**SQL Queries**

Easy

**1.Find the Total Number of Playlists:**

SELECT COUNT(\*) AS total\_playlists FROM playlist;

**2.Show Invoice Lines with Quantity Greater Than 5:**

SELECT \* FROM invoice\_line WHERE quantity > 5;

**3.who is most senior employee based on job title**

SELECT \*

FROM employee

ORDER BY levels DESC

LIMIT 1;

**4 Who is the senior most employee based on job title?**

SELECT title, last\_name, first\_name

FROM employee

ORDER BY levels DESC

LIMIT 1

**5 Which countries have the most Invoices?**

SELECT COUNT(\*) AS c, billing\_country

FROM invoice

GROUP BY billing\_country

ORDER BY c DESC

**6 What are top 3 values of total invoice?**

SELECT total

FROM invoice

ORDER BY total DESC

**7 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**

SELECT billing\_city,SUM(total) AS InvoiceTotal

FROM invoice

GROUP BY billing\_city

ORDER BY InvoiceTotal DESC

LIMIT 1;

**8 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 customer.customer\_id, first\_name, last\_name, SUM(total) AS total\_spending

FROM customer

JOIN invoice ON customer.customer\_id = invoice.customer\_id

GROUP BY customer.customer\_id

ORDER BY total\_spending DESC

LIMIT 1;

**Moderate**

**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.**

**Method 1**

SELECT DISTINCT email,first\_name, last\_name

FROM customer JOIN invoice ON customer.customer\_id = invoice.customer\_id

JOIN invoiceline ON invoice.invoice\_id = invoiceline.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;

**Method 2**

SELECT DISTINCT email AS Email,first\_name AS FirstName, last\_name AS LastName, genre.name AS Name

FROM customer

JOIN invoice ON invoice.customer\_id = customer.customer\_id

JOIN invoiceline ON invoiceline.invoice\_id = invoice.invoice\_id

JOIN track ON track.track\_id = invoiceline.track\_id

JOIN genre ON genre.genre\_id = track.genre\_id

WHERE genre.name LIKE 'Rock'

ORDER BY 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.**

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;

**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.**

SELECT name,miliseconds

FROM track

WHERE miliseconds > (

SELECT AVG(miliseconds) AS avg\_track\_length

FROM track )

ORDER BY miliseconds DESC;

**Advance**

**1: 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;

**2: 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.**

**Method 1: using CTE**

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

**Method 2: Using Recursive**

WITH RECURSIVE

customter\_with\_country AS (

SELECT customer.customer\_id,first\_name,last\_name,billing\_country,SUM(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 customter\_with\_country

GROUP BY billing\_country)

SELECT cc.billing\_country, cc.total\_spending, cc.first\_name, cc.last\_name, cc.customer\_id

FROM customter\_with\_country cc

JOIN country\_max\_spending ms

ON cc.billing\_country = ms.billing\_country

WHERE cc.total\_spending = ms.max\_spending

ORDER BY 1;