

CREATING THE USER AND CALCULATIONS TABLE

pgAdmin 4 — Mozilla Firefox

110% Sign in admin@example.com (internal)

Object Explorer Dashboard Properties SQL Statistics Dependencies Dependents Processes fastapi_db/postgres@fastapi_db*

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fastapi_db/postgres@fastapi_db No limit E

Query History Scratch Pad

```
1 CREATE TABLE users (
2     id SERIAL PRIMARY KEY,
3     username VARCHAR(50) NOT NULL UNIQUE,
4     email VARCHAR(100) NOT NULL UNIQUE,
5     created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP
6 );
7
8 CREATE TABLE calculations (
9     id SERIAL PRIMARY KEY,
10    operation VARCHAR(20) NOT NULL,
11    operand_a FLOAT NOT NULL,
12    operand_b FLOAT NOT NULL,
13    result FLOAT NOT NULL,
14    timestamp TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
15    user_id INTEGER NOT NULL,
16    FOREIGN KEY (user_id) REFERENCES users(id) ON DELETE CASCADE
17 );
```

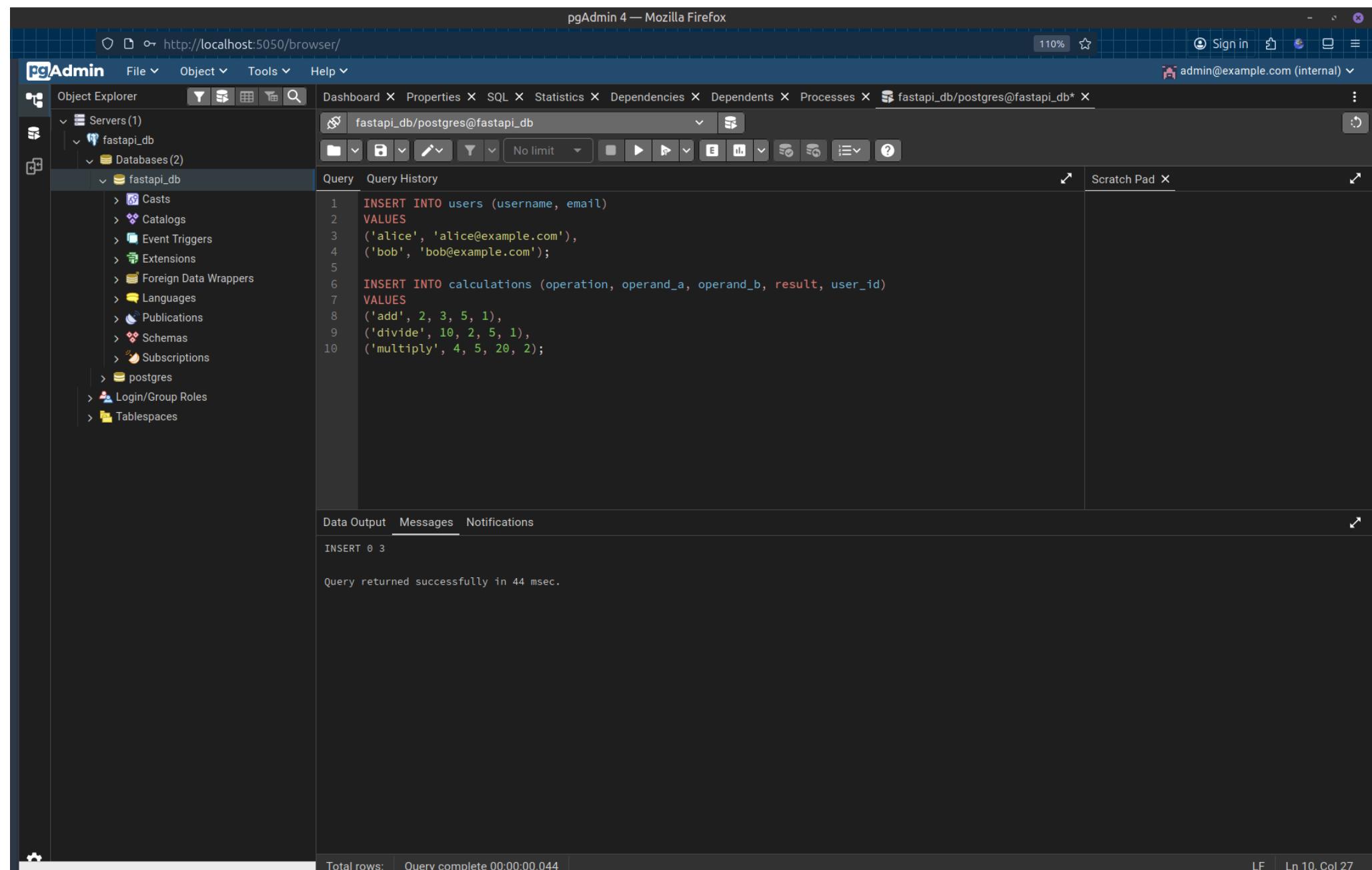
Data Output Messages Notifications

CREATE TABLE

Query returned successfully in 55 msec.

Total rows: Query complete 00:00:00.055 LF Ln 17, Col 3

INSERTING VALUES INTO THE USERS AND CALCULATIONS TABLE:



The screenshot shows the pgAdmin 4 interface in Mozilla Firefox. The left sidebar displays the Object Explorer with the current connection set to `fastapi_db/postgres@fastapi_db*`. The main area contains a SQL query window with the following code:

```
1 INSERT INTO users (username, email)
2 VALUES
3 ('alice', 'alice@example.com'),
4 ('bob', 'bob@example.com');
5
6 INSERT INTO calculations (operation, operand_a, operand_b, result, user_id)
7 VALUES
8 ('add', 2, 3, 5, 1),
9 ('divide', 10, 2, 5, 1),
10 ('multiply', 4, 5, 20, 2);
```

The query was executed successfully, as indicated by the output below:

Data Output Messages Notifications

```
INSERT 0 3
```

Query returned successfully in 44 msec.

Total rows: Query complete 00:00:00.044 LF Ln 10, Col 27

PERFORMING SELECT OPERATIONS ON USERS, CALCULATIONS AND A JOIN OPERATION ON USERS AND CALCULATIONS.

