

Project: SQL Symphony

Analysing a Music Store Database

Question Set:-- 1

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

Answer:--

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

---2. Which countries have the most Invoices?

Answer:--

```
select Billing_Country,count(invoice_ID) as Total_Invoices
from invoice
group by Billing_Country
order by count(invoice_ID) desc;
```

---3. What are top 3 values of total invoice?

Answer:--

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

---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 & sum of all invoice totals.

Answer:--

```
Select Billing_City, sum(Total) as Total_Earnings
from invoice
group by Billing_City
order by sum(Total) desc
limit 1;
```

---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.

Answer:--

```
select *
from Customer
where Customer_ID in (select Customer_ID
from Invoice
group by Customer_Id
order by sum(total) desc
limit 1);
-----or-----
select c.customer_id,c.first_name,c.last_name,sum(Total)
from customer as c join
invoice as i
on c.customer_id=i.customer_id
group by c.customer_id
order by sum(total) desc
```

```
limit 1;
```

Question Set:-- 2

---1. 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.

Answer:--

```
select distinct c.Email,c.first_name,c.last_name,g.name
from customer as c join invoice as i on c.Customer_ID=i.Customer_ID
join Invoice_line as il on i.invoice_id=il.invoice_id
join track as t on t.track_id=il.track_id
join genre as g on g.genre_id=t.genre_id
where g.name='Rock'
order by c.email;
```

---2. 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.

Answer:--

```
select a.artist_id,a.name, count(t.track_id) as total_Track
from artist as a join album as al on a.artist_id=al.artist_id
join track as t on al.album_id=t.album_id
join genre as g on t.genre_id=g.genre_id
where g.name='Rock'
group by a.artist_id
order by count(t.track_id) desc
limit 10;
```

---3. 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.

Answer:--

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

Question Set:-- 3

---1. Find how much amount spent by each customer on artists? Write a query to return customer name, artist name and total spent.

Answer:--

```
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;

```

---2. 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

Answer:--

```

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;

```

----3. 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.

Answer:--

```

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;

```

