Ana Farida – DS54 – Homework 2

Homework: Managing SQL Data

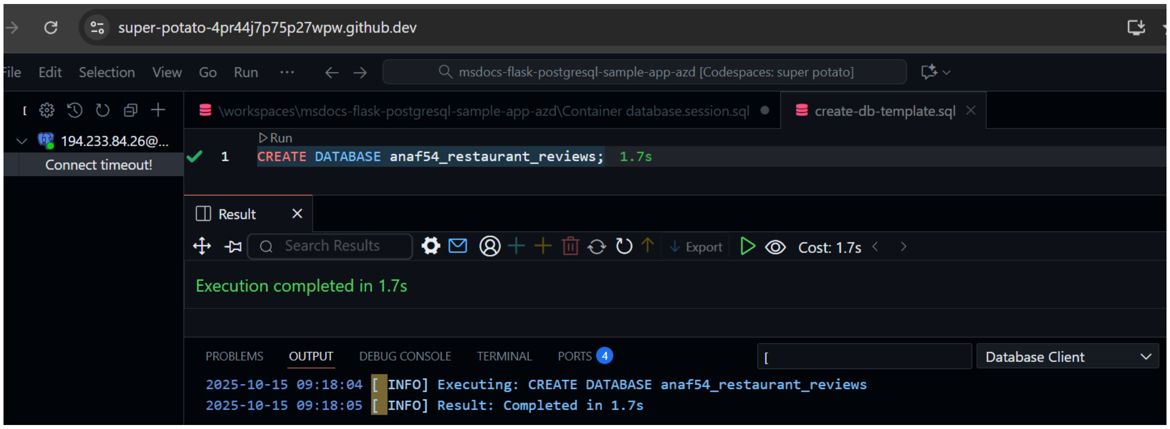
Objective

The goal of this assignment is to practice creating, reading, updating, and deleting data in a relational database using SQL. You will also work with foreign key constraints and joins to manage relationships between tables.

Tasks

A. Database Setup

1. Create a new database:
   - Name the database **restaurant_reviews**

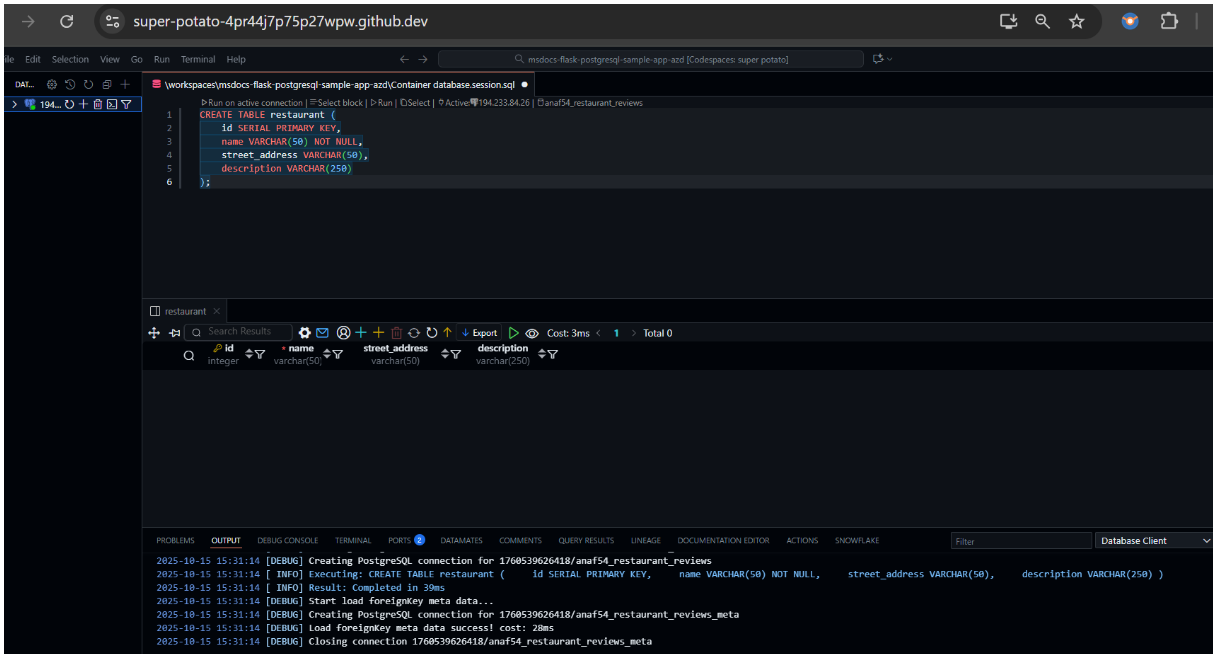

super-potato-4pr44j7p75p27wpw.github.dev
File Edit Selection View Go Run ···
msdocs-flask-postgresql-sample-app-azd [Codespaces: super potato]
194.233.84.26@...
Connect timeout!
\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql
create-db-template.sql
Run
Result
Search Results
Export
Cost: 1.7s
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS 4
Database Client

```
CREATE DATABASE anaf54_restaurant_reviews;  1.7s
```

Execution completed in 1.7s

```
2025-10-15 09:18:04 [INFO] Executing: CREATE DATABASE anaf54_restaurant_reviews
2025-10-15 09:18:05 [INFO] Result: Completed in 1.7s
```

2. Create two tables:
   - restaurant table:
     - ➢ Columns: `id, name, street_address, description`.


super-potato-4pr44j7p75p27wpw.github.dev
ile Edit Selection View Go Run Terminal Help
msdocs-flask-postgresql-sample-app-azd [Codespaces: super potato]
DAT...
194...
\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql
▷Run on active connection | ≡Select block | ▷Run | Select | Active: 194.233.84.26 | anaf54_restaurant_reviews
restaurant
Search Results
Export
Cost: 3ms
1
Total 0
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS 2 DATAMATES COMMENTS QUERY RESULTS LINEAGE DOCUMENTATION EDITOR ACTIONS SNOWFLAKE
Filter
Database Client

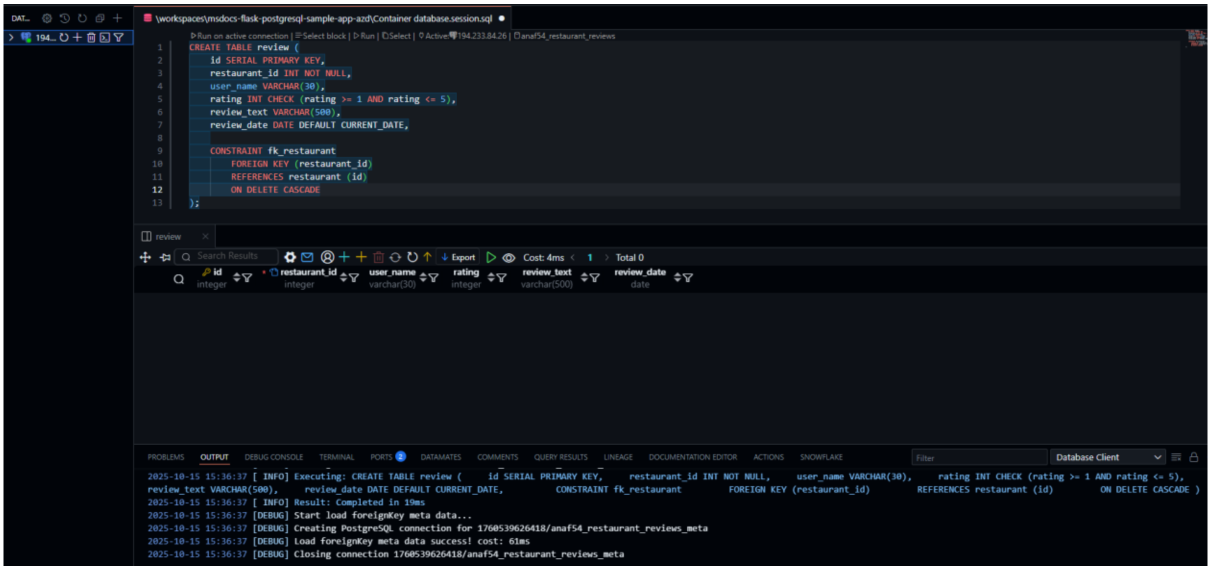
```sql
CREATE TABLE restaurant (
    id SERIAL PRIMARY KEY,
    name VARCHAR(50) NOT NULL,
    street_address VARCHAR(50),
    description VARCHAR(250)
);
```

id	name	street_address	description
integer	varchar(50)	varchar(50)	varchar(250)

```
2025-10-15 15:31:14 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews
2025-10-15 15:31:14 [ INFO] Executing: CREATE TABLE restaurant (     id SERIAL PRIMARY KEY,     name VARCHAR(50) NOT NULL,     street_address VARCHAR(50),     description VARCHAR(250) )
2025-10-15 15:31:14 [ INFO] Result: Completed in 39ms
2025-10-15 15:31:14 [DEBUG] Start load foreignKey meta data...
2025-10-15 15:31:14 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews_meta
2025-10-15 15:31:14 [DEBUG] Load foreignKey meta data success! cost: 28ms
2025-10-15 15:31:14 [DEBUG] Closing connection 1760539626418/anaf54_restaurant_reviews_meta
```

   - review table:
     - ➢ Columns: `id, restaurant_id, user_name, rating, review_text, review_date`.

   - Ensure restaurant_id in the review table is a foreign key referencing the restaurant table.