The screenshot shows the pgAdmin 4 interface in Mozilla Firefox. The left sidebar displays the Object Explorer with the 'fastapi_db' database selected. The main area contains a query editor with the following SQL code:

```
-- Retrieve all users
SELECT * FROM users;

-- Retrieve all calculations
SELECT * FROM calculations;

-- Join users and calculations
SELECT u.username, c.operation, c.operand_a, c.operand_b, c.result
FROM calculations c
JOIN users u ON c.user_id = u.id;
```

The Data Output tab shows the results of the third query:

	username	operation	operand_a	operand_b	result
	character varying (50)	character varying (20)	double precision	double precision	double precision
1	alice	add	2	3	5
2	alice	divide	10	2	5
3	bob	multiply	4	5	20

Total rows: 3 | Query complete 00:00:00.062 | LF | Ln 10, Col 34

UPDATING VALUE IN CALCULATIONS

The screenshot shows the pgAdmin 4 interface in Mozilla Firefox. The left sidebar displays the Object Explorer with the current connection set to `fastapi_db/postgres@fastapi_db`. The main area shows a query editor with the following SQL code:

```
1
2
3 UPDATE calculations
4 SET result = 6
5 WHERE id = 1; -- or whichever row you want to update
6
7
```

Below the query, the Data Output tab shows the results of the update:

```
UPDATE 1
Query returned successfully in 55 msec.
```

At the bottom of the pgAdmin window, status bars show "Total rows:" and "Query complete 00:00:00.055".

DELETING A VALUE FROM THE CALCULATIONS TABLE

The screenshot shows the pgAdmin 4 interface in Mozilla Firefox. The title bar reads "pgAdmin 4 — Mozilla Firefox". The left sidebar, titled "Object Explorer", shows a tree structure of database objects under "fastapi_db". The "Databases" node has "fastapi_db" selected. The main query editor window contains the following SQL code:

```
1
2
3  DELETE FROM calculations
4  WHERE id = 2; -- example record to remove
5
6
```

The "Messages" tab in the bottom panel displays the results of the query:

```
DELETE 1
Query returned successfully in 49 msec.
```

At the bottom of the pgAdmin window, status bars show "Total rows: 1" and "Query complete 00:00:00.049".