

EASY

1. Top 10 most expensive tracks.

The screenshot shows the pgAdmin 4 interface with a query result for the top 10 most expensive tracks. The query is a SELECT statement. The result is displayed in a table with 4 columns: track_name, artist, album, and unit_price. The tracks are sorted by unit_price in descending order.

	track_name	artist	album	unit_price
1	Torn	Battlestar Galactica	Battlestar Galactica, Season 3	1.99
2	Unfinished Business	Battlestar Galactica	Battlestar Galactica, Season 3	1.99
3	Exodus, Pt. 1	Battlestar Galactica	Battlestar Galactica, Season 3	1.99
4	Collaborators	Battlestar Galactica	Battlestar Galactica, Season 3	1.99
5	A Measure of Salvation	Battlestar Galactica	Battlestar Galactica, Season 3	1.99
6	Hero	Battlestar Galactica	Battlestar Galactica, Season 3	1.99
7	Battlestar Galactica: The Story So ...	Battlestar Galactica	Battlestar Galactica: The Story So ...	1.99
8	Occupation / Precipice	Battlestar Galactica	Battlestar Galactica, Season 3	1.99
9	Exodus, Pt. 2	Battlestar Galactica	Battlestar Galactica, Season 3	1.99
10	The Passage	Battlestar Galactica	Battlestar Galactica, Season 3	1.99

2. Tracks per genre

The screenshot shows the pgAdmin 4 interface with a query result for tracks per genre. The query is a SELECT statement. The result is displayed in a table with 2 columns: genre and track_count. The tracks are sorted by track_count in descending order.

genre	track_count
R&B/Soul	61
Reggae	58
Pop	48
Soundtrack	43
Alternative	40
Hip Hop/Rap	35
Electronica/Dance	30
Heavy Metal	28
World	28
Sci Fi & Fantasy	26
Easy Listening	24
Comedy	17
Bossa Nova	15
Science Fiction	13
Rock And Roll	12
Opera	1

3. Customers from Brazil

pgAdmin 4

File Object Tools Edit View Window Help

musicdb/postgres@PostgreSQL 18

Query

```
6 t.unit_price
7 FROM track t
8 JOIN album al ON t.album_id = al.album_id
9 JOIN artist ar ON al.artist_id = ar.artist_id
10 ORDER BY t.unit_price DESC
11 LIMIT 10;
12 /*2 Total number of tracks per genre (most to least)*/
13 SELECT
```

Data Output Messages Graph Visualiser X Notifications

Showing rows: 1 to 5 Page No: 1 of 1

	full_name text	city character varying (50)	email character varying (50)
1	Roberto Almei...	Rio de Janeiro	roberto.almeida@riotur.gov...
2	Luís Gonçalves	São José dos Campos	luisg@embraer.com.br
3	Eduardo Marti...	São Paulo	eduardo@woodstock.com.br
4	Fernanda Ram...	Brasília	fernadamos4@uol.com.br
5	Alexandre Roc...	São Paulo	alero@uol.com.br

Total rows: 5 Query complete 00:00:00.212 CR

4. Employee with the most customers

pgAdmin 4

File Object Tools Edit View Window Help

musicdb/postgres@PostgreSQL 18

Query

```
26 WHERE country = 'Brazil'
27 ORDER BY last_name, first_name;
28 /*4 */
29 SELECT
30 e.employee_id,
31 e.first_name || ' ' || e.last_name AS employee_name,
32 COUNT(c.customer_id) AS total_customers
33 FROM employee e
34 JOIN customer c ON e.employee_id = c.employee_id
```

Data Output Messages Graph Visualiser X Notifications

Showing rows: 1 to 1 Page 1

	employee_id [PK] character varying (50)	employee_name text	total_customers bigint
1	3	Jane Peacock	21

MODERATE

5. Employee with the Highest Total Sales Revenue

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer: Functions, Materialized Views, Operators, Procedures, Sequences, Tables (11): album, artist, customer, employee, genre, invoice, invoice_line, media_type, playlist, playlist_track, track, Trigger Functions, Types, Views, Subscriptions, postgres, Login/Group Roles

Query Editor: musicdb/postgres@PostgreSQL 18

Query: /*5 Employee with the Highest Total Sales Revenue */
SELECT
e.employee_id,
e.first_name || ' ' || e.last_name AS employee_name,
SUM(i.total) AS total_revenue

