Music database project using SQL

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

```
SELECT * FROM employee
ORDER BY levels DESC LIMIT 1;
```

Q2: Which country have most invoices?

```
SELECT COUNT(*) AS c,billing_country
FROM invoice
GROUP BY billing_country
ORDER BY c DESC LIMIT 1;
```

Q3: What are the top 3 values of total invoice?

```
SELECT  total FROM invoice
ORDER BY total DESC LIMIT 3;
```

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 has the highest sum of invoice totals. Return both the city & sum of all invoice totals

```
SELECT SUM(total) as billing_total , billing_city
FROM invoice
GROUP BY billing_city
ORDER BY billing_total DESC;
```

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 SUM(total) as billing_total , billing_city
FROM invoice
GROUP BY billing_city
ORDER BY billing_total DESC;
```

Q6: 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.

```
SELECT DISTINCT email, first_name, last_name
FROM customer
JOIN invoice ON customer.customer_id = invoice.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;
```

Q7: 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.

```
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;
```

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 track.name, AVG(track.Milliseconds) AS milli
FROM track
GROUP BY track.name
HAVING AVG(track.Milliseconds) < MIN(track.Milliseconds)
ORDER BY milli DESC;
```

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

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. For countries where the maximum number
of purchase is shared return all Genres.

```
WITH RECURSIVE
        sales_per_country AS(
                SELECT COUNT(*) AS purchases_per_genre,
customer.country, genre.name, genre.genre_id
                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
        ),
        max_genre_per_country AS (SELECT MAX(purchases_per_genre)
AS max_genre_number, country
                FROM sales_per_country
                GROUP BY 2
                ORDER BY 2)

SELECT sales_per_country.*
FROM sales_per_country
JOIN max_genre_per_country ON sales_per_country.country =
max_genre_per_country.country
WHERE sales_per_country.purchases_per_genre =
max_genre_per_country.max_genre_number;
```

Q11: 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 Customter_with_country AS (
                SELECT
customer.customer_id,first_name,last_name,billing_country,SUM(tot
```

```
al) 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 Customter_with_country WHERE RowNo <= 1
```