## **Music Store Data Analysis Using SQL**

1. Who is the senior most Employee based on Job title?

SELECT \* FROM employee

**ORDER BY Levels DESC** 

Limit 1;



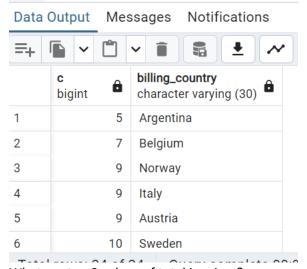
2. Which countries have the most invoices?

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

FROM invoice

GROUP BY billing\_country

Order by c ASC;

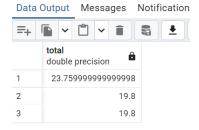


3. What are top 3 values of total invoices?

SELECT total FROM invoice

**ORDER BY total DESC** 

limit 3;



4. 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 invoices totals. Return both the city name & sum of all invoices total.

SELECT SUM(total) AS invoice total, billing city

FROM invoice

GROUP BY billing city

ORDER BY invoice total DESC;

Data Output Messages Notifications =+ invoice\_total billing\_city character varying (30) double precision 1 273.24000000000007 Prague 2 169.29 Mountain View 3 166.32 London 4 158.4 Berlin 5 151.47 Paris 6 129.69 São Paulo

Total rows: 53 of 53 Query complete 00:00:00.076

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, 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;



Q1: 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_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;
      UKUEK BY PHATE.
Data Output Messages Notifications
       email
                                  first_name
                                                              last_name
                                                                                      character varying (50)
                                  character
                                                              character
       aaronmitchell@yahoo.ca
                                  Aaron
                                                              Mitchell
2
       alero@uol.com.br
                                  Alexandre
                                                              Rocha
3
       astrid.gruber@apple.at
                                  Astrid
                                                              Gruber
4
       bjorn.hansen@yahoo.no
                                  Bjørn
                                                              Hansen
```

Bernard

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

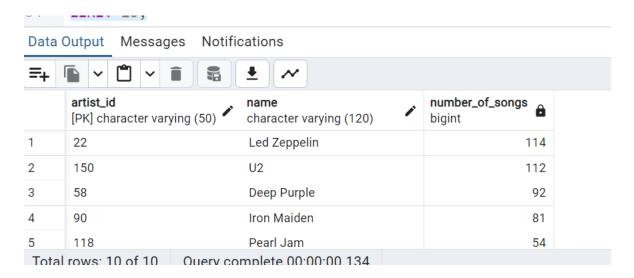
Camille

Query complete 00:00:00.127

WHERE genre.name LIKE 'Rock'
GROUP BY artist.artist\_id
ORDER BY number\_of\_songs DESC
LIMIT 10;

camille.bernard@yahoo.fr

Total rows: 59 of 59



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;



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;
Data Output Messages Notifications
       customer_id
                                         last_name
                                                                artist_name
                                                                                   amount_spent
                                                                character varying (120)
                                                                                                 â
                 character
                                         character
                                                                                   double precision
              46
                  Hugh
                                         O'Reilly
                                                                Queen
                                                                                    27.71999999999985
2
              38
                  Niklas
                                         Schröder
                                                                Queen
                                                                                               18.81
3
               3
                  Francois
                                         Tremblay
                                                                Queen
                                                                                               17.82
4
                                                                                    16.8300000000000002
              34
                  João
                                         Fernandes
                                                                Queen
                  Phil
                                         Hughes
              53
                                                                Queen
                                                                                               11.88
Total rows: 43 of 43 Query complete 00:00:00.130
2: 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
```

Data	Output Messages Notifications			
=+				
	bigint country character varying (50)	name character varying (120)	genre_id character varying (50)	rowno bigint
1	17 Argentina	Alternative & Punk	4	1
2	34 Australia	Rock	1	1
3	40 Austria	Rock	1	1
4	26 Belgium	Rock	1	1
5	205 Brazil	Rock	1	1
Tota	rows: 24 of 24 Query complete 00	:00:00.239		

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 questionfirst 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,

RowNo

ROW\_NUMBER() OVER(PARTITION BY billing\_country ORDER BY SUM(total) DESC) AS

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