Data Output: Messages Notifications

	employee_id [PK] character varying (50)	employee_name text	total_revenue double precision
1	3	Jane Peacock	1731.51000000000039

Showing rows: 1 to 1 Page No: 1

6. Top 5 Customers by Total Spending

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer: Functions, Materialized Views, Operators, Procedures, Sequences, Tables (11): album, artist, customer, employee, genre, invoice, invoice_line, media_type, playlist, playlist_track, track, Trigger Functions, Types, Views, Subscriptions, postgres, Login/Group Roles, Tablespaces

Query Editor: musicdb/postgres@PostgreSQL 18

Query: JOIN public.customer c
ON e.employee_id::int = c.support_rep_id
JOIN public.invoice i
ON c.customer_id = i.customer_id

Data Output: Messages Notifications

	customer_id [PK] integer	customer_name text	total_spent double precision
1	5	R Madhav	144.54000000000002
2	6	Helena Holý	128.7
3	46	Hugh O'Reilly	114.83999999999997
4	58	Manoj Pareek	111.86999999999999
5	1	Luís Gonçalves	108.89999999999998

Showing rows: 1 to 5 Page No: 1

7. Most Popular Genre by Number of Purchases

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

- Foreign Tables
- Functions
- Materialized Views
- Operators
- Procedures
- Sequences
- Tables (11)**
 - album
 - artist
 - customer
 - employee
 - genre
 - invoice
 - invoice_line
 - media_type
 - playlist
 - playlist_track
 - track
- Trigger Functions

musicdb/postgres@PostgreSQL 18

No limit

Query

```
16 c.customer_id,  
17 c.first_name || ' ' || c.last_name AS customer_name,  
18 SUM(i.total) AS total_spent  
19 FROM public.customer c  
20 JOIN public.invoice i  
21 ON c.customer_id = i.customer_id  
22 GROUP BY c.customer_id, customer_name
```

Query History

Data Output Messages Notifications

Showing rows: 1 to 1

	genre_name character varying (120)	total_purchases bigint
1	Rock	2635

HARD

8. Top Employee per Country by Total Sales

Admin 4

Object Tools Edit View Window Help

Object Explorer

- Foreign Tables
- Functions
- Materialized Views
- Operators
- Procedures
- Sequences
- Tables (11)
 - album
 - artist
 - customer
 - employee
 - genre
 - invoice
 - invoice_line
 - media_type
 - playlist
 - playlist_track
 - track
- Trigger Functions
- Types
- Views
- Subscriptions
- postgres
- Login/Group Roles

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Data Output Messages Notifications

Showing rows: 1 to 25 Page No: 1 of 1

	country	employee_id	employee_name	total_revenue
	character varying (50)	character varying (50)	text	double precision
1	Argentina	4	Margaret Park	39.6
2	Australia	4	Margaret Park	81.18
3	Austria	5	Steve Johnson	69.3
4	Belgium	4	Margaret Park	60.38999999999999
5	Brazil	3	Jane Peacock	191.06999999999994
6	Canada	3	Jane Peacock	373.23
7	Chile	5	Steve Johnson	97.02000000000001
8	Czech Republic	4	Margaret Park	144.54000000000002
9	Denmark	4	Margaret Park	37.61999999999999
10	Finland	3	Jane Peacock	79.2
11	France	3	Jane Peacock	173.25000000000003
12	Germany	5	Steve Johnson	167.31
13	Germany	3	Jane Peacock	167.31
14	Hungary	3	Jane Peacock	78.21

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

- Foreign Tables
- Functions
- Materialized Views
- Operators
- Procedures
- Sequences
- Tables (11)
 - album
 - artist
 - customer
 - employee
 - genre
 - invoice
 - invoice_line
 - media_type
 - playlist
 - playlist_track
 - track
- Trigger Functions
- Types
- Views
- Subscriptions
- postgres
- Login/Group Roles
- Tablespaces

musicdb/postgres@PostgreSQL 18*

Data Output Messages Notifications

Showing rows: 1 to 25 Page No: 1 of 1

	country	employee_id	employee_name	total_revenue
	character varying (50)	character varying (50)	text	double precision
11	France	3	Jane Peacock	173.25000000000003
12	Germany	5	Steve Johnson	167.31
13	Germany	3	Jane Peacock	167.31
14	Hungary	3	Jane Peacock	78.21
15	India	3	Jane Peacock	183.14999999999998
16	Ireland	3	Jane Peacock	114.83999999999997
17	Italy	5	Steve Johnson	50.49
18	Netherlands	5	Steve Johnson	65.34
19	Norway	4	Margaret Park	72.27000000000001
20	Poland	4	Margaret Park	76.22999999999999
21	Portugal	4	Margaret Park	185.13000000000002
22	Spain	5	Steve Johnson	98.01
23	Sweden	5	Steve Johnson	75.24
24	United Kingdom	3	Jane Peacock	166.32
25	USA	4	Margaret Park	497.96999999999999

