

• BASIC SELECT

pgAdmin 4

File Object Tools Edit View Window Help

Welcome Ecommerce/postgres@PostgreSQL 17* X

Ecommerce/postgres@PostgreSQL 17

Query Query History

```
14 ('536366','1053','Glass Bowl',6,'2010-12-01 08:34',3.39,'17850','United Kingdom'),
15 ('536367','844068','Mini Tray',8,'2010-12-01 08:52',2.75,'13047','France'),
16 ('536368','840296','Green Notebook',3,'2010-12-01 09:17',3.75,'12583','Germany'),
17 ('536369','84029E','Red Notebook',2,'2010-12-01 09:45',3.75,'13748','Germany'),
18 ('536370','84879','Red Pen',32,'2010-12-01 10:01',1.69,'15100','Italy'),
19 ('536371','85099B','Set of Coasters',6,'2010-12-01 10:20',5.95,'14527','Portugal'),
20 ('536372','79323P','Wall Clock',10,'2010-12-01 10:45',3.39,'13480','Spain'),
21 ('536373','22086','Blue Mug',6,'2010-12-01 11:06',1.85,'15311','United Kingdom'),
22 ('536374','22632','Candle Holder',12,'2010-12-01 11:30',2.55,'13263','France');
23
24 -- BASIC SELECT
25
26 SELECT * FROM transactions;
27
```

Data Output Messages Notifications

Showing rows: 1 to 10 Page No: 1 of 1

	invoice	stock	description	quantity	invoicedate	unitprice	customerid	country
	no	code						
	text	text	text	integer	timestamp without time zone	numeric	text	text
1	536365	85123A	White Mug	6	2010-12-01 08:26:00	2.55	17850	United Kingdom
2	536366	71053	Glass Bowl	6	2010-12-01 08:34:00	3.39	17850	United Kingdom
3	536367	844068	Mini Tray	8	2010-12-01 08:52:00	2.75	13047	France
4	536368	84029G	Green Notebo...	3	2010-12-01 09:17:00	3.75	12583	Germany
5	536369	84029E	Red Notebook	2	2010-12-01 09:45:00	3.75	13748	Germany
6	536370	84879	Red Pen	32	2010-12-01 10:01:00	1.69	15100	Italy
7	536371	85099B	Set of Coasters	6	2010-12-01 10:20:00	5.95	14527	Portugal
8	536372	79323P	Wall Clock	10	2010-12-01 10:45:00	3.39	13480	Spain
9	536373	22086	Blue Mug	6	2010-12-01 11:06:00	1.85	15311	United Kingdom
10	536374	22632	Candle Holder	12	2010-12-01 11:30:00	2.55	13263	France

Total rows: 10 Query complete 00:00:00.099 CRLF Ln 26, Col 1

• WHERE CLAUSE

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Query Query History

```
19 ('536371','85099B','Set of Coasters',6,'2010-12-01 10:20',5.95,'14527','Portugal'),
20 ('536372','79323P','Wall Clock',10,'2010-12-01 10:45',3.39,'13480','Spain'),
21 ('536373','22086','Blue Mug',6,'2010-12-01 11:06',1.85,'15311','United Kingdom'),
22 ('536374','22632','Candle Holder',12,'2010-12-01 11:30',2.55,'13263','France');
23
24 SELECT * FROM transactions;
25
26 -- WHERE CLAUSE
27
28 SELECT * FROM transactions
29 WHERE Country = 'France';
30
31
32
33
```

Data Output Messages Notifications

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

	invoice	stock	description	quantity	invoicedate	unitprice	customerid	country
	no	code						
	text	text	text	integer	timestamp without time zone	numeric	text	text
1	536367	844068	Mini Tray	8	2010-12-01 08:52:00	2.75	13047	France
2	536374	22632	Candle Holder	12	2010-12-01 11:30:00	2.55	13263	France

Total rows: 2 Query complete 00:00:00.128 CRLF Ln 30, Col 1

• ORDER BY

The screenshot shows the pgAdmin 4 interface with a SQL query editor and a data output table. The query is as follows:

```
24 SELECT * FROM transactions;
25
26 -- WHERE Clause
27
28 SELECT * FROM transactions
29 WHERE Country = 'France';
30
31 -- ORDER BY
32
33 SELECT * FROM transactions
34 ORDER BY UnitPrice DESC;
35
36
37
```

The data output table shows 10 rows of transaction data, sorted by UnitPrice in descending order. The columns are: invoiceid, stockcode, description, quantity, invoicedate, unitprice, customerid, and country.

