

Music Store Data Analysis

SQL queries with output below:

1. The senior most employee based on job title (identified by level)

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

	employee_id [PK] character varying (50)	last_name character	first_name character	title character varying (50)	reports_to character varying (30)	levels character varying (10)
1	9	Madan	Mohan	Senior General Manager	[null]	L7

2. Countries have the most invoices

```
select count(*) as c, billing_country from invoice group by billing_country  
order by c desc limit 5;
```

	c bigint	billing_country character varying (30)
1	131	USA
2	76	Canada
3	61	Brazil
4	50	France
5	41	Germany

3. Top 3 values of total invoice

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

	total double precision
1	23.759999999999998
2	19.8
3	19.8

4. City which has the best customers

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

	invoice_total double precision	billing_city character varying (30)
1	273.24000000000007	Prague

5. Find the best customer with the basis of their spending value

```
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	last_name character	total double precision
1	5	R	Madhav	144.54000000000002

6. Return email, first name and last name listening to genre rock where email is listed alphabetically.

```
select distinct email, first_name, last_name from customer
join invoice on invoice.customer_id = customer.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 asc;
```

	email character varying (50)	first_name character	last_name character
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

7. Top 10 artist who have written most rock music

```
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
1	22	Led Zeppelin	114
2	150	U2	112
3	58	Deep Purple	92
4	90	Iron Maiden	81
5	118	Pearl Jam	54
6	152	Van Halen	52
7	51	Queen	45
8	142	The Rolling Stones	41
9	76	Creedence Clearwater Revival	40
10	52	Kiss	35

8. List songs that are longer than the average length of all songs on the basis of milliseconds

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

	name character varying (150)	milliseconds integer
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
9	Take the Celestra	2927677
10	Fire In Space	2926593

9. How much amount spend by each customer on artists?

```
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) as total_sales
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 customer.customer_id, customer.first_name, customer.last_name,
best_selling_artist.artist_name,
sum(invoice_line.unit_price*invoice_line.quantity)as amount_spent
from invoice
join customer on customer.customer_id = invoice.customer_id
join invoice_line on invoice_line.invoice_id = invoice.invoice_id
join track on track.track_id = invoice_line.track_id
join album on album.album_id = track.album_id
join best_selling_artist on best_selling_artist.artist_id = album.artist_id
group by 1,2,3,4
order by 5 desc;
```

	customer_id integer	first_name character	last_name character	artist_name character var	amount_spent double precision
1	46	Hugh	O'Reilly	Queen	27.719999999999985
2	38	Niklas	Schröder	Queen	18.81
3	3	François	Tremblay	Queen	17.82
4	34	João	Fernandes	Queen	16.830000000000002
5	53	Phil	Hughes	Queen	11.88
6	41	Marc	Dubois	Queen	11.88
7	47	Lucas	Mancini	Queen	10.89
8	33	Ellie	Sullivan	Queen	10.89
9	20	Dan	Miller	Queen	3.96
10	5	R	Madhav	Queen	3.96

10. Most popular genre for each country on the basis of highest amount of purchase

```
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;
```

	purchases bigint	country character varying (50)	name character varying (50)	genre_id character varying (50)	rowno bigint
13	44	Hungary	Rock	1	1
14	102	India	Rock	1	1
15	72	Ireland	Rock	1	1
16	35	Italy	Rock	1	1
17	33	Netherlands	Rock	1	1
18	40	Norway	Rock	1	1
19	40	Poland	Rock	1	1
20	108	Portugal	Rock	1	1

11. The customer that have spent most on music for each country

```

with customer_and_country as (
  select customer.customer_id,
  customer.first_name, customer.last_name, invoice.billing_country, sum(invoice.to
tal) as total_spending,

  Row_Number() over(partition by invoice.billing_country order by
sum(invoice.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_and_country where RowNo <= 1;

```

	customer_id integer	first_name character	last_name character	billing_country character varying (30)	total_spending double precision	rowno bigint
1	56	Diego	Gutiérrez	Argentina	39.6	1
2	55	Mark	Taylor	Australia	81.18	1
3	7	Astrid	Gruber	Austria	69.3	1
4	8	Daan	Peeters	Belgium	60.38999999999999	1
5	1	Luis	Gonçalves	Brazil	108.89999999999998	1
6	3	François	Tremblay	Canada	99.99	1
7	57	Luis	Rojas	Chile	97.02000000000001	1
8	5	R	Madhav	Czech Republic	144.54000000000002	1
9	9	Kara	Nielsen	Denmark	37.61999999999999	1
10	44	Terhi	Hämäläinen	Finland	79.2	1