

The screenshot shows the pgAdmin 4 interface. In the top navigation bar, there are tabs for 'pgAdmin 4', 'User Management — pgAdmin', and 'Access PostgreSQL server'. Below the tabs, the address bar shows 'http://localhost:5050/browser/'. The main window has a dark theme. On the left is the 'Object Explorer' pane, which lists servers, databases, and tables. The current database selected is 'fastapi_db'. The right side contains a 'Query' editor and a 'Messages' tab.

Object Explorer:

- Servers (1)
 - FastAPI DB
 - Databases (2)
 - fastapi_db
 - Casts
 - Catalogs
 - Event Triggers
 - Extensions
 - Foreign Data Wrappers
 - Languages
 - Publications
 - Schemas
 - Subscriptions
 - postgres
 - Login/Group Roles
 - Tablespaces

```

29
30    -- Retrieve all users
31    SELECT * FROM users;
32
33    -- Retrieve all calculations
34    SELECT * FROM calculations;
35
36    -- Join users and calculations
37    SELECT u.username, c.operation, c.operand_a, c.operand_b, c.result
38    FROM calculations c
39    JOIN users u ON c.user_id = u.id;
40

```

Data Output Messages Notifications

	id [PK] integer	username character varying (50)	email character varying (100)	created_at timestamp without time zone
1	1	alice	alice@example.com	2025-11-04 02:19:33.405892
2	2	bob	bob@example.com	2025-11-04 02:19:33.405892


```

31    SELECT * FROM users;
32
33    -- Retrieve all calculations
34    SELECT * FROM calculations;
35
36    -- Join users and calculations
37    SELECT u.username, c.operation, c.operand_a, c.operand_b, c.result
38    FROM calculations c
39    JOIN users u ON c.user_id = u.id;
40

```

Data Output Messages Notifications

	id [PK] integer	operation character varying (20)	operand_a double precision	operand_b double precision	result double precision	timestamp timestamp without time zone	user_id integer
1	1	add	2	3	5	2025-11-04 02:19:33.405892	1
2	2	divide	10	2	5	2025-11-04 02:19:33.405892	1
3	3	multiply	4	5	20	2025-11-04 02:19:33.405892	2

```
40 -- Retrieve all users
41 SELECT * FROM users;
42
43 -- Retrieve all calculations
44 SELECT * FROM calculations;
45
46 -- Join users and calculations
47 SELECT u.username, c.operation, c.operand_a, c.operand_b, c.result
48 FROM calculations c
49 JOIN users u ON c.user_id = u.id;
50
```

Data Output Messages Notifications

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

```
40
41 UPDATE calculations
42 SET result = 6
43 WHERE id = 1; -- or whichever row you want to update
44
```

Data Output Messages Notifications

UPDATE 1

Query returned successfully in 94 msec.

```
43 WHERE id = 1; -- or whichever row you want to update
44
45 DELETE FROM calculations
46 WHERE id = 2; -- example record to remove
47
```

Data Output Messages Notifications

DELETE 1

Query returned successfully in 62 msec.