
Daan	Peeters	daan_peeters@apple.be	Rock
Diego	GutiÃ©rrez	diego.gutierrez@yahoo.ar	Rock
Dan	Miller	dmiller@comcast.com	Rock
Dominique	Lefebvre	dominiquelefebvre@gmail.com	Rock
Edward	Francis	edfrancis@yachoo.ca	Rock
Eduardo	Martins	eduardo@woodstock.com.br	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.

```sql
select artist.name,count(artist_id) as total_count
from artist join album
using(artist_id) join track
using(album_id) join genre
using(genre_id)
where genre.name ='ROCK'
group by 1
order by total_count desc
limit 10;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

name	total_count
AC/DC	18
Aerosmith	15
Audioslave	14
Led Zeppelin	14
Alanis Morissette	13
Alice In Chains	12
Frank Zappa & Captain Beefheart	9
Accept	4

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.

```
1 •  select name, milliseconds from track
2    where milliseconds > (select avg(milliseconds) from track)
3    order by milliseconds desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

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 ...	494524
Book Of Thel	494393
You Oughta Know (Alternate)	491885
Terra	482429
Snoopy's search-Red baron	456071
Sozinho (Hitmakers Classic ...	436636
Master Of Puppets	436453

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

```
WITH cte as (select artist.artist_id AS art_id,
artist.name,sum(invoice_line.unit_price*invoice_line.quantity) as total_spent
from invoice join invoice_line
using(invoice_id) join track
using(track_id) join album
using(album_id) join artist
using(artist_id)
group by 1,2
order by total_spent desc limit 1)

select distinct concat(customer.first_name,' ',customer.last_name) as cust_name,customer.customer_id,
cte.name as artist_name,sum(invLine.unit_price*invLine.quantity) as total_amount_spent
from customer join invoice
using(customer_id) join invoice_line invLine
on invoice.invoice_id=invLine.invoice_id join track
using(track_id) join album
using(album_id) join cte
on album.artist_id=cte.art_id
group by 1,2,3
order by total_amount_spent desc;
```

cust_name	customer_id	artist_name	total_amount_spent
Steve Murray	54	AC/DC	17.82
Phil Hughes	53	AC/DC	10.89
Kathy Chase	21	AC/DC	10.89
StanisÅ‚aw WÃ³jcik	49	AC/DC	9.9
LuÃ-s GonÃ§alves	1	AC/DC	7.920000000000001
Frank Ralston	24	AC/DC	7.920000000000001
Martha Silk	31	AC/DC	3.96
Frank Harris	16	AC/DC	2.9699999999999998
Wyatt Girard	42	AC/DC	2.9699999999999998
Helena HolÃ½	6	AC/DC	2.9699999999999998
Niklas SchrÃ¶der	38	AC/DC	2.9699999999999998
Madalena Sampaio	35	AC/DC	2.9699999999999998
Terhi HÃ¤mÃ¤lÃ¤i...	44	AC/DC	2.9699999999999998
Kara Nielsen	9	AC/DC	1.98
JoÃ£o Fernandes	34	AC/DC	1.98
Luis Rojas	57	AC/DC	1.98

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 number 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

```sql
WITH cte AS (select customer.country,
genre.name,
count(invoice_line.quantity) as total_purchase,
row_number() over(partition by customer.country order by count(invoice_line.quantity) desc) as rn
from customer join invoice
using(customer_id) join invoice_line
using(invoice_id) join track
using(track_id) join genre
using(genre_id)
group by 1,2
order by 1 asc, 3 desc
)
select * from cte where rn=1;
```

ult Grid | Filter Rows: | Export: | Wrap Cell Content:

country	name	total_purchase	rn
Argentina	Rock	1	1
Australia	Rock	18	1
Austria	Rock	6	1
Belgium	Rock	5	1
Brazil	Rock	26	1

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.customer_id,concat(customer.first_name,' ',customer.last_name) as cust_name,
invoice.billing_country,sum(invoice.total) as total_spent,
row_number() over(partition by invoice.billing_country order by sum(invoice.total) desc) as rn
from customer join invoice
using(customer_id)
group by 1,2,3
order by 3 asc, 4 desc)
select * from cte where rn=1;
```

ult Grid | Filter Rows: | Export: | Wrap Cell Content:

customer_id	cust_name	billing_country	total_spent	rn
56	Diego GutiÃ©rrez	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	LuÃ-s GonÃ§alves	Brazil	108.89999999999998	1
3	FranÃ§ois Tremblay	Canada	99.99	1
57	Luis Rojas	Chile	97.02000000000001	1
5	FrantiÅiek WichterlovÃi	Czech Republic	144.54000000000002	1
9	Kara Nielsen	Denmark	37.61999999999999	1
44	Terhi HÃ¤mÃ¤lÃ¤inen	Finland	79.2	1
42	Wyatt Girard	France	99.99	1

THANK YOU SO MUCH

Please feel free to suggest or share your valuable feedback.