DAT...
194...
\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql
▷Run on active connection | ≡Select block | ▷Run | Select | Active: 194.233.84.26 | anaf54_restaurant_reviews
review
Search Results
Export
Cost: 4ms
1
Total 0
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS 2 DATAMATES COMMENTS QUERY RESULTS LINEAGE DOCUMENTATION EDITOR ACTIONS SNOWFLAKE
Filter
Database Client

```sql
CREATE TABLE review (
    id SERIAL PRIMARY KEY,
    restaurant_id INT NOT NULL,
    user_name VARCHAR(30),
    rating INT CHECK (rating >= 1 AND rating <= 5),
    review_text VARCHAR(500),
    review_date DATE DEFAULT CURRENT_DATE,

    CONSTRAINT fk_restaurant
        FOREIGN KEY (restaurant_id)
        REFERENCES restaurant (id)
        ON DELETE CASCADE
);
```

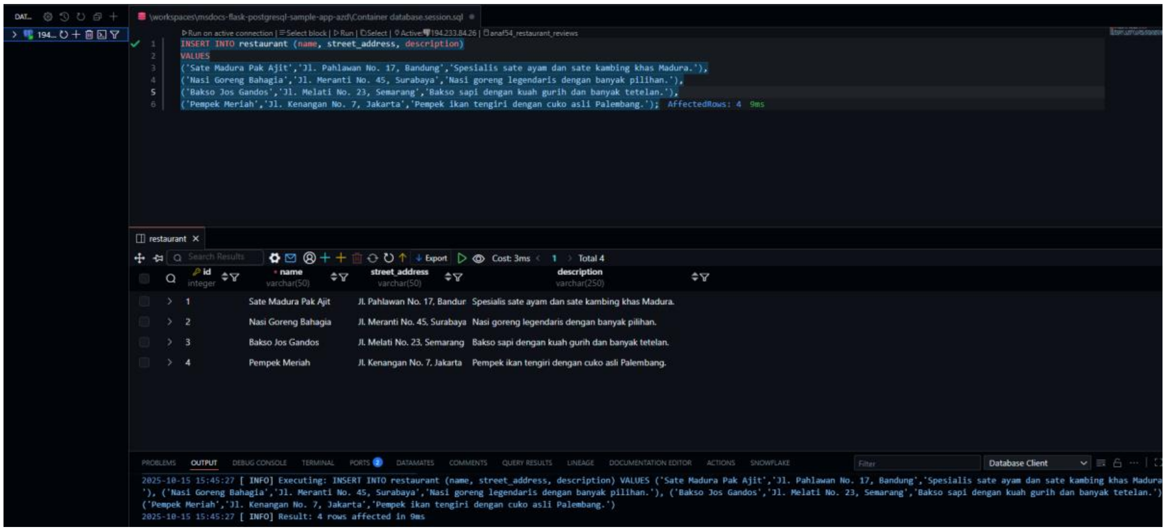
id	restaurant_id	user_name	rating	review_text	review_date
integer	integer	varchar(30)	integer	varchar(500)	date

```
2025-10-15 15:36:37 [ INFO] Executing: CREATE TABLE review (     id SERIAL PRIMARY KEY,     restaurant_id INT NOT NULL,     user_name VARCHAR(30),     rating INT CHECK (rating >= 1 AND rating <= 5),
review_text VARCHAR(500),     review_date DATE DEFAULT CURRENT_DATE,         CONSTRAINT fk_restaurant         FOREIGN KEY (restaurant_id)         REFERENCES restaurant (id)         ON DELETE CASCADE )
2025-10-15 15:36:37 [ INFO] Result: Completed in 19ms
2025-10-15 15:36:37 [DEBUG] Start load foreignKey meta data...
2025-10-15 15:36:37 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews_meta
2025-10-15 15:36:37 [DEBUG] Load foreignKey meta data success! cost: 61ms
2025-10-15 15:36:37 [DEBUG] Closing connection 1760539626418/anaf54_restaurant_reviews_meta
```

B. Inserting Data

Insert sample data into both tables:

1. Insert **at least 3 restaurants** in the restaurant table.

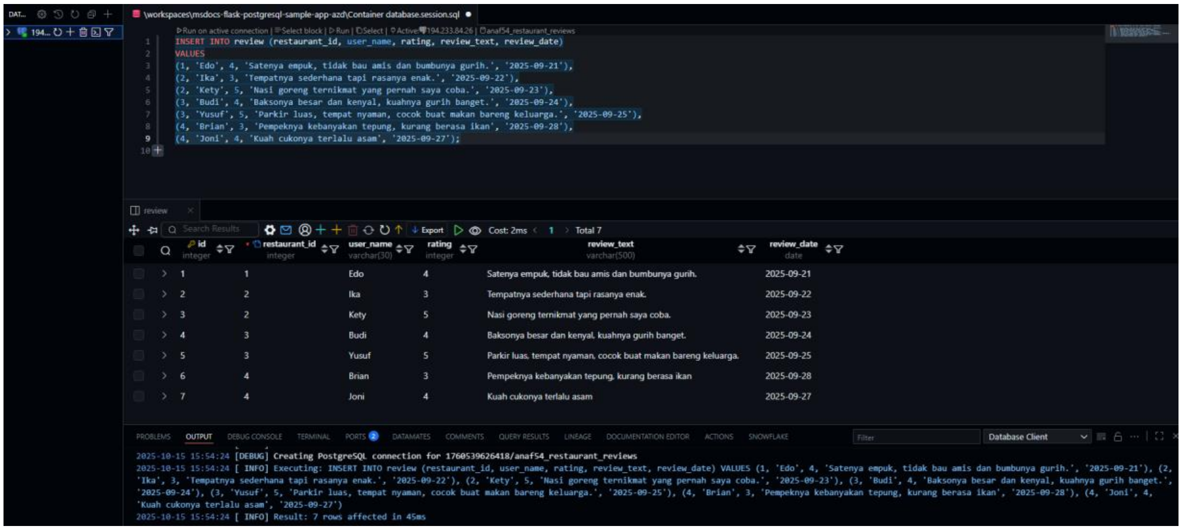

\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql
▷Run on active connection | ☰Select block | ▷Run | ☐Select | Active: 194.233.84.26 | anaf54_restaurant_reviews
restaurant
Search Results
Export
Cost: 3ms
1
Total 4
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS 2
DATAMATES
COMMENTS
QUERY RESULTS
LINEAGE
DOCUMENTATION EDITOR
ACTIONS
SNOWFLAKE
Filter
Database Client

```sql
INSERT INTO restaurant (name, street_address, description)
VALUES
('Sate Madura Pak Ajit','Jl. Pahlawan No. 17, Bandung','Spesialis sate ayam dan sate kambing khas Madura.'),
('Nasi Goreng Bahagia','Jl. Meranti No. 45, Surabaya','Nasi goreng legendaris dengan banyak pilihan.'),
('Bakso Jos Gandos','Jl. Melati No. 23, Semarang','Bakso sapi dengan kuah gurih dan banyak tetelan.'),
('Pempek Meriah','Jl. Kenangan No. 7, Jakarta','Pempek ikan tengiri dengan cuko asli Palembang.'); AffectedRows: 4  9ms
```

id integer	name varchar(50)	street_address varchar(50)	description varchar(250)
1	Sate Madura Pak Ajit	Jl. Pahlawan No. 17, Bandur	Spesialis sate ayam dan sate kambing khas Madura.
2	Nasi Goreng Bahagia	Jl. Meranti No. 45, Surabaya	Nasi goreng legendaris dengan banyak pilihan.
3	Bakso Jos Gandos	Jl. Melati No. 23, Semarang	Bakso sapi dengan kuah gurih dan banyak tetelan.
4	Pempek Meriah	Jl. Kenangan No. 7, Jakarta	Pempek ikan tengiri dengan cuko asli Palembang.

```
2025-10-15 15:45:27 [ INFO] Executing: INSERT INTO restaurant (name, street_address, description) VALUES ('Sate Madura Pak Ajit','Jl. Pahlawan No. 17, Bandung','Spesialis sate ayam dan sate kambing khas Madura
'), ('Nasi Goreng Bahagia','Jl. Meranti No. 45, Surabaya','Nasi goreng legendaris dengan banyak pilihan.'), ('Bakso Jos Gandos','Jl. Melati No. 23, Semarang','Bakso sapi dengan kuah gurih dan banyak tetelan.')
('Pempek Meriah','Jl. Kenangan No. 7, Jakarta','Pempek ikan tengiri dengan cuko asli Palembang.')
2025-10-15 15:45:27 [ INFO] Result: 4 rows affected in 9ms
```

2. Insert **at least 5 reviews** in the review table, ensuring they reference the correct restaurants via `restaurant_id`.


\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql
▷Run on active connection | ☰Select block | ▷Run | ☐Select | Active: 194.233.84.26 | anaf54_restaurant_reviews
review
Search Results
Export
Cost: 2ms
1
Total 7
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS 2
DATAMATES
COMMENTS
QUERY RESULTS
LINEAGE
DOCUMENTATION EDITOR
ACTIONS
SNOWFLAKE
Filter
Database Client

```sql
INSERT INTO review (restaurant_id, user_name, rating, review_text, review_date)
VALUES
(1, 'Edo', 4, 'Satenya empuk, tidak bau amis dan bumbunya gurih.', '2025-09-21'),
(2, 'Ika', 3, 'Tempatnya sederhana tapi rasanya enak.', '2025-09-22'),
(2, 'Kety', 5, 'Nasi goreng ternikmat yang pernah saya coba.', '2025-09-23'),
(3, 'Budi', 4, 'Baksonya besar dan kenyal, kuahnya gurih banget.', '2025-09-24'),
(3, 'Yusuf', 5, 'Parkir luas, tempat nyaman, cocok buat makan bareng keluarga.', '2025-09-25'),
(4, 'Brian', 3, 'Pempeknya kebanyakan tepung, kurang berasa ikan', '2025-09-28'),
(4, 'Joni', 4, 'Kuah cukonya terlalu asam', '2025-09-27');
```

