

SQL-PROJECT-MUSIC STORE ANALYSIS

Insights from the project

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

QUERY

```
1 select * from employee
2 order by levels desc
3 limit 1
```

Data Output Messages Notifications

	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. Which countries have the most invoices?

QUERY


```
select count(invoice_id), billing_country
from invoice
group by 2
order by 1 desc
```

	count bigint	billing_country character varying (30)
1	131	USA
2	76	Canada
3	61	Brazil
4	50	France
5	41	Germany
6	30	Czech Republic
7	29	Portugal
8	28	United Kingdom
9	21	India
10	13	Chile
11	13	Ireland
12	11	Spain
13	11	Finland
14	10	Australia
15	10	Netherlands
16	10	Sweden
17	10	Poland

3.What are the Top 3 values of total invoice?



QUERY

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

	total double precision 
1	23.759999999999998
2	19.8
3	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)
  from invoice
 group by 1
 order by 2 desc limit 1
```

	billing_city character varying (30) 	sum double precision 
1	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.first_name,c.last_name,sum(i.total)as total_Amount
  from customer c
 inner join invoice i
 on i.customer_id=c.customer_id
 group by 1,2
 order by 3 desc
 limit 1
```

	first_name character 	last_name character 	total_amount double precision 
1	R	Madhav	144.54000000000002

6. Write a Query to return the email, first_name, last_name & Genre of Rock all Rock Music Listeners. Return your lists ordered alphabetically by email starting with A

```
select distinct | c.first_name, c.last_name, c.email
  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 track_id from track
 join genre g on track.genre_id=g.genre_id
 where g.name='Rock')
 order by 3
```

	first_name character		last_name character		email character varying (50)	
1	Aaron	...	Mitchell	...	aaronmitchell@yahoo.ca	
2	Alexandre	...	Rocha	...	alero@uol.com.br	
3	Astrid		Gruber	...	astrid.gruber@apple.at	
4	Bjørn		Hansen	...	bjorn.hansen@yahoo.no	
5	Camille	...	Bernard	...	camille.bernard@yahoo.fr	
6	Daan		Peeters	...	daan_peeters@apple.be	
7	Diego		Gutiérrez	...	diego.gutierrez@yahoo.ar	
8	Dan		Miller		dmiller@comcast.com	
9	Dominique	...	Lefebvre	...	dominiquedefebvre@gmail.c...	
10	Edward	...	Francis	...	edfrancis@yahoo.ca	
11	Eduardo	...	Martins	...	eduardo@woodstock.com.br	
12	Ellie		Sullivan	...	ellie.sullivan@shaw.ca	
13	Emma	...	Jones	...	emma_jones@hotmail.com	
14	Enrique	...	Muñoz	...	enrique_munoz@yahoo.es	
15	Fernanda	...	Ramos	...	fernadaramos4@uol.com.br	
16	Frank		Harris	...	fharris@google.com	
17	Frank		Ralston	...	fralston@gmail.com	
18	François	...	Tremblay	...	ftremblay@gmail.com	
19	Fynn		Zimmermann	...	fzimmermann@yahoo.de	
20	Hannah	...	Schneider	...	hannah.schneider@yahoo.de	

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 track bands

```

1
2 ✓ select artist.artist_id,artist.name,count(artist.artist_id)as number_of_songs
3       from track
4 join album on album.album_id=track.album_id
5 join artist on artist.artist_id=album.artist_id
6 join genre on genre.genre_id=track.genre_id
7 where genre.name like 'Rock'
8 group by artist.artist_id
9 order by number_of_songs desc
10 limit 10
11
12

```

	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. 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 song_length from track)
order by 2 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. Find how much amount spent by each customer on artists? Write a query to return the customer name, artist name and money spent

```
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 c.customer_id, c.first_name, c.last_name, bsa.artist_name, sum(il.unit_price*il.quantity) as amount_spent
from invoice i
join customer c on c.customer_id=i.customer_id
join invoice_line il on il.invoice_id=i.invoice_id
join track t on t.track_id=il.track_id
join album 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 integer	first_name character	last_name character	artist_name character varying (120)	amount_spent double precision
46	Hugh	O'Reilly	Queen	27.719999999999985
38	Niklas	Schröder	Queen	18.81
3	François	Tremblay	Queen	17.82
34	João	Fernandes	Queen	16.830000000000002
53	Phil	Hughes	Queen	11.88
41	Marc	Dubois	Queen	11.88
47	Lucas	Mancini	Queen	10.89
33	Ellie	Sullivan	Queen	10.89
20	Dan	Miller	Queen	3.96
5	R	Madhav	Queen	3.96
23	John	Gordon	Queen	2.9699999999999998
54	Steve	Murray	Queen	2.9699999999999998
31	Martha	Silk	Queen	2.9699999999999998

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

```
with popular_genre as (select customer.country, genre.genre_id, genre.name as genre_name, count(invoice_line.quantity),
row_number() over (partition by customer.country order by count(invoice_line.quantity) desc)
from customer
join invoice on customer.customer_id=invoice.customer_id
join invoice_line on invoice_line.invoice_id=invoice.invoice_id
join track on invoice_line.track_id=track.track_id
join genre on track.genre_id=genre.genre_id
group by 1,2,3
order by 1 asc, 4 desc)

select country, genre_name
from popular_genre
where row_number=1
```

	country character varying (50) 🔒	genre_name character varying (120) 🔒
1	Argentina	Alternative & Punk
2	Australia	Rock
3	Austria	Rock
4	Belgium	Rock
5	Brazil	Rock
6	Canada	Rock
7	Chile	Rock
8	Czech Republic	Rock
9	Denmark	Rock
10	Finland	Rock
11	France	Rock
12	Germany	Rock
13	Hungary	Rock
14	India	Rock
15	Ireland	Rock
16	Italy	Rock
17	Netherlands	Rock
18	Norway	Rock
19	Poland	Rock
20	Portugal	Rock

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 is shared, provide all customers who spent this amount

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

),country_max_spending as(select billing_country,max(total_spending)as max_spending
    from all_customer
    group by 1)

select cc.billing_country,cc.total_spending,cc.first_name,cc.last_name,cc.customer_id
from all_customer cc
join country_max_spending ms
on cc.billing_country=ms.billing_country
where cc.total_spending=ms.max_spending
order by 1
```

	billing_country character varying (30)	total_spending double precision	first_name character	last_name character	customer_id integer
1	Argentina	39.6	Diego	Gutiérrez	56
2	Australia	81.18	Mark	Taylor	55
3	Austria	69.3	Astrid	Gruber	7
4	Belgium	60.38999999999999	Daan	Peeters	8
5	Brazil	108.89999999999998	Luís	Gonçalves	1
6	Canada	99.99	François	Tremblay	3
7	Chile	97.02000000000001	Luis	Rojas	57
8	Czech Republic	144.54000000000002	R	Madhav	5
9	Denmark	37.61999999999999	Kara	Nielsen	9
10	Finland	79.2	Terhi	Hämäläinen	44
11	France	99.99	Wyatt	Girard	42
12	Germany	94.05000000000001	Fynn	Zimmermann	37
13	Hungary	78.21	Ladislav	Kovács	45
14	India	111.86999999999999	Manoj	Pareek	58
15	Ireland	114.83999999999997	Hugh	O'Reilly	46
16	Italy	50.49	Lucas	Mancini	47
17	Netherlands	65.34	Johannes	Van der Berg	48