invoiceid	stockcode	description	quantity	invoicedate	unitprice	customerid	country
536371	85099B	Set of Coasters	6	2010-12-01 10:20:00	5.95	14527	Portugal
536368	84029G	Green Notebo...	3	2010-12-01 09:17:00	3.75	12583	Germany
536369	84029E	Red Notebook	2	2010-12-01 09:45:00	3.75	13748	Germany
536366	71053	Glass Bowl	6	2010-12-01 08:34:00	3.39	17850	United Kingdom
536372	79323P	Wall Clock	10	2010-12-01 10:45:00	3.39	13480	Spain
536367	84406B	Mini Tray	8	2010-12-01 08:52:00	2.75	13047	France
536365	85123A	White Mug	6	2010-12-01 08:26:00	2.55	17850	United Kingdom
536374	22632	Candle Holder	12	2010-12-01 11:30:00	2.55	13263	France
536373	22086	Blue Mug	6	2010-12-01 11:06:00	1.85	15311	United Kingdom
536370	84879	Red Pen	32	2010-12-01 10:01:00	1.69	15100	Italy

Total rows: 10 Query complete 00:00:00.159

• GROUP BY WITH COUNT

The screenshot shows the pgAdmin 4 interface with a SQL query editor and a data output table. The query is as follows:

```
30
31 -- ORDER BY
32
33 SELECT * FROM transactions
34 ORDER BY UnitPrice DESC;
35
36 -- GROUP BY with COUNT
37
38 SELECT Country, COUNT(*) AS total_orders
39 FROM transactions
40 GROUP BY Country;
41
42
```

The data output table shows 6 rows of aggregated data, grouped by Country. The columns are: country and total_orders.

country	total_orders
Italy	1
United Kingdom	3
Germany	2
Portugal	1
Spain	1
France	2

Total rows: 6 Query complete 00:00:00.108

• GROUP BY WITH SUM

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Query Query History

```
38 SELECT Country, COUNT(*) AS total_orders
39 FROM transactions
40 GROUP BY Country;
41
42 --- GROUP BY with SUM
43
44 SELECT Country, SUM(Quantity * UnitPrice) AS total_sales
45 FROM transactions
46 GROUP BY Country;
47
48
49
50
```

Data Output Messages Notifications

Showing rows: 1 to 6 Page No: 1 of 1

	country text	total_sales numeric
1	Italy	54.08
2	United Kingdom	46.74
3	Germany	18.75
4	Portugal	35.70
5	Spain	33.90
6	France	52.60

Total rows: 6 Query complete 00:00:00.093 CRLF Ln 50, Col 1

• INNER JOIN

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Query Query History

```
61 ('84029E', 'Stationery', 'Germany Co'),
62 ('84879', 'Office Supplies', 'Italy Corp'),
63 ('85099B', 'Home Decor', 'Portugal Inc'),
64 ('79323P', 'Clocks', 'Spain SA'),
65 ('22086', 'Kitchenware', 'UK Supplier'),
66 ('22632', 'Candleware', 'France Ltd');
67
68 -- INNER JOIN
69
70 SELECT t.InvoiceNo, t.Description, p.Category
71 FROM transactions t
72 INNER JOIN products p ON t.StockCode = p.StockCode;
73
```

Data Output Messages Notifications

Showing rows: 1 to 10 Page No: 1 of 1

	stockcode text	category text	invoiceNo text
1	85123A	Home Decor	536365
2	71053	Kitchenware	536366
3	84406B	Stationery	536367
4	84029G	Stationery	536368
5	84029E	Stationery	536369
6	84879	Office Supplies	536370
7	85099B	Home Decor	536371
8	79323P	Clocks	536372
9	22086	Kitchenware	536373
10	22632	Candleware	536374

• LEFT JOIN

The screenshot shows the pgAdmin 4 interface with a query window open. The query is a LEFT JOIN between the 'transactions' table (t) and the 'products' table (p) on the 'StockCode' column. The query is as follows:

```
69
70 SELECT t.InvoiceNo, t.Description, p.Category
71 FROM transactions t
72 INNER JOIN products p ON t.StockCode = p.StockCode;
73
74 -- LEFT JOIN
75
76 SELECT t.InvoiceNo, t.Description, p.Supplier
77 FROM transactions t
78 LEFT JOIN products p ON t.StockCode = p.StockCode;
79
80
81
```

The results are displayed in a table with the following columns: InvoiceNo, description, and supplier. The results show 10 rows of data.

