

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer Dashboard Properties SQL Statistics Dependencies Dependents Processes Customer_behavior/postgres@PostgreSQL 18*

Servers PostgreSQL 18 Databases (2) Customer_behavior

- Casts
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- Tables (1)
 - customers
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Query History

```
-- Q1. What is the total revenue generated by male Vs female customers?  
select gender, sum(purchase_amount) as revenue  
from customers  
group by gender
```

Data Output Messages Notifications

	gender	revenue
	text	numeric
1	Female	75191
2	Male	157890

Total rows: 2 Query complete 00:00:00.217

Successfully run. Total CRLF Ln 3, Col 1

The screenshot shows the pgAdmin 4 interface. In the left sidebar, the 'Object Explorer' shows a tree structure of databases, tables, and other objects. The 'Customer_behavior' database is selected. In the main area, the 'SQL' tab contains a query to calculate total revenue by gender. The 'Data Output' tab shows the results of this query, which are two rows: Female with a revenue of 75191 and Male with a revenue of 157890. A success message at the bottom right indicates the query was run successfully.

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File Object Tools Edit View Window Help

Object Explorer PostgreSQL 18 Databases (2) Customer_behavior (2)

Customer_behavior/postgres@PostgreSQL 18*

Query History

```
1
2
3 -- Q2. which customers used a discount but still spend more than the average purchase amount?
4
5 select customer_id, purchase_amount
6 from customers
7 where discount_applied = 'Yes' and purchase_amount >=
8 (select AVG(purchase_amount) from customers)
```

Data Output Messages Notifications

customer_id	purchase_amount
1	64
2	73
3	90
4	85
5	97
6	68
7	72
8	81
9	90
10	62
11	88
12	94

Total rows: 839 Query complete 00:00:00.141

CRLF Ln 5, Col 1

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Object Explorer Dashboard Properties SQL Statistics Dependencies Dependents Processes Customer_behavior/postgres@PostgreSQL 18*

Databases (2) Customer_behavior

Customer_behavior

- Casts
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 - Tables (1)
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 - Constraints
 - Indexes
 - RLS Policies

Query Query History Scratch Pad

```
1  
2  
3 -- Q3.Which are top 5 products with the highest average review rating?  
4  
5  
6 select item_purchased, ROUND(Avg(review_rating::numeric),2) as Average_product_rating  
7 from customers  
8 group by item_purchased  
9 order by avg(review_rating) desc  
10 limit 5;  
11
```

Data Output Messages Notifications

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

item_purchased	average_product_rating
Gloves	3.86
Sandals	3.84
Boots	3.82
Hat	3.80
Skirt	3.78

Total rows: 5 Query complete 00:00:00.134 CRLF Ln 6, Col 1

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File Object Tools Edit View Window Help

Object Explorer PostgreSQL 18 Customer_behavior/postgres@PostgreSQL 18*

Customer_behavior/postgres@PostgreSQL 18

Query History

```
-- Q4. compare the average purchase amounts between standard and express shipping?  
select shipping_type,  
round(Avg(purchase_amount),2)  
from customers  
where shipping_type in ('Express','Standard')  
group by shipping_type
```

Data Output Messages Notifications

shipping_type	round
Standard	58.46
Express	60.48

Showing rows: 1 to 2 Page No: 1 of 1

Total rows: 2 Query complete 00:00:00.142 CRLF Ln 5, Col 1

The screenshot shows the pgAdmin 4 interface. The left sidebar is the Object Explorer, displaying the database structure for 'Customer_behavior' under 'PostgreSQL 18'. The main area is a query editor window titled 'Customer_behavior/postgres@PostgreSQL 18'. It contains a SQL query to find the average purchase amount for 'Express' and 'Standard' shipping types. The results are displayed in a table with two rows: 'Standard' with a round value of 58.46 and 'Express' with a round value of 60.48. The bottom status bar indicates the query completed in 00:00:00.142.

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File Object Tools Edit View Window Help

Object Explorer PostgreSQL 18 Databases (2) Customer_behavior

Customer_behavior/postgres@PostgreSQL 18*

Query History

```
1  
2  
3 -- Q5. Do subscribed customers spend more? compare average spend and total revenue between  
4 -- subscribers and non-subscribers ?  
5  
6  
7 select subscription_status, count(customer_id)as Total_customers,  
8 round(Avg(purchase_amount),2) as average_spend,  
9 sum(purchase_amount) as total_revenue  
10 from customers  
11 group by subscription_status  
12 order by total_revenue,average_spend desc
```

Data Output Messages Notifications

	subscription_status	total_customers	average_spend	total_revenue
1	Yes	1053	59.49	62645
2	No	2847	59.87	170436

Total rows: 2 Query complete 00:00:00.119 CRLF Ln 7, Col 1

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File Object Tools Edit View Window Help

Object Explorer PostgreSQL 18 Databases (2) Customer_behavior/postgres@PostgreSQL 18*

Customer_behavior/postgres@PostgreSQL 18 No limit

Query History Scratch Pad

```
-- Q6. Which 5 products have the highest percentage of purchase with discounts applied?  
select item_purchased,  
round(100* sum(case when discount_applied = 'Yes' then 1 else 0 end)/count(*),2) as discount_rate  
from customers  
group by item_purchased  
order by discount_rate desc  
limit 5;
```