Total rows: 25 Query complete 00:00:00.129 CRLF Ln

9. Top 3 Tracks by Revenue in Each Genre

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File Object Tools Edit View Window Help

board x Properties x SQL x Statistics x Dependencies x Dependents x Processes x musicdb/postgres@PostgreSQL 18*

musicdb/postgres@PostgreSQL 18

No limit

Data Output Messages Notifications

Showing rows: 1 to 51 Page No: 1 of 1

genre_name	track_name	total_revenue
character varying (120)	character varying (150)	double precision
1 Alternative	War Pigs	30.689999999999998
2 Alternative	Slowness	9.9
3 Alternative	Safe and Sound	5.94
4 Alternative & Punk	Last Chance	9.9
5 Alternative & Punk	Get What You Need	8.91
6 Alternative & Punk	Train In Vain	8.91
7 Blues	Sunshine Of Your Love	4.95
8 Blues	White Room	4.95
9 Blues	Knockin On Heavens Door	3.96
10 Classical	Das Lied Von Der Erde, Von Der Jugend	7.9200000000000001
11 Classical	Turandot, Act III, Nessun dorma!	7.9200000000000001
12 Classical	24 Caprices, Op. 1, No. 24, for Solo Violin, in A Mi...	7.9200000000000001
13 Drama	Confirmed Dead	0.99
14 Easy Listening	Bad, Bad Leroy Brown	4.95
15 Easy Listening	Love And Marriage	4.95
16 Easy Listening	I've Got You Under My Skin	3.96

Total rows: 51 Query complete 00:00:00.202 CRLF Ln 39, Col 1

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File Object Tools Edit View Window Help

board x Properties x SQL x Statistics x Dependencies x Dependents x Processes x musicdb/postgres@PostgreSQL 18*

musicdb/postgres@PostgreSQL 18

No limit

Data Output Messages Notifications

Showing rows: 1 to 51 Page No: 1 of 1

genre_name	track_name	total_revenue
character varying (120)	character varying (150)	double precision
17 Electronica/Dance	Half The Man	4.95
18 Electronica/Dance	Journey To Amhemland	3.96
19 Electronica/Dance	Scam	3.96
20 Heavy Metal	Gates Of Tomorrow	1.98
21 Heavy Metal	New Frontier	0.99
22 Heavy Metal	Wrathchild	0.99
23 Hip Hop/Rap	House Of Pain Anthem	2.9699999999999998
24 Hip Hop/Rap	One For The Road	2.9699999999999998
25 Hip Hop/Rap	Danny Boy, Danny Boy	1.98
26 Jazz	My Ship	4.95
27 Jazz	The Meaning Of The Blues/Lament (Alternate Ta...	4.95
28 Jazz	Blues For Pablo	4.95
29 Latin	Chuva No Brejo	3.96
30 Latin	Cérebro Eletrônico	3.96
31 Latin	De Noite Na Cama	3.96
32 Metal	Barin/Virid...	11.88

Total rows: 51 Query complete 00:00:00.202 CRLF Ln 39, Col 1

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File Object Tools Edit View Window Help

Object Explorer: Functions, Materialized Views, Operators, Procedures, Sequences, **Tables (11)**, Trigger Functions, Types, Views, Subscriptions, postgres, Login/Group Roles, Tablespaces