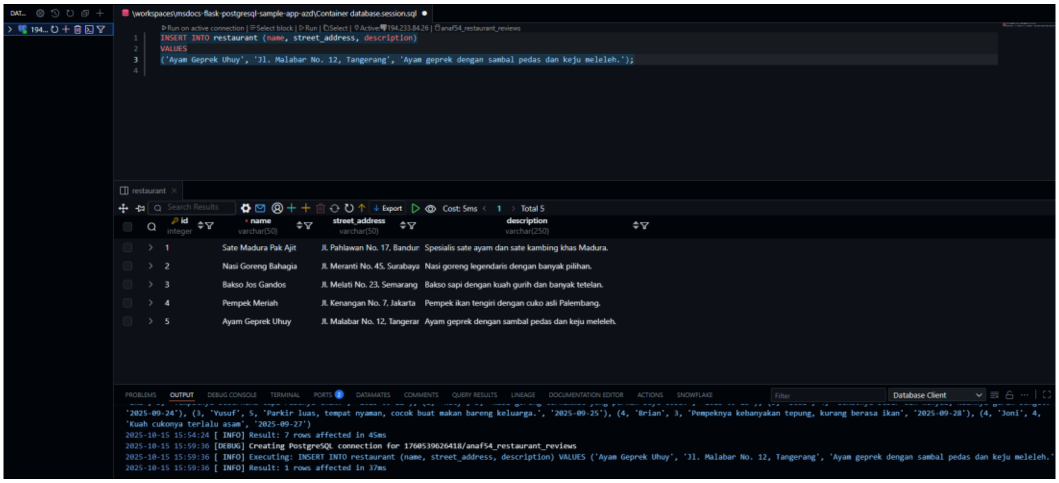
id integer	restaurant_id integer	user_name varchar(30)	rating integer	review_text varchar(500)	review_date date
1	1	Edo	4	Satenya empuk, tidak bau amis dan bumbunya gurih.	2025-09-21
2	2	Ika	3	Tempatnya sederhana tapi rasanya enak.	2025-09-22
3	2	Kety	5	Nasi goreng ternikmat yang pernah saya coba.	2025-09-23
4	3	Budi	4	Baksonya besar dan kenyal, kuahnya gurih banget.	2025-09-24
5	3	Yusuf	5	Parkir luas, tempat nyaman, cocok buat makan bareng keluarga.	2025-09-25
6	4	Brian	3	Pempeknya kebanyakan tepung, kurang berasa ikan	2025-09-28
7	4	Joni	4	Kuah cukonya terlalu asam	2025-09-27

```
2025-10-15 15:54:24 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews
2025-10-15 15:54:24 [ INFO] Executing: INSERT INTO review (restaurant_id, user_name, rating, review_text, review_date) VALUES (1, 'Edo', 4, 'Satenya empuk, tidak bau amis dan bumbunya gurih.', '2025-09-21'), (2,
'Ika', 3, 'Tempatnya sederhana tapi rasanya enak.', '2025-09-22'), (2, 'Kety', 5, 'Nasi goreng ternikmat yang pernah saya coba.', '2025-09-23'), (3, 'Budi', 4, 'Baksonya besar dan kenyal, kuahnya gurih banget.',
'2025-09-24'), (3, 'Yusuf', 5, 'Parkir luas, tempat nyaman, cocok buat makan bareng keluarga.', '2025-09-25'), (4, 'Brian', 3, 'Pempeknya kebanyakan tepung, kurang berasa ikan', '2025-09-28'), (4, 'Joni', 4,
'Kuah cukonya terlalu asam', '2025-09-27')
2025-10-15 15:54:24 [ INFO] Result: 7 rows affected in 45ms
```

C. Performing CRUD Operations

Perform the following operations on your database:

1. Create (Insert):
    - Insert a new restaurant into the restaurant table.



\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql

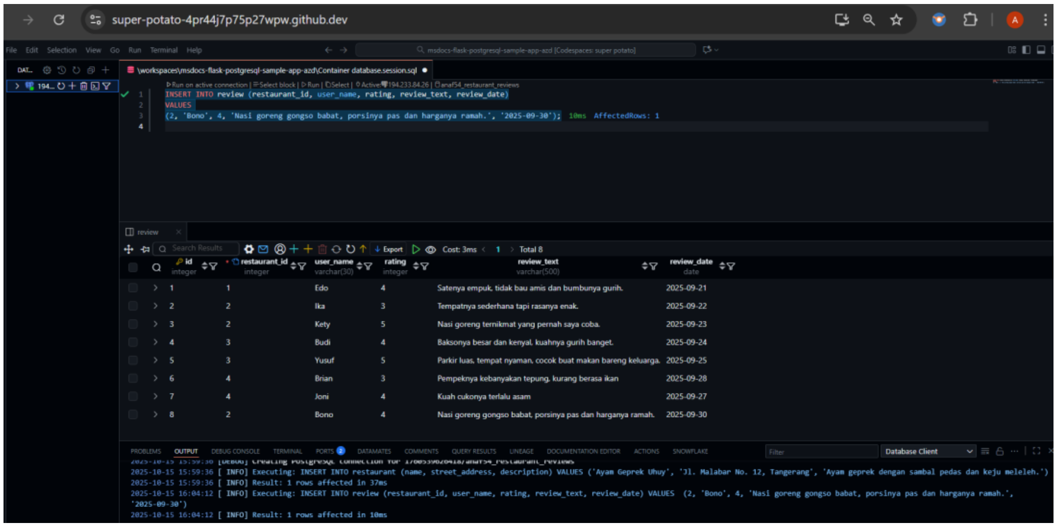
```
INSERT INTO restaurant (name, street_address, description)
VALUES
('Ayam Geprek Uhuy', 'Jl. Malabar No. 12, Tangerang', 'Ayam geprek dengan sambal pedas dan keju meleleh.');
```

restaurant — Cost: 5ms — Total 5

id integer	name varchar(50)	street_address varchar(50)	description varchar(250)
1	Sate Madura Pak Ajit	Jl. Pahlawan No. 17, Bandun	Spesialis sate ayam dan sate kambing khas Madura.
2	Nasi Goreng Bahagia	Jl. Meranti No. 45, Surabaya	Nasi goreng legendaris dengan banyak pilihan.
3	Bakso Jos Gandos	Jl. Melati No. 23, Semarang	Bakso sapi dengan kuah gurih dan banyak tetelan.
4	Pempek Meriah	Jl. Kenangan No. 7, Jakarta	Pempek ikan tengiri dengan cuko asli Palembang.
5	Ayam Geprek Uhuy	Jl. Malabar No. 12, Tangerar	Ayam geprek dengan sambal pedas dan keju meleleh.

```
'2025-09-24'), (3, 'Yusuf', 5, 'Parkir luas, tempat nyaman, cocok buat makan bareng keluarga.', '2025-09-25'), (4, 'Brian', 3, 'Pempeknya kebanyakan tepung, kurang berasa ikan', '2025-09-28'), (4, 'Joni', 4,
'Kuah cukonya terlalu asam', '2025-09-27')
2025-10-15 15:54:24 [ INFO] Result: 7 rows affected in 45ms
2025-10-15 15:59:36 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews
2025-10-15 15:59:36 [ INFO] Executing: INSERT INTO restaurant (name, street_address, description) VALUES ('Ayam Geprek Uhuy', 'Jl. Malabar No. 12, Tangerang', 'Ayam geprek dengan sambal pedas dan keju meleleh.'
2025-10-15 15:59:36 [ INFO] Result: 1 rows affected in 37ms
```

    - Insert a new review for an existing restaurant.



super-potato-4pr44j7p75p27wpw.github.dev

msdocs-flask-postgresql-sample-app-azd [Codespaces: super potato]

\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql

```
INSERT INTO review (restaurant_id, user_name, rating, review_text, review_date)
VALUES
(2, 'Bono', 4, 'Nasi goreng gongso babat, porsinya pas dan harganya ramah.', '2025-09-30');  10ms  AffectedRows: 1
```