Data Output Messages Notifications

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

	item_purchased	discount_rate
1	Hat	50.00
2	Sneakers	49.00
3	Coat	49.00
4	Sweater	48.00
5	Pants	47.00

Total rows: 5 Query complete 00:00:00.203 CRLF Ln 11, Col 9

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File Object Tools Edit View Window Help

Object Explorer PostgreSQL 18 Databases (2) Customer_behavior/postgres@PostgreSQL 18*

Customer_behavior/postgres@PostgreSQL 18

No limit

Query History

```
3 -- Q6. segment customers into new, returning and loyal based on their previous purchases,
4 -- and show the count of each segment?
5
6 with customer_type as (
7 select customer_id, previous_purchases,
8 case
9 when previous_purchases = 1 then 'New'
10 when previous_purchases between 2 and 10 then 'returning'
11 else 'Loyal'
12 end as customer_segment
13 from customers
14 )
15 select customer_segment, count(*) as numnber_of_customers
16 from customer_type
17 group by customer_segment
```

Data Output Messages Notifications

Showing rows: 1 to 3 Page No: 1 of 1

customer_segment	numnber_of_customers
returning	701
Loyal	3116
New	83

Total rows: 3 Query complete 00:00:00.125 CRLF Ln 18, Col 1

The screenshot shows the pgAdmin 4 interface with the following details:

- File** | Object | Tools | Edit | View | Window | Help
- Object Explorer**: PostgreSQL 18 > Databases (2) > Customer_behavior
- Dashboard**: Customer_behavior/postgres@PostgreSQL 18*
- Query** tab: Contains the following SQL code:

```
1
2
3 -- Q6. what are top 3 most purchased products within each category?
4
5 with item_counts as(
6 select category, item_purchased,
7 count (customer_id) as total_orders,
8 row_number() over(partition by category order by count(customer_id) desc) as item_rank
9 from customers
10 group by category, item_purchased
11 )
12 select category, total_orders, item_rank, item_purchased
13 from item_counts
14 where item_rank <= 3;
```
- Data Output** tab: Shows the results of the query in a table format.
- Scratch Pad**: A panel on the right side of the interface.
- Bottom Status Bar**: Total rows: 11 | Query complete 00:00:00.316 | CRLF | Ln 5, Col 1

	category	total_orders	item_rank	item_purchased
1	Accessori...	171	1	Jewelry
2	Accessori...	161	2	Sunglasses
3	Accessori...	161	3	Belt
4	Clothing	171	1	Blouse
5	Clothing	171	2	Pants
6	Clothing	169	3	Shirt
7	Footwear	160	1	Sandals
8	Footwear	150	2	Shoes

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer PostgreSQL 18 Databases (2) Customer_behavior (2)

Customer_behavior/postgres@PostgreSQL 18

Query History

```
1
2
3 -- Q6. Are customers who are repeat buyers (more than 5 previous purchases ) also likely to
4 -- to subscribe?
5
6 select subscription_status,
7 count(customer_id) as repeat_buyers
8 from customers
9 where previous_purchases >5
10 group by subscription_status
11
```

Data Output Messages Notifications

subscription_status	repeat_buyers
No	2518
Yes	958

Showing rows: 1 to 2 | Page No: 1 | of 1 | < << > >>

Total rows: 2 Query complete 00:00:00.243 CRLF Ln 4, Col 21

The screenshot shows the pgAdmin 4 interface with the following details:

- Object Explorer:** Displays the database structure under "PostgreSQL 18".
 - Databases:** Customer_behavior (2)
 - Customer_behavior:** Contains various objects like Casts, Catalogs, Event Triggers, etc.
 - Schemas:** public (1)
 - Tables:** customers (1)
- Query Editor:** A tabbed interface with "Customer_behavior/postgres@PostgreSQL 18". The current tab is "Query".
 - SQL:** The query is a SELECT statement to find repeat buyers based on previous purchases.
 - Data Output:** Shows the results of the query in a table format.
 - Messages:** Displays the message "Showing rows: 1 to 2 | Page No: 1 | of 1 | < << > >>".
- Status Bar:** Shows "Total rows: 2" and "Query complete 00:00:00.243".

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer PostgreSQL 18 Customer_behavior/postgres@PostgreSQL 18*

Customer_behavior/postgres@PostgreSQL 18

Query History

```
1
2
3 -- Q6. what is the revenue contribution of each age group?
4
5 select age_group,
6 sum(purchase_amount) as total_revenue
7 from customers
8 group by age_group
9 order by total_revenue desc;
```

Scratch Pad

Data Output Messages Notifications

Showing rows: 1 to 4 Page No: 1 of 1

	age_group	total_revenue
1	young adult	62143
2	Middle aged	59197
3	Adult	55978
4	Senior	55763

Total rows: 4 Query complete 00:00:00.096 CRLF Ln 10, Col 1

The screenshot shows the pgAdmin 4 interface. The left sidebar is the Object Explorer, displaying the PostgreSQL 18 database structure under the Customer_behavior schema. The main area is a query editor with the title 'Customer_behavior/postgres@PostgreSQL 18'. It contains a SQL query to find the revenue contribution of each age group. The results are displayed in a table with four rows, showing age groups like 'young adult' and 'Senior' with their respective total revenues.