SQL: musicdb/postgres@PostgreSQL 18

Data Output: Showing rows: 1 to 51 | Page No: 1 of 1

genre_name	track_name	total_revenue
character varying (120)	character varying (150)	double precision
32 Metal	Dead And Broken	10.89
33 Metal	Old School Hollywood	10.89
34 Metal	Take the Box	5.94
35 Pop	You Sent Me Flying / Cherry	4.95
36 Pop	October Song	4.95
37 R&B/Soul	You Know I'm No Good (feat. Ghostface Killah)	7.920000000000001
38 R&B/Soul	Tears Dry On Their Own	5.94
39 R&B/Soul	I Got You (I Feel Good)	5.94
40 Reggae	Wear You To The Ball	2.9699999999999998
41 Reggae	Superstition	2.9699999999999998
42 Reggae	Nothing But Love	2.9699999999999998
43 Rock	Highway Chile	13.860000000000001
44 Rock	Are You Experienced?	13.860000000000001
45 Rock	Third Stone From The Sun	12.870000000000001
46 Soundtrack	Qui Nem Jiló	0.99
47 Soundtrack	Ito Okashi	0.99
48 Soundtrack	Baião Da Penha	0.99
49 TV Shows	Collaborators	0.99
50 TV Shows	Exodus (Part 1)	0.99
51		

Total rows: 51 | Query complete 00:00:00.202 | CRLF Ln 39, Col 1

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File Object Tools Edit View Window Help

Object Explorer: Functions, Materialized Views, Operators, Procedures, Sequences, **Tables (11)**, Trigger Functions, Types, Views, Subscriptions, postgres, Login/Group Roles, Tablespaces

SQL: musicdb/postgres@PostgreSQL 18

Data Output: Showing rows: 1 to 51 | Page No: 1 of 1

genre_name	track_name	total_revenue
character varying (120)	character varying (150)	double precision
36 Pop	You Sent Me Flying / Cherry	4.95
37 Pop	October Song	4.95
38 R&B/Soul	You Know I'm No Good (feat. Ghostface Killah)	7.920000000000001
39 R&B/Soul	Tears Dry On Their Own	5.94
40 R&B/Soul	I Got You (I Feel Good)	5.94
41 Reggae	Wear You To The Ball	2.9699999999999998
42 Reggae	Superstition	2.9699999999999998
43 Reggae	Nothing But Love	2.9699999999999998
44 Rock	Highway Chile	13.860000000000001
45 Rock	Are You Experienced?	13.860000000000001
46 Rock	Third Stone From The Sun	12.870000000000001
47 Soundtrack	Qui Nem Jiló	0.99
48 Soundtrack	Ito Okashi	0.99
49 Soundtrack	Baião Da Penha	0.99
50 TV Shows	Collaborators	0.99
51 TV Shows	Exodus (Part 1)	0.99

Total rows: 51 | Query complete 00:00:00.202 | CRLF Ln 39, Col 1

10. Customers Who Purchased Every Track of a Specific Genre

output is empty.

```
39  /*Customers Who Purchased Every Track of a Specific Genre*/
40  WITH rock_tracks AS (
41      SELECT track_id
42      FROM public.track t
43      JOIN public.genre g ON t.genre_id = g.genre_id
44      WHERE g.name = 'Rock'
45  ),
```

Data Output Messages Notifications

customer_id [PK] integer customer_name text

11. Monthly Sales Trend for Each Employee

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	employee_id	employee_name	month	monthly_sales
	[PK] character varying (50)	text	timestamp without time zone	double precision
1	3	Jane Peacock	2020-01-01 00:00:00	3.96
2	3	Jane Peacock	2020-02-01 00:00:00	39.6
3	3	Jane Peacock	2020-03-01 00:00:00	30.689999999999998
4	3	Jane Peacock	2020-04-01 00:00:00	29.7
5	3	Jane Peacock	2020-05-01 00:00:00	24.75
6	3	Jane Peacock	2020-06-01 00:00:00	35.64
7	3	Jane Peacock	2020-07-01 00:00:00	45.54
8	3	Jane Peacock	2020-08-01 00:00:00	35.64
9	3	Jane Peacock	2020-09-01 00:00:00	28.709999999999997
10	3	Jane Peacock	2020-10-01 00:00:00	23.759999999999998
11	3	Jane Peacock	2020-11-01 00:00:00	18.810000000000002
12	3	Jane Peacock	2020-12-01 00:00:00	85.14
13	4	Margaret Park	2020-01-01 00:00:00	12.870000000000001
14	4	Margaret Park	2020-02-01 00:00:00	21.78
15	4	Margaret Park	2020-03-01 00:00:00	19.8
16	4	Margaret Park	2020-04-01 00:00:00	21.779999999999998