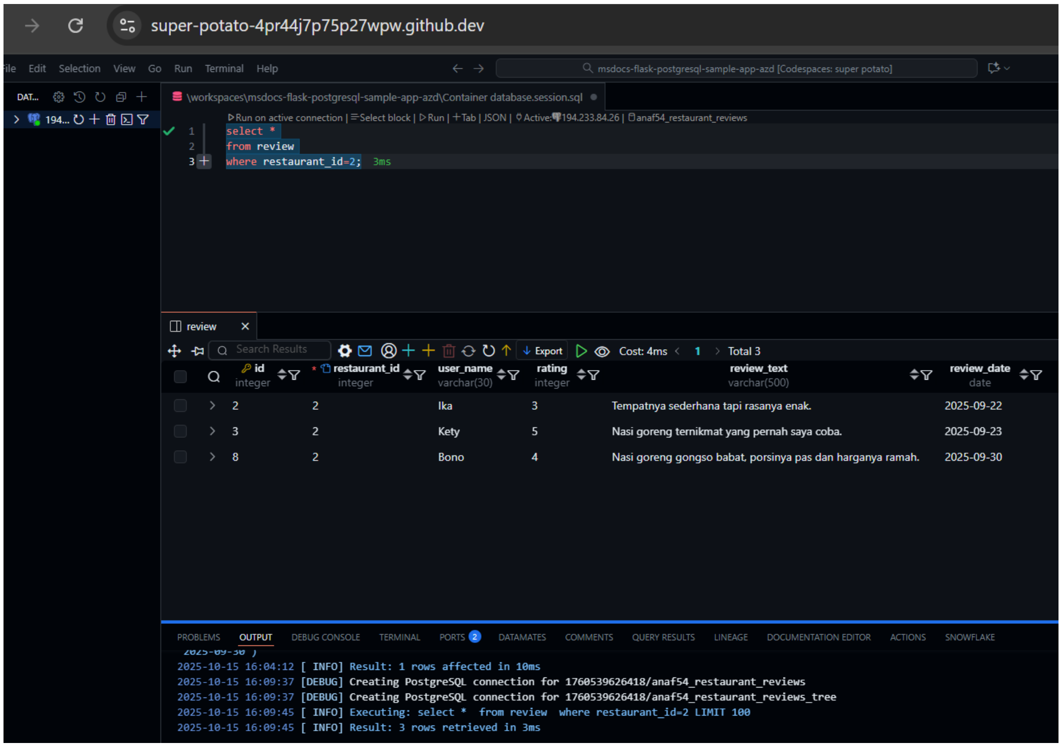
review — Cost: 3ms — Total 8

id integer	restaurant_id integer	user_name varchar(30)	rating integer	review_text varchar(500)	review_date date
1	1	Edo	4	Satenya empuk, tidak bau amis dan bumbunya gurih.	2025-09-21
2	2	Ika	3	Tempatnya sederhana tapi rasanya enak.	2025-09-22
3	2	Kety	5	Nasi goreng ternikmat yang pernah saya coba.	2025-09-23
4	3	Budi	4	Baksonya besar dan kenyal, kuahnya gurih banget.	2025-09-24
5	3	Yusuf	5	Parkir luas, tempat nyaman, cocok buat makan bareng keluarga.	2025-09-25
6	4	Brian	3	Pempeknya kebanyakan tepung, kurang berasa ikan	2025-09-28
7	4	Joni	4	Kuah cukonya terlalu asam	2025-09-27
8	2	Bono	4	Nasi goreng gongso babat, porsinya pas dan harganya ramah.	2025-09-30

```
2025-10-15 15:59:36 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews
2025-10-15 15:59:36 [ INFO] Executing: INSERT INTO restaurant (name, street_address, description) VALUES ('Ayam Geprek Uhuy', 'Jl. Malabar No. 12, Tangerang', 'Ayam geprek dengan sambal pedas dan keju meleleh.')
2025-10-15 15:59:36 [ INFO] Result: 1 rows affected in 37ms
2025-10-15 16:04:12 [ INFO] Executing: INSERT INTO review (restaurant_id, user_name, rating, review_text, review_date) VALUES  (2, 'Bono', 4, 'Nasi goreng gongso babat, porsinya pas dan harganya ramah.',
'2025-09-30')
2025-10-15 16:04:12 [ INFO] Result: 1 rows affected in 10ms
```

2. Read (Select):

- Retrieve all reviews for a specific restaurant using the `restaurant_id`.

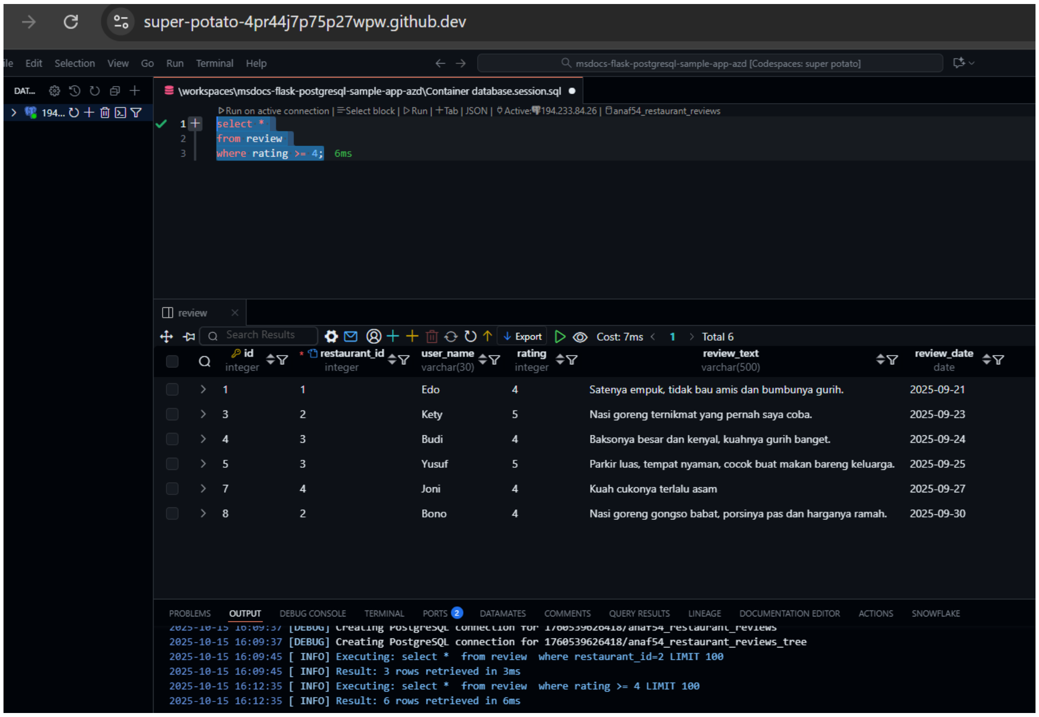

super-potato-4pr44j7p75p27wpw.github.dev
File Edit Selection View Go Run Terminal Help
msdocs-flask-postgresql-sample-app-azd [Codespaces: super potato]
\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql
Run on active connection | Select block | Run | Tab | JSON | Active: 194.233.84.26 | anaf54_restaurant_reviews
review
Search Results
Export
Cost: 4ms
1
Total 3
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS 2
DATAMATES
COMMENTS
QUERY RESULTS
LINEAGE
DOCUMENTATION EDITOR
ACTIONS
SNOWFLAKE

```sql
select *
from review
where restaurant_id=2;  3ms
```

id integer	restaurant_id integer	user_name varchar(30)	rating integer	review_text varchar(500)	review_date date
2	2	Ika	3	Tempatnya sederhana tapi rasanya enak.	2025-09-22
3	2	Kety	5	Nasi goreng ternikmat yang pernah saya coba.	2025-09-23
8	2	Bono	4	Nasi goreng gongso babat, porsinya pas dan harganya ramah.	2025-09-30

```
 2025-09-30 )
2025-10-15 16:04:12 [ INFO] Result: 1 rows affected in 10ms
2025-10-15 16:09:37 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews
2025-10-15 16:09:37 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews_tree
2025-10-15 16:09:45 [ INFO] Executing: select *  from review  where restaurant_id=2 LIMIT 100
2025-10-15 16:09:45 [ INFO] Result: 3 rows retrieved in 3ms
```

- Retrieve all reviews with a rating of 4 or higher.

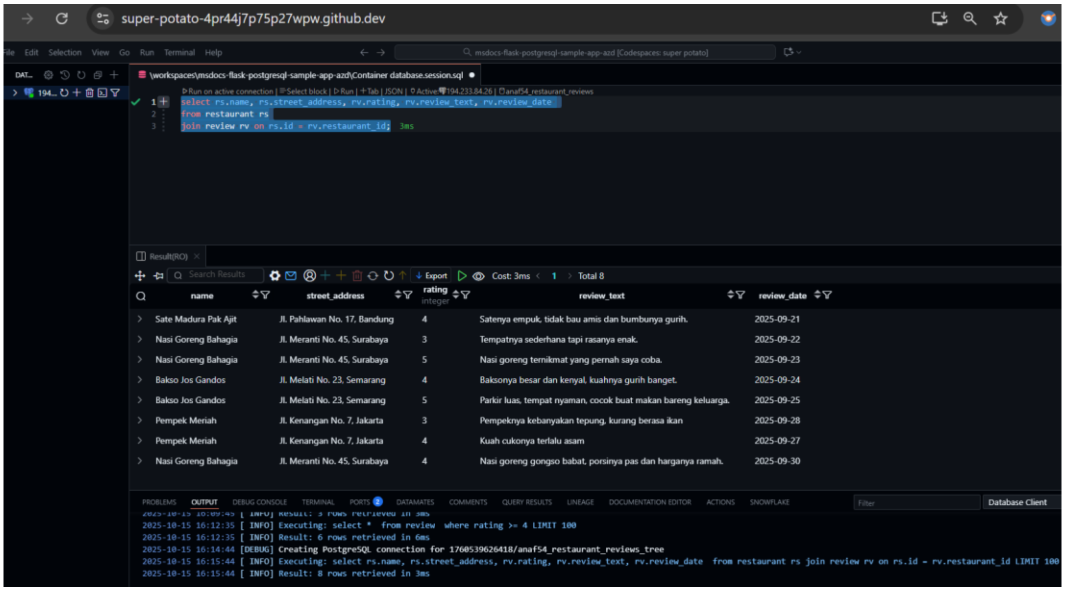

super-potato-4pr44j7p75p27wpw.github.dev
File Edit Selection View Go Run Terminal Help
msdocs-flask-postgresql-sample-app-azd [Codespaces: super potato]
\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql
Run on active connection | Select block | Run | Tab | JSON | Active: 194.233.84.26 | anaf54_restaurant_reviews
review
Search Results
Export
Cost: 7ms
1
Total 6
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS 2
DATAMATES
COMMENTS
QUERY RESULTS
LINEAGE
DOCUMENTATION EDITOR
ACTIONS
SNOWFLAKE

```sql
select *
from review
where rating >= 4;  6ms
```

id integer	restaurant_id integer	user_name varchar(30)	rating integer	review_text varchar(500)	review_date date
1	1	Edo	4	Satenya empuk, tidak bau amis dan bumbunya gurih.	2025-09-21
3	2	Kety	5	Nasi goreng ternikmat yang pernah saya coba.	2025-09-23
4	3	Budi	4	Baksonya besar dan kenyal, kuahnya gurih banget.	2025-09-24
5	3	Yusuf	5	Parkir luas, tempat nyaman, cocok buat makan bareng keluarga.	2025-09-25
7	4	Joni	4	Kuah cukonya terlalu asam	2025-09-27
8	2	Bono	4	Nasi goreng gongso babat, porsinya pas dan harganya ramah.	2025-09-30

```
2025-10-15 16:09:37 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews
2025-10-15 16:09:37 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews_tree
2025-10-15 16:09:45 [ INFO] Executing: select *  from review  where restaurant_id=2 LIMIT 100
2025-10-15 16:09:45 [ INFO] Result: 3 rows retrieved in 3ms
2025-10-15 16:12:35 [ INFO] Executing: select *  from review  where rating >= 4 LIMIT 100
2025-10-15 16:12:35 [ INFO] Result: 6 rows retrieved in 6ms
```

- Use a JOIN to display a list of restaurants along with their reviews.

