



# Music

# Store







## Query History

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

```
SELECT title, last_name, first_name
```

FROM employee

ORDER BY levels DESC


```
LIMIT 1;
```


## Messages


## Notifications



Show

character varying (50) 

character (50) 

character (50) 

Senior General Manager



000000





music\_analysis/postgres@PostgreSQL 17

No limit

E

Query Query History

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/\* Q2: Which countries have the most Invoices? \*/

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

FROM invoice

GROUP BY billing\_country

ORDER BY c DESC;

Data Output Messages Notifications

SQL

	c bigint	billing_country character varying (30)
1	131	USA
2	76	Canada
3	61	Brazil
4	50	France
5	41	Germany
6	30	Czech Republic
7	29	Portugal
8	28	United Kingdom
9	21	India
10	13	Chile
11	13	Ireland
12	11	Spain
13	11	Finland
14	10	Australia
15	10	Netherlands





## Query Query History

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```
/* Q3: What are top 3 values of total invoice? */  
  
SELECT total  
FROM invoice  
ORDER BY total DESC;
```

## Data Output Messages Notifications



	total double precision
1	23.759999999999998
2	19.8
3	19.8
4	19.8
5	19.8
6	18.81
7	17.82
8	17.82
9	17.82
10	17.82
11	17.82
12	17.82
13	17.82
14	16.83
15	16.83





```
SELECT billing_city,SUM(total) AS InvoiceTotal
FROM invoice
GROUP BY billing_city
ORDER BY InvoiceTotal DESC
LIMIT 1;
```

Data Output

Messages

Notifications

</





```
SELECT c.customer_id, first_name, last_name, SUM(total) AS total_spending
FROM customer c
JOIN invoice i
    ON c.customer_id = i.customer_id
GROUP BY c.customer_id
ORDER BY total_spending DESC
LIMIT 1;
```

Data Output Messages Notifications						
			SQL			
	customer_id [PK] integer	first_name character (50)	last_name character (50)	total_spending double precision		
1	5	R	Madhav	144.540000000000002		





```
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
;
```

	email character varying (50) 🔒	first_name character (50) 🔒	last_name character (50) 🔒
1	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 ...
5	camille.bernard@yahoo.fr	Camille ...	Bernard ...
6	daan_peeters@apple.be	Daan ...	Peeters ...
7	diego.gutierrez@yahoo.ar	Diego ...	Gutiérrez ...
8	dmiller@comcast.com	Dan ...	Miller ...
9	dominiquelefebvre@gmail.c...	Dominique ...	Lefebvre ...
10	edfrancis@yahoo.ca	Edward ...	Francis ...





```
SELECT a.artist_id, a.name,  
       COUNT(a.artist_id) AS number_of_songs  
FROM track t  
JOIN album ab  
      ON ab.album_id = t.album_id  
JOIN artist a  
      ON a.artist_id = ab.artist_id  
JOIN genre g  
      ON g.genre_id = t.genre_id  
WHERE g.name LIKE 'Rock'  
GROUP BY a.artist_id  
ORDER BY number_of_songs DESC  
LIMIT 10;
```

	artist_id [PK] character varying (50)	name character varying (120)	number_of_songs bigint
1	22	Led Zeppelin	114
2	150	U2	112
3	58	Deep Purple	92
4	90	Iron Maiden	81
5	118	Pearl Jam	54
6	152	Van Halen	52
7	51	Queen	45
8	142	The Rolling Stones	41
9	76	Creedence Clearwater Revival	40
10	52	Kiss	35





```
SELECT name,milliseconds
FROM track
WHERE milliseconds > (
    SELECT AVG(milliseconds) AS avg_track_length
    FROM track )
ORDER BY milliseconds DESC;
```

	name character varying (150)	milliseconds integer
1	Occupation / Precipice	5286953
2	Through a Looking Glass	5088838
3	Greetings from Earth, Pt. 1	2960293
4	The Man With Nine Lives	2956998
5	Battlestar Galactica, Pt. 2	2956081
6	Battlestar Galactica, Pt. 1	2952702
7	Murder On the Rising Star	2935894
8	Battlestar Galactica, Pt. 3	2927802
9	Take the Celestra	2927677
10	Fire In Space	2926593
11	The Long Patrol	2925008
12	The Magnificent Warriors	2924716





```
WITH best_selling_artist AS (  
    SELECT a.artist_id, a.name AS artist_name,  
           SUM(il.unit_price * il.quantity) AS total_sales  
    FROM invoice_line il  
    JOIN track t ON t.track_id = il.track_id  
    JOIN album ab ON ab.album_id = t.album_id  
    JOIN artist a ON a.artist_id = ab.artist_id  
    GROUP BY a.artist_id  
    ORDER BY total_sales 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 c.customer_id,c.first_name,c.last_name,bsa.artist_name  
ORDER BY amount_spent DESC  
;
```

	customer_id integer	first_name character (50)	last_name character (50)	artist_name character varying (120)	amount_spent double precision
1	46	Hugh ...	O'Reilly ...	Queen	27.719999999999985
2	38	Niklas ...	Schröder ...	Queen	18.81
3	3	François ...	Tremblay ...	Queen	17.82
4	34	João ...	Fernandes ...	Queen	16.830000000000002
5	53	Phil ...	Hughes ...	Queen	11.88
6	41	Marc ...	Dubois ...	Queen	11.88
7	47	Lucas ...	Mancini ...	Queen	10.89
8	33	Ellie ...	Sullivan ...	Queen	10.89
9	20	Dan ...	Miller ...	Queen	3.96
10	5	R ...	Madhav ...	Queen	3.96





```
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
```

	purchases 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
6	333	Canada	Rock	1	1
7	61	Chile	Rock	1	1
8	143	Czech Republic	Rock	1	1
9	24	Denmark	Rock	1	1





## WITH RECURSIVE

```
customer_with_country AS (  
    SELECT c.customer_id, first_name, last_name, billing_country,  
           SUM(total) AS total_spending  
    FROM invoice i  
    JOIN customer c ON c.customer_id = i.customer_id  
    GROUP BY c.customer_id, first_name, last_name, billing_country  
    ORDER BY first_name, last_name DESC),  
country_max_spending AS(  
    SELECT billing_country, MAX(total_spending) AS max_spending  
    FROM customer_with_country  
    GROUP BY billing_country)  
SELECT cc.billing_country, cc.total_spending, cc.first_name, cc.last_name, cc.customer_id  
FROM customer_with_country cc  
JOIN country_max_spending ms ON cc.billing_country = ms.billing_country  
WHERE cc.total_spending = ms.max_spending  
ORDER BY cc.billing_country  
;
```

	billing_country character varying (30) 🔒	total_spending double precision 🔒	first_name character (50) 🔒	last_name character (50) 🔒	customer_id integer 🔒
1	Argentina	39.6	Diego ...	Gutiérrez ...	56
2	Australia	81.18	Mark ...	Taylor ...	55
3	Austria	69.3	Astrid ...	Gruber ...	7
4	Belgium	60.389999999999999	Daan ...	Peeters ...	8
5	Brazil	108.899999999999998	Luís ...	Gonçalves ...	1
6	Canada	99.99	François ...	Tremblay ...	3
7	Chile	97.020000000000001	Luis ...	Rojas ...	57
8	Czech Republic	144.540000000000002	R ...	Madhav ...	5