SQL Queries for the Questions Sets

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Basic Question set \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

# --Q1) Who is the senior most employee based on job title?

SELECT \* From employee

order by levels desc

limit 1

# -- 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 the top 3 values of total invoice?

select total from invoice

order by total desc

limit 3

# -- Q4) Which city has the best customers?

select  billing\_city, SUM(total) as ct

from invoice

group by billing\_city

order by ct desc

limit 1

-- Q5) Who is the best customer?

select customer.customer\_id, customer.first\_name, customer.last\_name, sum(invoice.total) as sale

from customer

join invoice on customer.customer\_id = invoice.customer\_id

group by customer.customer\_id

order by sale desc

limit 1

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Intermediate Question set \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

# -- 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 = '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 = '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 name, milliseconds

from track

where milliseconds > (

    select avg(milliseconds) as avg\_track\_length

    from track)

order by milliseconds desc;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Advanced Question set \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

# -- 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 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