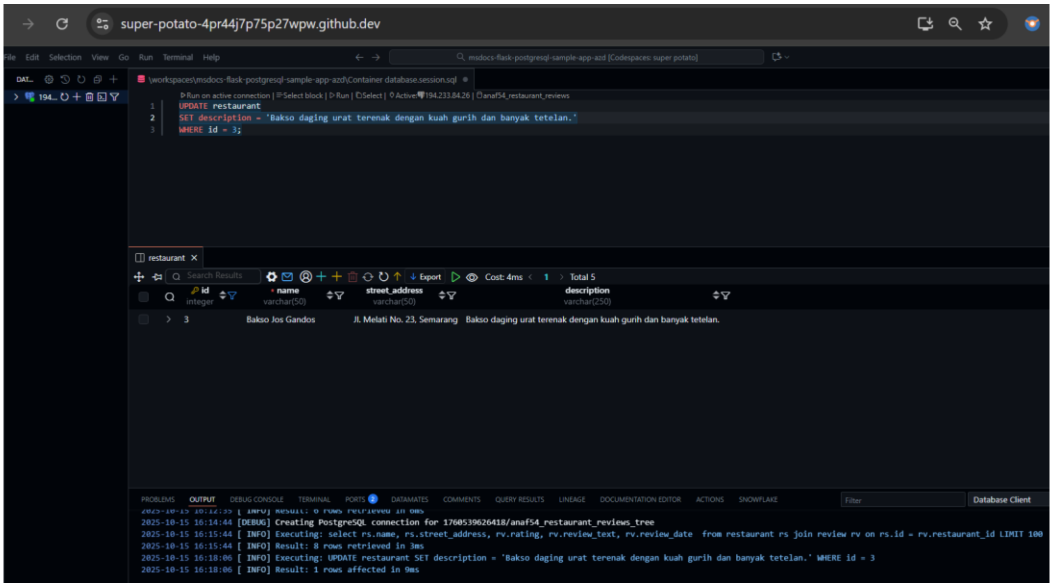

super-potato-4pr44j7p75p27wpw.github.dev
File Edit Selection View Go Run Terminal Help
msdocs-flask-postgresql-sample-app-azd [Codespaces: super potato]
\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql
▷Run on active connection | ≡Select block | ▷Run | +Tab | JSON | Active: 194.233.84.26 | anaf54_restaurant_reviews
3ms
Result(RO)
Search Results
Export
Cost: 3ms
Total 8
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS 2 DATAMATES COMMENTS QUERY RESULTS LINEAGE DOCUMENTATION EDITOR ACTIONS SNOWFLAKE
Filter
Database Client

```sql
select rs.name, rs.street_address, rv.rating, rv.review_text, rv.review_date
from restaurant rs
join review rv on rs.id = rv.restaurant_id;
```

name	street_address	rating integer	review_text	review_date
Sate Madura Pak Ajit	Jl. Pahlawan No. 17, Bandung	4	Satenya empuk, tidak bau amis dan bumbunya gurih.	2025-09-21
Nasi Goreng Bahagia	Jl. Meranti No. 45, Surabaya	3	Tempatnya sederhana tapi rasanya enak.	2025-09-22
Nasi Goreng Bahagia	Jl. Meranti No. 45, Surabaya	5	Nasi goreng ternikmat yang pernah saya coba.	2025-09-23
Bakso Jos Gandos	Jl. Melati No. 23, Semarang	4	Baksonya besar dan kenyal, kuahnya gurih banget.	2025-09-24
Bakso Jos Gandos	Jl. Melati No. 23, Semarang	5	Parkir luas, tempat nyaman, cocok buat makan bareng keluarga.	2025-09-25
Pempek Meriah	Jl. Kenangan No. 7, Jakarta	3	Pempeknya kebanyakan tepung, kurang berasa ikan	2025-09-28
Pempek Meriah	Jl. Kenangan No. 7, Jakarta	4	Kuah cukonya terlalu asam	2025-09-27
Nasi Goreng Bahagia	Jl. Meranti No. 45, Surabaya	4	Nasi goreng gongso babat, porsinya pas dan harganya ramah.	2025-09-30

```
2025-10-15 16:09:45 [ INFO] Result: 3 rows retrieved in 3ms
2025-10-15 16:12:35 [ INFO] Executing: select *  from review  where rating >= 4 LIMIT 100
2025-10-15 16:12:35 [ INFO] Result: 6 rows retrieved in 6ms
2025-10-15 16:14:44 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews_tree
2025-10-15 16:15:44 [ INFO] Executing: select rs.name, rs.street_address, rv.rating, rv.review_text, rv.review_date  from restaurant rs join review rv on rs.id = rv.restaurant_id LIMIT 100
2025-10-15 16:15:44 [ INFO] Result: 8 rows retrieved in 3ms
```

3. Update:
    - Update the description of one restaurant.

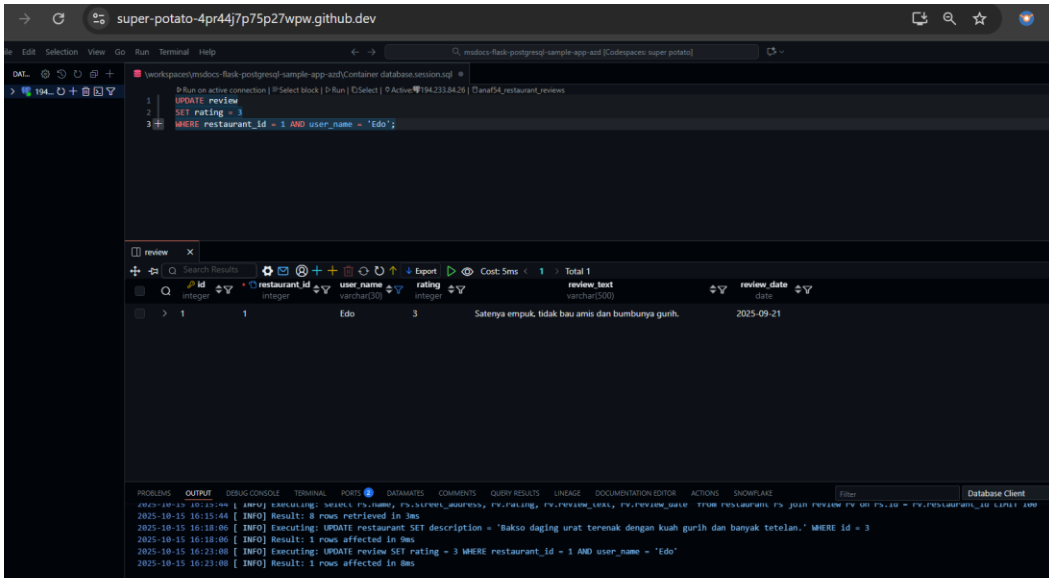

super-potato-4pr44j7p75p27wpw.github.dev
File Edit Selection View Go Run Terminal Help
msdocs-flask-postgresql-sample-app-azd [Codespaces: super potato]
\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql
▷Run on active connection | ≡Select block | ▷Run | Select | Active: 194.233.84.26 | anaf54_restaurant_reviews
restaurant
Search Results
Export
Cost: 4ms
Total 5
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS 2 DATAMATES COMMENTS QUERY RESULTS LINEAGE DOCUMENTATION EDITOR ACTIONS SNOWFLAKE
Filter
Database Client

```sql
UPDATE restaurant
SET description = 'Bakso daging urat terenak dengan kuah gurih dan banyak tetelan.'
WHERE id = 3;
```

id integer	name varchar(50)	street_address varchar(50)	description varchar(250)
3	Bakso Jos Gandos	Jl. Melati No. 23, Semarang	Bakso daging urat terenak dengan kuah gurih dan banyak tetelan.

```
2025-10-15 16:12:35 [ INFO] Result: 6 rows retrieved in 6ms
2025-10-15 16:14:44 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews_tree
2025-10-15 16:15:44 [ INFO] Executing: select rs.name, rs.street_address, rv.rating, rv.review_text, rv.review_date  from restaurant rs join review rv on rs.id = rv.restaurant_id LIMIT 100
2025-10-15 16:15:44 [ INFO] Result: 8 rows retrieved in 3ms
2025-10-15 16:18:06 [ INFO] Executing: UPDATE restaurant SET description = 'Bakso daging urat terenak dengan kuah gurih dan banyak tetelan.' WHERE id = 3
2025-10-15 16:18:06 [ INFO] Result: 1 rows affected in 9ms
```

- Update the rating of a specific review.



super-potato-4pr44j7p75p27wpw.github.dev

\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql

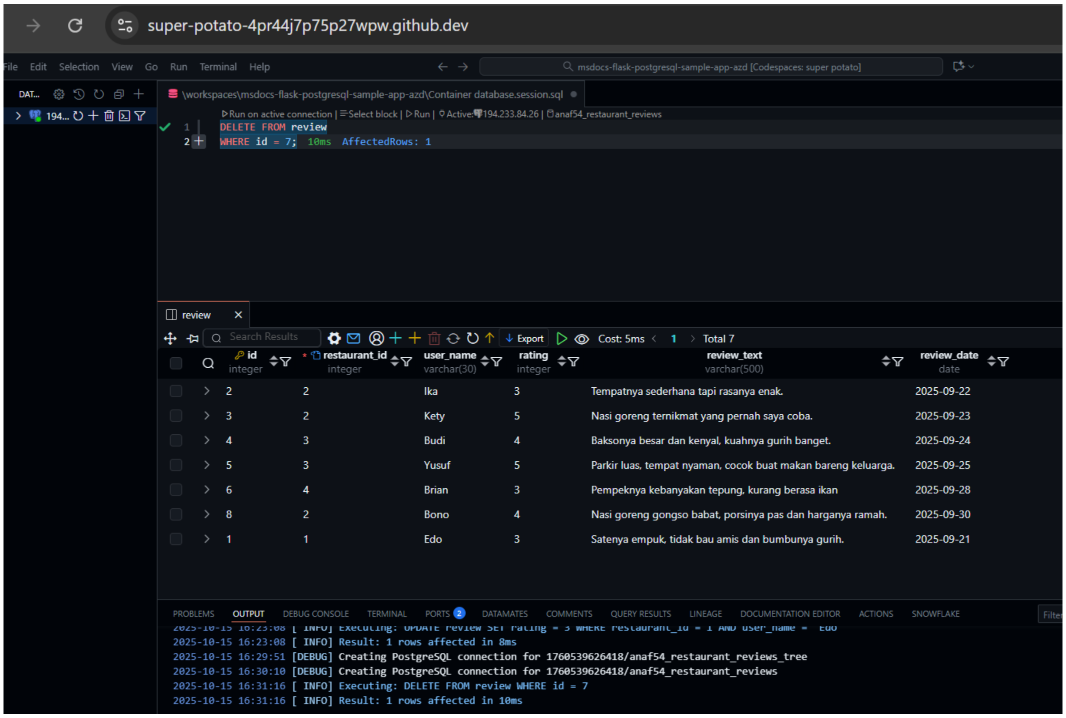
```sql
UPDATE review
SET rating = 3
WHERE restaurant_id = 1 AND user_name = 'Edo';
```

