**MUSIC STORE DATA ANALYSIS WITH SQL**

**--Section\_1**

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

select \* from employee

order by levels desc

limit 1;

**--Q2. Which country have the most invoices?**

select billing\_country, count(\*) from invoice

group by billing\_country

order by count(\*) 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?**

**--(based on invoice totals, show city name with total)**

select billing\_city, sum(total) from invoice

group by billing\_city

order by sum(total) desc

limit 1;

**--Q5. Who is the best customer?**

select c.customer\_id, c.first\_name, c.last\_name, sum(i.total) as Total

from customer c

join invoice i

on c.customer\_id = i.customer\_id

group by c.customer\_id

order by Total desc

limit 1;

**--Section\_2**

**--Q1. Write a query to return email, first name & last name of all rock music listeners.**

select distinct email, first\_name, last\_name

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 t

join genre g on t.genre\_id = g.genre\_id

where g.name like 'Rock'

)

order by email

**--Q2. 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;

**--Q3.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 avg\_track\_length

FROM track )

ORDER BY milliseconds DESC;

**--Section\_3**

**--Q1. Find how much amount spent by each customer on artists? Write a query to return customer name, artist name and total spent.**

**/\* Steps to Solve: First, find which artist has earned the most according to the InvoiceLines. Now use this artist to find**

**which customer spent the most on this artist. For this query, you will need to use the Invoice, InvoiceLine, Track, Customer,**

**Album, and Artist tables. Note, this one is tricky because the Total spent in the Invoice table might not be on a single product,**

**so you need to use the InvoiceLine table to find out how many of each product was purchased, and then multiply this by the price**

**for each artist.\*/**

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;

**/\*Q2. 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.**

**Steps to Solve: There are two parts in question- first most popular music genre and second need data at country level. \*/**

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;

**/\* Q3. 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.**

**Steps to Solve: Similar to the above question. There are two parts in question-**

**first find the most spent on music for each country and second filter the data for respective customers. \*/**

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;