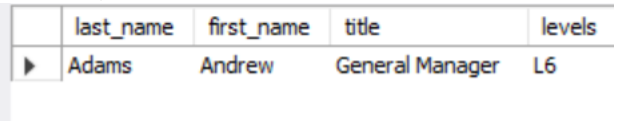
Online Music Store Project

Here are SQL queries and their solutions:

use digital_music_store;

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

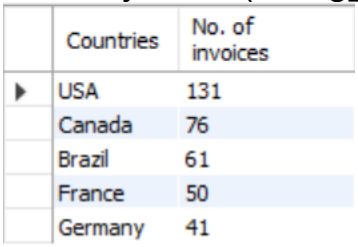
select last_name, first_name, title, levels from employee order by levels desc limit 1;



last_name	first_name	title	levels
Adams	Andrew	General Manager	L6

Q2: Which countries have the most invoices?

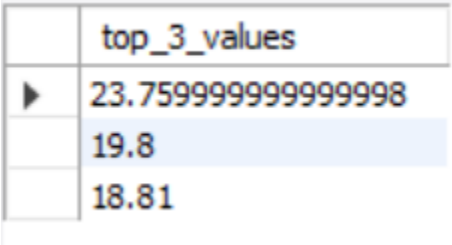
select billing_country as Countries, count(billing_country) as `No. of invoices`
from invoice group by billing_country
order by count(billing_country) desc limit 5;



Countries	No. of invoices
USA	131
Canada	76
Brazil	61
France	50
Germany	41

Q3: What are top 3 values of total invoices?

select distinct total as top_3_values from invoice order by total desc limit 3;



top_3_values
23.759999999999998
19.8
18.81

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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 that has the highest sum of invoice totals. Return both the city name and sum of all invoice totals.

```
select billing_city as city, sum(total) as total_invoice from invoice
group by billing_city order by total_invoice desc limit 1;
```

	city	total_invoice
▶	Prague	273.24000000000007

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 c.customer_id, c.first_name, c.last_name, sum(i.total) as total_invoice
from customer c
join invoice i on c.customer_id = i.customer_id group by c.customer_id,
c.first_name, c.last_name
order by total_invoice desc limit 1;
```

	customer_id	first_name	last_name	total_invoice
▶	5	FrantiÅiek	WichterlovÃ¡	144.54000000000002

Q6: Write a query to return the email, first name, last name, and Genre of all Rock Music listener. Return your list ordered alphabetically by email starting with A.

```
SELECT * FROM genre;
SELECT c.email, c.first_name, c.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
where track_id in
(select t.track_id from track t join genre g on t.genre_id = g.genre_id where
g.name = "Rock")
order by email;
```

(OR)

```
SELECT c.email, c.first_name, c.last_name, g.name as genre_name FROM
customer c
join invoice i on c.customer_id = i.customer_id
```

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```
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 LIMIT 5;
```

email	first_name	last_name	genre_name
aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock
aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock
aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock
aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock
alero@uol.com.br	Alexandre	Rocha	Rock

Q7: Let's invite the artists who have written the most rock music in our dataset. Write a query that returns the artist's name and total track count of the top 10 rock bands.

```
select ar.artist_id, ar.name as artist_name, count(ar.name) as number_of_songs, g.name as genre_name from artist ar
join album 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 = "Rock"
group by ar.artist_id, artist_name order by number_of_songs desc;
```

artist_id	artist_name	number_of_songs	genre_name
1	AC/DC	18	Rock
3	Aerosmith	15	Rock
8	Audioslave	14	Rock
22	Led Zeppelin	14	Rock
4	Alanis Morissette	13	Rock
5	Alice In Chains	12	Rock
23	Frank Zappa & Captain Beefheart	9	Rock
2	Accept	4	Rock

Q8: 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 as song_name, milliseconds as song_length from track
where milliseconds > (select avg(milliseconds) as avg_track_length from track)
order by song_length desc limit 10;
```

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song_name	song_length
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

Q9: Find how much amount spent by each customer on artists? Write a query to return customer name, artist name and total spent.

```
WITH selling_artist as (
select ar.artist_id as artist_id, ar.name as artist_name,
sum(il.quantity * il.unit_price) as total_sales from invoice_line il
join track t on il.track_id = t.track_id
join album al on t.album_id = al.album_id
join artist ar on al. artist_id = ar.artist_id group by 1, 2 order by 3 desc limit 1)
select c.customer_id, c.first_name, c.last_name, a.artist_name, sum(il.quantity * il.unit_price) as amount_spend
from invoice i
join customer c on i.customer_id = c.customer_id
join invoice_line il on il.invoice_id = i.invoice_id
join track t on il.track_id = t.track_id
join album al on t.album_id = al.album_id
join selling_artist a on al.artist_id = a.artist_id
group by 1, 2, 3, 4 order by 5 desc limit 5;
```

customer_id	first_name	last_name	artist_name	amount_spend
54	Steve	Murray	AC/DC	17.82
53	Phil	Hughes	AC/DC	10.89
21	Kathy	Chase	AC/DC	10.89
49	StanisÅ‚aw	WÃ³jcik	AC/DC	9.9
1	LuÃ-s	GonÃ§alves	AC/DC	7.920000000000001

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Q10: 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. Four countries where the maximum number of purchases is shared return all genres.

```
with popular_genre as
(select row_number() over (partition by c.country order by sum(il.quantity) desc) as row_num,
g.genre_id, c.country, g.name,  sum(il.quantity) as purchases from invoice i
join customer c on i.customer_id = c.customer_id
join invoice_line il on il.invoice_id = i.invoice_id
join track t on il.track_id = t.track_id
join genre g on t.genre_id = g.genre_id group by 2,3,4 order by 3 asc, 5 desc)
select country, name, purchases from popular_genre where row_num = 1
limit 5;
```

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

Q11: 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 customers and how much they spent. For countries where the top amount spent is shared, provide all customers who spent this amount.

```
with recursive
    customer_with_country as (
    select c.customer_id, c.first_name, c.last_name, i.billing_country, sum(total)    as total_spending
    from customer c join invoice i on c.customer_id = i.customer_id group by 1,2,3,4 order by 1,5 desc),

    country_max_spending as (
    select billing_country, max(total_spending) as maximum_spending
    from customer_with_country group by billing_country)

select cc.first_name, cc.last_name, cc.billing_country, cc.total_spending as maximum_spending
```

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```
from customer_with_country cc join country_max_spending cs on cc.billing_country = cs.billing_country
where cc.total_spending = cs.maximum_spending order by 4 desc limit 5;
```

(OR)

```
With customer_with_country as (
  select row_number() over(partition by billing_country order by sum(total) desc) as row_num,
  c.customer_id, c.first_name, c.last_name, i.billing_country, sum(total) as total_spending
  from invoice i join customer c on i.customer_id = c.customer_id group by 2,3,4,5 order by 5 asc, 6 desc)
select * from customer_with_country where row_num = 1 order by total_spending desc limit 5;
```

first_name	last_name	billing_country	maximum_spending
FrantiÅiek	WichterlovÃi	Czech Republic	144.54000000000002
Hugh	O'Reilly	Ireland	114.83999999999997
Manoj	Pareek	India	111.86999999999999
LuÃ-s	GonÃ§alves	Brazil	108.89999999999998
JoÃ£o	Fernandes	Portugal	102.96000000000001