review — Cost: 5ms — Total 1

id integer	restaurant_id integer	user_name varchar(30)	rating integer	review_text varchar(500)	review_date date
1	1	Edo	3	Satenya empuk, tidak bau amis dan bumbunya gurih.	2025-09-21

```
2025-10-15 16:15:44 [ INFO] Executing: select rs.name, rs.street_address, rv.rating, rv.review_text, rv.review_date  from restaurant rs join review rv on rs.id = rv.restaurant_id LIMIT 100
2025-10-15 16:15:44 [ INFO] Result: 8 rows retrieved in 3ms
2025-10-15 16:18:06 [ INFO] Executing: UPDATE restaurant SET description = 'Bakso daging urat terenak dengan kuah gurih dan banyak tetelan.' WHERE id = 3
2025-10-15 16:18:06 [ INFO] Result: 1 rows affected in 9ms
2025-10-15 16:23:08 [ INFO] Executing: UPDATE review SET rating = 3 WHERE restaurant_id = 1 AND user_name = 'Edo'
2025-10-15 16:23:08 [ INFO] Result: 1 rows affected in 8ms
```

4. Delete:
   - Delete one review based on id.



super-potato-4pr44j7p75p27wpw.github.dev

\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql

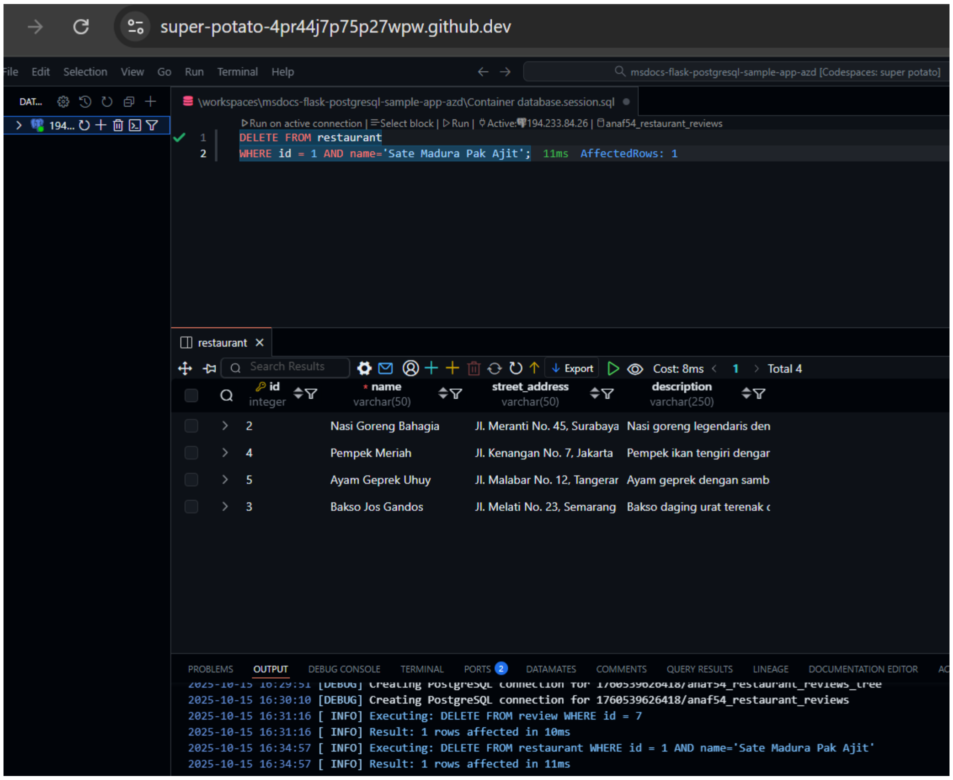
```sql
DELETE FROM review
WHERE id = 7;  10ms  AffectedRows: 1
```

review — Cost: 5ms — Total 7

id integer	restaurant_id integer	user_name varchar(30)	rating integer	review_text varchar(500)	review_date date
2	2	Ika	3	Tempatnya sederhana tapi rasanya enak.	2025-09-22
3	2	Kety	5	Nasi goreng ternikmat yang pernah saya coba.	2025-09-23
4	3	Budi	4	Baksonya besar dan kenyal, kuahnya gurih banget.	2025-09-24
5	3	Yusuf	5	Parkir luas, tempat nyaman, cocok buat makan bareng keluarga.	2025-09-25
6	4	Brian	3	Pempeknya kebanyakan tepung, kurang berasa ikan	2025-09-28
8	2	Bono	4	Nasi goreng gongso babat, porsinya pas dan harganya ramah.	2025-09-30
1	1	Edo	3	Satenya empuk, tidak bau amis dan bumbunya gurih.	2025-09-21

```
2025-10-15 16:23:08 [ INFO] Executing: UPDATE review SET rating = 3 WHERE restaurant_id = 1 AND user_name = 'Edo'
2025-10-15 16:23:08 [ INFO] Result: 1 rows affected in 8ms
2025-10-15 16:29:51 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews_tree
2025-10-15 16:30:10 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews
2025-10-15 16:31:16 [ INFO] Executing: DELETE FROM review WHERE id = 7
2025-10-15 16:31:16 [ INFO] Result: 1 rows affected in 10ms
```

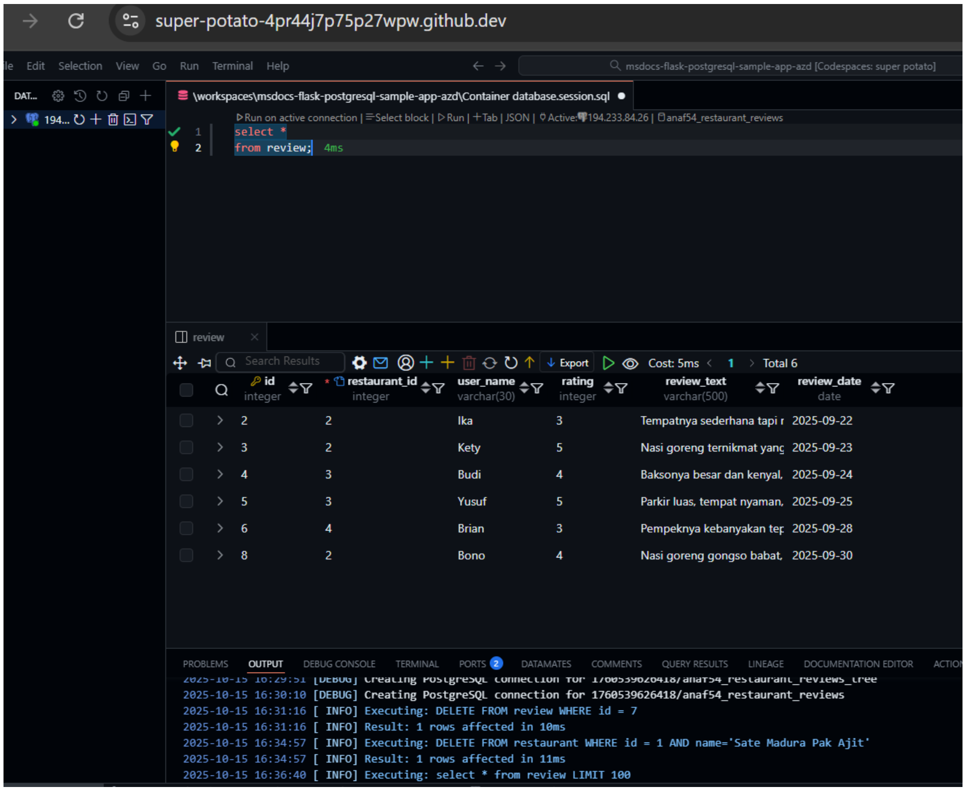
- Delete a restaurant and ensure its associated reviews are also deleted (using cascade).


super-potato-4pr44j7p75p27wpw.github.dev
File Edit Selection View Go Run Terminal Help
msdocs-flask-postgresql-sample-app-azd [Codespaces: super potato]
\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql
▷Run on active connection | ☰Select block | ▷Run | Active: 194.233.84.26 | anaf54_restaurant_reviews
restaurant
Search Results
Export
Cost: 8ms
1
Total 4
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS 2
DATAMATES
COMMENTS
QUERY RESULTS
LINEAGE
DOCUMENTATION EDITOR

```sql
DELETE FROM restaurant
WHERE id = 1 AND name='Sate Madura Pak Ajit';  11ms  AffectedRows: 1
```

id integer	name varchar(50)	street_address varchar(50)	description varchar(250)
2	Nasi Goreng Bahagia	Jl. Meranti No. 45, Surabaya	Nasi goreng legendaris den
4	Pempek Meriah	Jl. Kenangan No. 7, Jakarta	Pempek ikan tengiri dengar
5	Ayam Geprek Uhuy	Jl. Malabar No. 12, Tangerar	Ayam geprek dengan samb
3	Bakso Jos Gandos	Jl. Melati No. 23, Semarang	Bakso daging urat terenak c

```
2025-10-15 16:29:51 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews_tree
2025-10-15 16:30:10 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews
2025-10-15 16:31:16 [ INFO] Executing: DELETE FROM review WHERE id = 7
2025-10-15 16:31:16 [ INFO] Result: 1 rows affected in 10ms
2025-10-15 16:34:57 [ INFO] Executing: DELETE FROM restaurant WHERE id = 1 AND name='Sate Madura Pak Ajit'
2025-10-15 16:34:57 [ INFO] Result: 1 rows affected in 11ms
```


super-potato-4pr44j7p75p27wpw.github.dev
le Edit Selection View Go Run Terminal Help
msdocs-flask-postgresql-sample-app-azd [Codespaces: super potato]
\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql
▷Run on active connection | ☰Select block | ▷Run | +Tab | JSON | Active: 194.233.84.26 | anaf54_restaurant_reviews
review
Search Results
Export
Cost: 5ms
1
Total 6
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS 2
DATAMATES
COMMENTS
QUERY RESULTS
LINEAGE
DOCUMENTATION EDITOR
ACTION

