Music Store Data Analysis (SQL)

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

Ans. Mr. Madan Mohan

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

Q2. Which countries have the most invoices?

Ans. USA → **131**

```
SELECT COUNT(billing_country) as c FROM invoice GROUP BY billing_country
ORDER BY c DESC
```

Q3. What are top 3 values of total Invoices?

Ans. 23.75, 19.8, 19.8

```
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 name & sum of all invoices total.

Ans. City → Prague , Total Sum → 273.24

```
SELECT billing_city as c, SUM(total) as invoice_total FROM invoice GROUP
BY c ORDER BY invoice_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 return the person who has spent the most money.

Ans. Name: R Madhav**, Money Spent** = 144.54

```
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
```

Q6. Write a 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.

Ans. Name: Aaron Mitchell , Email: aaronmitchell@yahoo.ca

```
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. Lets 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.

Ans. Artist Name: Led Zeppelin, **Total Songs:** 114

```
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 listed first.

Ans. Track Name: Occupation / Precipice, **Milliseconds:** 5286953

```
SELECT name, milliseconds FROM track WHERE milliseconds > ( SELECT
AVG(milliseconds) AS avg_track_length FROM track) ORDER BY milliseconds
DESC
```

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

Ans. Customer Name: Huge O'Rielly , **Artist Name:** Queen, **Total Spent**: 27.71

```
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_sale 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 the countries where the maximum number of purchases is shared return all Genres.

```
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
```

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 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(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 Customter_with_country WHERE RowNo <= 1
```