InvoiceNo	description	supplier
536365	White Mug	UK Supplier
536366	Glass Bowl	UK Supplier
536367	Mini Tray	France Ltd
536368	Green Notebo...	Germany ...
536369	Red Notebook	Germany ...
536370	Red Pen	Italy Corp
536371	Set of Coasters	Portugal Inc
536372	Wall Clock	Spain SA
536373	Blue Mug	UK Supplier
536374	Candle Holder	France Ltd

• RIGHT JOIN

The screenshot shows the pgAdmin 4 interface with a query window open. The query is a RIGHT JOIN between the 'products' table (p) and the 'transactions' table (t) on the 'StockCode' column. The query is as follows:

```
75
76 SELECT t.InvoiceNo, t.Description, p.Supplier
77 FROM transactions t
78 LEFT JOIN products p ON t.StockCode = p.StockCode;
79
80 -- RIGHT JOIN
81
82 SELECT p.StockCode, p.Category, t.InvoiceNo
83 FROM products p
84 RIGHT JOIN transactions t ON t.StockCode = p.StockCode;
85
86
87
```

The results are displayed in a table with the following columns: stockcode, category, and InvoiceNo. The results show 10 rows of data.

stockcode	category	InvoiceNo
85123A	Home Decor	536365
71053	Kitchenware	536366
84406B	Stationery	536367
84029G	Stationery	536368
84029E	Stationery	536369
84879	Office Supplies	536370
85099B	Home Decor	536371
79323P	Clocks	536372
22086	Kitchenware	536373
22632	Candleware	536374

- SUBQUERY WITH WHERE CLAUSE

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No limit

Query Query History

```
83 FROM products p
84 RIGHT JOIN transactions t ON t.StockCode = p.StockCode;
85
86 -- SUBQUERY with WHERE CLAUSE
87
88 SELECT * FROM transactions
89 WHERE UnitPrice > (SELECT AVG(UnitPrice) FROM transactions);
90
91
92
93
94
95
```

Data Output Messages Notifications

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

	invoiceid	stockcode	description	quantity	invoicedate	unitprice	customerid	country
	text	text	text	integer	timestamp without time zone	numeric	text	text
1	536366	71053	Glass Bowl	6	2010-12-01 08:34:00	3.39	17850	United Kingdom
2	536368	84029G	Green Notebo...	3	2010-12-01 09:17:00	3.75	12583	Germany
3	536369	84029E	Red Notebook	2	2010-12-01 09:45:00	3.75	13748	Germany
4	536371	85099B	Set of Coasters	6	2010-12-01 10:20:00	5.95	14527	Portugal
5	536372	79323P	Wall Clock	10	2010-12-01 10:45:00	3.39	13480	Spain

Total rows: 5 Query complete 00:00:00.100 CRLF Ln 86, Col 30

- Aggregate function (SUM, AVERAGE)
- Total revenue per country

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No limit

Query Query History

```
89 WHERE UnitPrice > (SELECT AVG(UnitPrice) FROM transactions);
90
91 -- Aggregate function (SUM, AVERAGE)
92 -- Total revenue per country
93
94 SELECT Country, SUM(Quantity * UnitPrice) AS TotalRevenue
95 FROM transactions
96 GROUP BY Country
97 ORDER BY TotalRevenue DESC
98
99
100
101
```

Data Output Messages Notifications

Showing rows: 1 to 6 Page No: 1 of 1

	country	totalrevenue
	text	numeric
1	Italy	54.08
2	France	52.60
3	United Kingdom	46.74
4	Portugal	35.70
5	Spain	33.90
6	Germany	18.75

- Average quantity sold per transaction

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

Query Editor:

```
-- Total revenue per country
SELECT Country, SUM(Quantity * UnitPrice) AS TotalRevenue
FROM transactions
GROUP BY Country
ORDER BY TotalRevenue DESC

-- Average quantity sold per transaction
SELECT AVG(Quantity) AS AvgQuantitySold
FROM transactions;
```

Data Output:

avgquantitiesold	numeric
1	9.1000000000000000

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

- View

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

Query Editor:

```
FROM transactions
GROUP BY Country
ORDER BY TotalRevenue DESC

-- Average quantity sold per transaction
SELECT AVG(Quantity) AS AvgQuantitySold
FROM transactions;

-- CREATE VIEW
CREATE VIEW HighValueTransactions AS
SELECT *, Quantity * UnitPrice AS TotalValue
FROM transactions
WHERE Quantity * UnitPrice > 100;
```

Messages:

CREATE VIEW

Query returned successfully in 96 msec.

- INDEX

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No limit

Query Query History

```
99  -- Average quantity sold per transaction
100
101  SELECT AVG(Quantity) AS AvgQuantitySold
102  FROM transactions;
103
104  -- CREATE VIEW
105
106  CREATE VIEW HighValueTransactions AS
107  SELECT *, Quantity * UnitPrice AS TotalValue
108  FROM transactions
109  WHERE Quantity * UnitPrice > 100;
110
111  -- Create index on country column
112
113  CREATE INDEX idx_country ON transactions(Country);
114
```

Data Output Messages Notifications

CREATE INDEX

Query returned successfully in 67 msec.