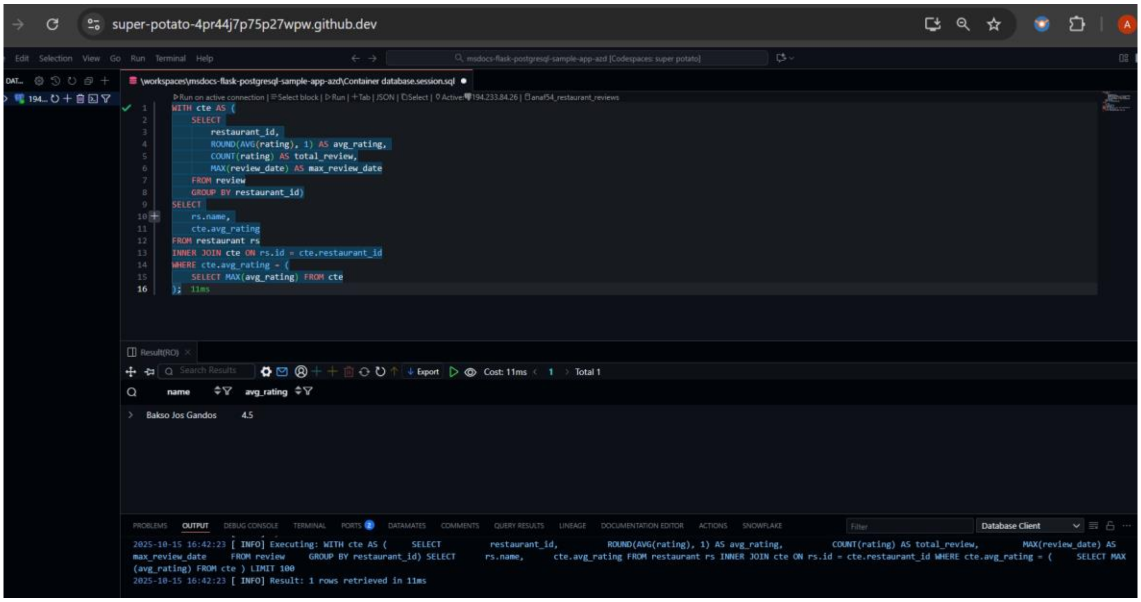
```sql
select *
from review;  4ms
```

id integer	restaurant_id integer	user_name varchar(30)	rating integer	review_text varchar(500)	review_date date
2	2	Ika	3	Tempatnya sederhana tapi r	2025-09-22
3	2	Kety	5	Nasi goreng ternikmat yang	2025-09-23
4	3	Budi	4	Baksonya besar dan kenyal,	2025-09-24
5	3	Yusuf	5	Parkir luas, tempat nyaman,	2025-09-25
6	4	Brian	3	Pempeknya kebanyakan tep	2025-09-28
8	2	Bono	4	Nasi goreng gongso babat,	2025-09-30

```
2025-10-15 16:29:51 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews_tree
2025-10-15 16:30:10 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews
2025-10-15 16:31:16 [ INFO] Executing: DELETE FROM review WHERE id = 7
2025-10-15 16:31:16 [ INFO] Result: 1 rows affected in 10ms
2025-10-15 16:34:57 [ INFO] Executing: DELETE FROM restaurant WHERE id = 1 AND name='Sate Madura Pak Ajit'
2025-10-15 16:34:57 [ INFO] Result: 1 rows affected in 11ms
2025-10-15 16:36:40 [ INFO] Executing: select * from review LIMIT 100
```

D. Additional Queries

1. Find the highest-rated restaurant based on the average rating of all its reviews.



super-potato-4pr44j7p75p27wpw.github.dev

\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql

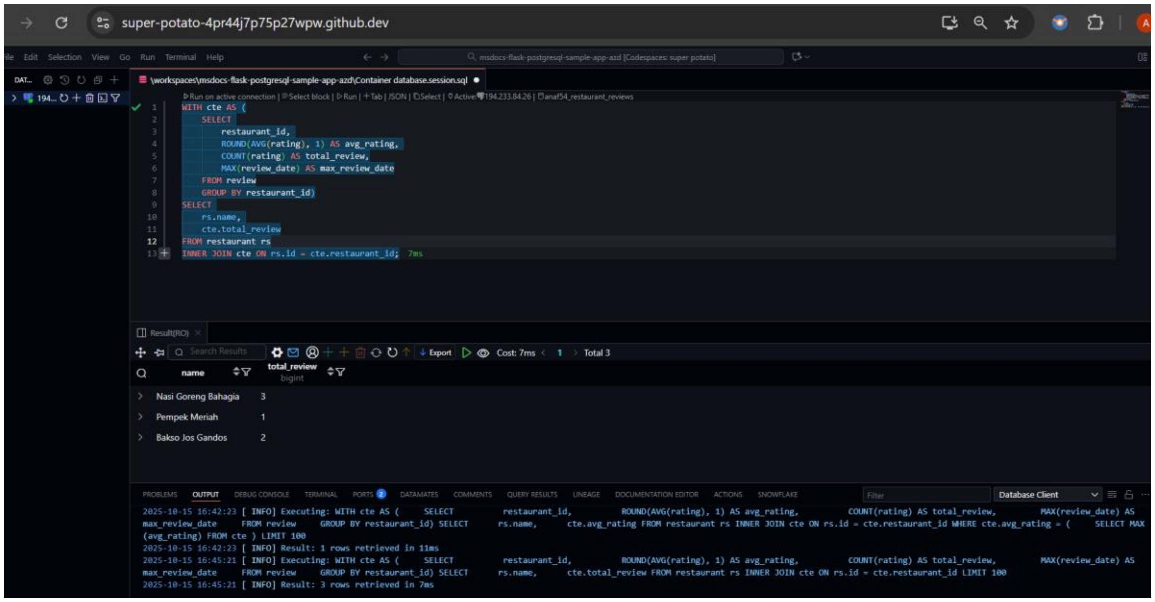
```sql
WITH cte AS (
    SELECT
        restaurant_id,
        ROUND(AVG(rating), 1) AS avg_rating,
        COUNT(rating) AS total_review,
        MAX(review_date) AS max_review_date
    FROM review
    GROUP BY restaurant_id)
SELECT
    rs.name,
    cte.avg_rating
FROM restaurant rs
INNER JOIN cte ON rs.id = cte.restaurant_id
WHERE cte.avg_rating = (
    SELECT MAX(avg_rating) FROM cte
);  11ms
```

Cost: 11ms Total 1

name	avg_rating
Bakso Jos Gandos	4.5

```
2025-10-15 16:42:23 [ INFO] Executing: WITH cte AS (     SELECT        restaurant_id,          ROUND(AVG(rating), 1) AS avg_rating,          COUNT(rating) AS total_review,        MAX(review_date) AS
max_review_date     FROM review     GROUP BY restaurant_id) SELECT      rs.name,      cte.avg_rating FROM restaurant rs INNER JOIN cte ON rs.id = cte.restaurant_id WHERE cte.avg_rating = (     SELECT MAX
(avg_rating) FROM cte ) LIMIT 100
2025-10-15 16:42:23 [ INFO] Result: 1 rows retrieved in 11ms
```

2. Find the number of reviews each restaurant has received.



super-potato-4pr44j7p75p27wpw.github.dev

\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql

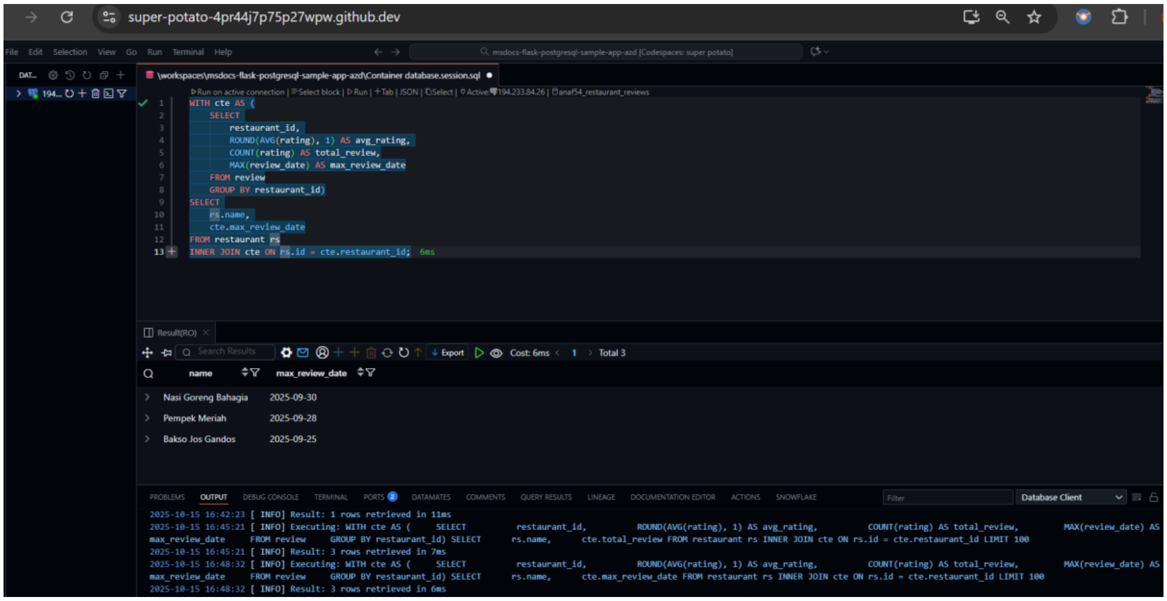
```sql
WITH cte AS (
    SELECT
        restaurant_id,
        ROUND(AVG(rating), 1) AS avg_rating,
        COUNT(rating) AS total_review,
        MAX(review_date) AS max_review_date
    FROM review
    GROUP BY restaurant_id)
SELECT
    rs.name,
    cte.total_review
FROM restaurant rs
INNER JOIN cte ON rs.id = cte.restaurant_id;  7ms
```

