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

SELECT TOP 1 title, last\_name, first\_name

FROM employee

ORDER BY levels DESC

Q2: Which countries have the most Invoices?

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

FROM invoice

GROUP BY billing\_country

ORDER BY c DESC

Q3: What are top 3 values of total invoice?

SELECT TOP 3 total FROM invoice

ORDER BY total DESC

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 invoice totals

SELECT TOP 1

billing\_city AS CityName,

SUM(Total) AS TotalInvoiceAmount

FROM invoice

GROUP BY billing\_city

ORDER BY TotalInvoiceAmount DESC;

Question 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.

SELECT TOP 1

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, first\_name, last\_name

ORDER BY

total\_spending 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 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 invoice\_line ON invoice\_line.invoice\_id = invoice.invoice\_id

JOIN track ON track.track\_id = invoice\_line.track\_id

JOIN genre ON genre.genre\_id = track.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 TOP 10

artist.artist\_id, artist.name AS ArtistName,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, artist.name

ORDER BY number\_of\_songs DESC

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 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

WITH best\_selling\_artist AS (

SELECT TOP 1 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 artist.artist\_id, artist.name

ORDER BY total\_sales DESC

)

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 c.customer\_id, c.first\_name, c.last\_name, bsa.artist\_name

ORDER BY amount\_spent 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 purchases is shared return all Genres.

Method 2:

WITH CountryGenreCounts AS (

SELECT

c.country,

g.name AS genre\_name,

COUNT(i.invoice\_id) AS purchase\_count,

ROW\_NUMBER() OVER (PARTITION BY c.country ORDER BY COUNT(i.invoice\_id) DESC) AS rank

FROM

customer c

JOIN

invoice i ON c.customer\_id = i.customer\_id

JOIN

invoice\_line il ON i.invoice\_id = il.invoice\_id

JOIN

track t ON il.track\_id = t.track\_id

JOIN

genre g ON t.genre\_id = g.genre\_id

GROUP BY

c.country, g.name

)

SELECT country, genre\_name FROM CountryGenreCounts

WHERE rank = 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 customer.customer\_id, first\_name, last\_name, billing\_country

)

SELECT \* FROM Customter\_with\_country WHERE RowNo <= 1