Total rows: 36 Query complete 00:00:00.235 CRLF Ln 73, Col 1

pgAdmin 4

File Object Tools Edit View Window Help

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No limit

Data Output Messages Notifications

Showing rows: 1 to 36 Page No: 1 of 1

employee_id	employee_name	month	monthly_sales
[PK] character varying (50)	text	timestamp without time zone	double precision
17	Margaret Park	2020-05-01 00:00:00	35.64
18	Margaret Park	2020-06-01 00:00:00	39.599999999999994
19	Margaret Park	2020-07-01 00:00:00	18.81
20	Margaret Park	2020-08-01 00:00:00	10.89
21	Margaret Park	2020-09-01 00:00:00	34.65
22	Margaret Park	2020-10-01 00:00:00	85.14
23	Margaret Park	2020-11-01 00:00:00	33.660000000000004
24	Margaret Park	2020-12-01 00:00:00	30.689999999999998
25	Steve Johnson	2020-01-01 00:00:00	26.729999999999997
26	Steve Johnson	2020-02-01 00:00:00	35.64
27	Steve Johnson	2020-03-01 00:00:00	27.72
28	Steve Johnson	2020-04-01 00:00:00	68.31
29	Steve Johnson	2020-05-01 00:00:00	21.78
30	Steve Johnson	2020-06-01 00:00:00	45.54
31	Steve Johnson	2020-07-01 00:00:00	11.879999999999999
32	Steve Johnson	2020-08-01 00:00:00	25.74

Total rows: 36 Query complete 00:00:00.235 CRLF Ln 73, Col 1

pgAdmin 4

File Object Tools Edit View Window Help

board X Properties X SQL X Statistics X Dependencies X Dependents X Processes X musicdb/postgres@PostgreSQL 18*

musicdb/postgres@PostgreSQL 18

No limit

Data Output Messages Notifications

Showing rows: 1 to 36 Page No: 1 of 1

employee_id	employee_name	month	monthly_sales
[PK] character varying (50)	text	timestamp without time zone	double precision
21	Margaret Park	2020-09-01 00:00:00	34.65
22	Margaret Park	2020-10-01 00:00:00	85.14
23	Margaret Park	2020-11-01 00:00:00	33.660000000000004
24	Margaret Park	2020-12-01 00:00:00	30.689999999999998
25	Steve Johnson	2020-01-01 00:00:00	26.729999999999997
26	Steve Johnson	2020-02-01 00:00:00	35.64
27	Steve Johnson	2020-03-01 00:00:00	27.72
28	Steve Johnson	2020-04-01 00:00:00	68.31
29	Steve Johnson	2020-05-01 00:00:00	21.78
30	Steve Johnson	2020-06-01 00:00:00	45.54
31	Steve Johnson	2020-07-01 00:00:00	11.879999999999999
32	Steve Johnson	2020-08-01 00:00:00	25.74
33	Steve Johnson	2020-09-01 00:00:00	31.68
34	Steve Johnson	2020-10-01 00:00:00	35.64
35	Steve Johnson	2020-11-01 00:00:00	30.69
36	Steve Johnson	2020-12-01 00:00:00	9.899999999999999

Total rows: 36 Query complete 00:00:00.235 CRLF Ln 73, Col 1

12. Track with the Highest Single Invoice Sale

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

- Foreign Tables
- Functions
- Materialized Views
- Operators
- Procedures
- Sequences
- Tables (11)
 - album
 - artist
 - customer
 - employee
 - genre
 - invoice
 - invoice_line
 - media_type
 - playlist
 - playlist_track
 - track
- Trigger Functions
- Types
- Views
- Subscriptions
- postgres

musicdb/postgres@PostgreSQL 18

No limit

Query

```
68 ON e.employee_id, mc = c.support_rep_id
69 JOIN public.invoice i
70 ON c.customer_id = i.customer_id
71 WHERE i.invoice_date >= '2020-01-01' AND i.invoice_date < '2021-01-01'
72 GROUP BY e.employee_id, employee_name, month
73 ORDER BY e.employee_id, month;
74
75 /*12 Track with the Highest Single Invoice Sale*/
76 SELECT
77     t.track_id,
78     t.name AS track_name,
79     il.invoice_id,
80     il.unit_price * il.quantity AS line_total
```

Query History

Data Output Messages Notifications

Showing rows: 1 to 1

track_id	track_name	invoice_id	line_total
1158	Right Next Door to Hell	1	0.99