Cost: 7ms Total 3

name	total_review bigint
Nasi Goreng Bahagia	3
Pempek Meriah	1
Bakso Jos Gandos	2

```
2025-10-15 16:42:23 [ INFO] Executing: WITH cte AS (     SELECT        restaurant_id,          ROUND(AVG(rating), 1) AS avg_rating,          COUNT(rating) AS total_review,        MAX(review_date) AS
max_review_date     FROM review     GROUP BY restaurant_id) SELECT      rs.name,      cte.avg_rating FROM restaurant rs INNER JOIN cte ON rs.id = cte.restaurant_id WHERE cte.avg_rating = (     SELECT MAX
(avg_rating) FROM cte ) LIMIT 100
2025-10-15 16:42:23 [ INFO] Result: 1 rows retrieved in 11ms
2025-10-15 16:45:21 [ INFO] Executing: WITH cte AS (     SELECT        restaurant_id,          ROUND(AVG(rating), 1) AS avg_rating,          COUNT(rating) AS total_review,        MAX(review_date) AS
max_review_date     FROM review     GROUP BY restaurant_id) SELECT      rs.name,      cte.total_review FROM restaurant rs INNER JOIN cte ON rs.id = cte.restaurant_id LIMIT 100
2025-10-15 16:45:21 [ INFO] Result: 3 rows retrieved in 7ms
```

3. Display the most recent review for each restaurant.



super-potato-4pr44j7p75p27wpw.github.dev
File Edit Selection View Go Run Terminal Help
msdocs-flask-postgresql-sample-app-azd [Codespaces: super potato]
\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql
▷Run on active connection | ≡Select block | ▷Run | +Tab | JSON | Select | Active: 194.233.84.26 | anaf54_restaurant_reviews

```sql
WITH cte AS (
    SELECT
        restaurant_id,
        ROUND(AVG(rating), 1) AS avg_rating,
        COUNT(rating) AS total_review,
        MAX(review_date) AS max_review_date
    FROM review
    GROUP BY restaurant_id)
SELECT
    rs.name,
    cte.max_review_date
FROM restaurant rs
INNER JOIN cte ON rs.id = cte.restaurant_id;  6ms
```

Result(RO)
Search Results
Export
Cost: 6ms
1
Total 3

name	max_review_date
Nasi Goreng Bahagia	2025-09-30
Pempek Meriah	2025-09-28
Bakso Jos Gandos	2025-09-25

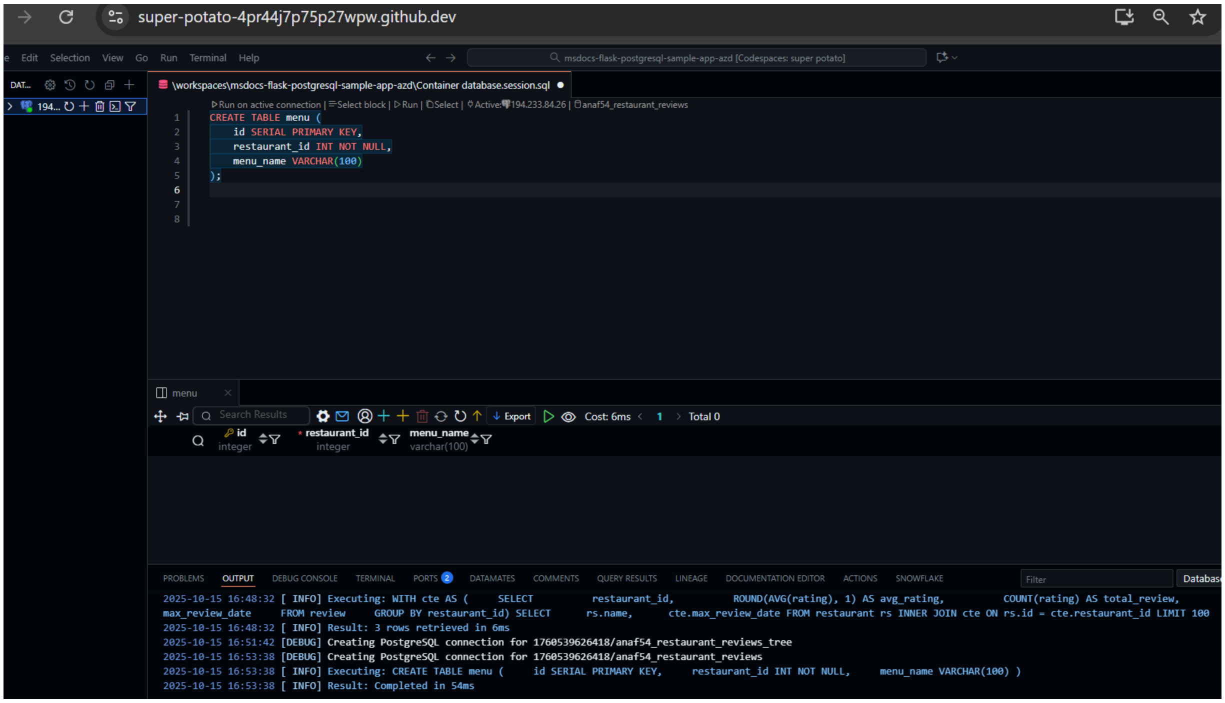
```
2025-10-15 16:42:23 [ INFO] Result: 1 rows retrieved in 11ms
2025-10-15 16:45:21 [ INFO] Executing: WITH cte AS (     SELECT         restaurant_id,         ROUND(AVG(rating), 1) AS avg_rating,         COUNT(rating) AS total_review,         MAX(review_date) AS
max_review_date     FROM review     GROUP BY restaurant_id) SELECT     rs.name,     cte.total_review FROM restaurant rs INNER JOIN cte ON rs.id = cte.restaurant_id LIMIT 100
2025-10-15 16:45:21 [ INFO] Result: 3 rows retrieved in 7ms
2025-10-15 16:48:32 [ INFO] Executing: WITH cte AS (     SELECT         restaurant_id,         ROUND(AVG(rating), 1) AS avg_rating,         COUNT(rating) AS total_review,         MAX(review_date) AS
max_review_date     FROM review     GROUP BY restaurant_id) SELECT     rs.name,     cte.max_review_date FROM restaurant rs INNER JOIN cte ON rs.id = cte.restaurant_id LIMIT 100
2025-10-15 16:48:32 [ INFO] Result: 3 rows retrieved in 6ms
```

Submission Requirements

1. Submit the SQL scripts for:
    - ➢ Table creation
    - ➢ Sample data insertion
    - ➢ All queries for CRUD operations
    - ➢ Additional queries
2. Take a screenshot of the results for each query and include it in the submission.

Extra Credit (Optional)

1. Create a menu table, similar to the one used in our class session, and insert at least 3 menu items for each restaurant.

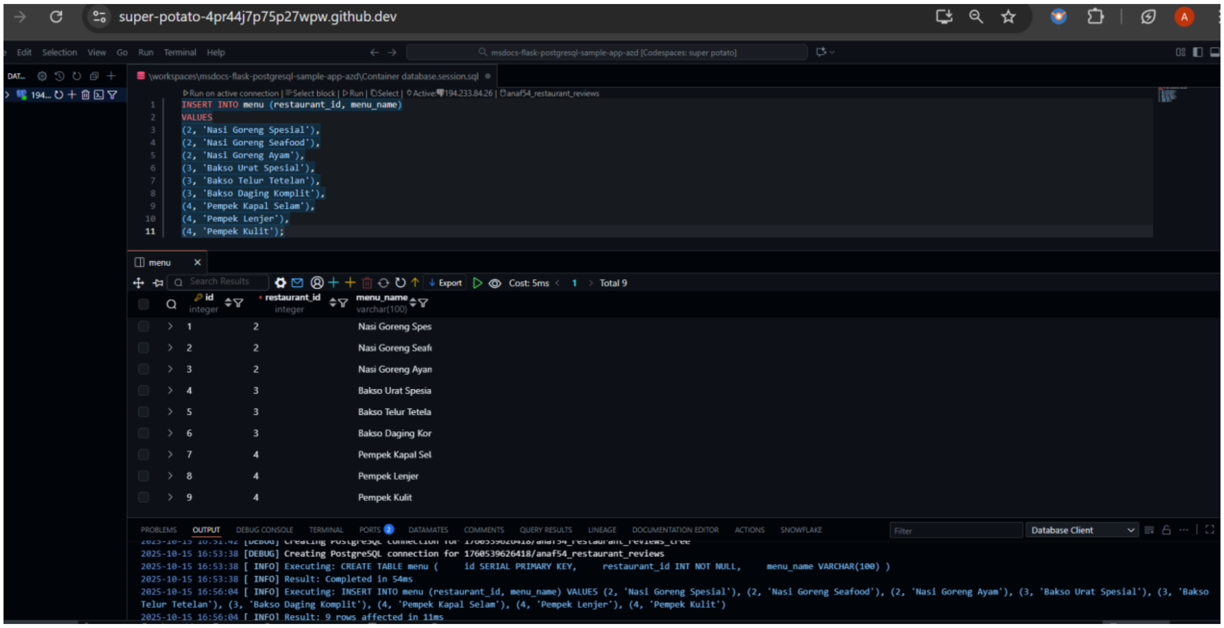


super-potato-4pr44j7p75p27wpw.github.dev
Edit Selection View Go Run Terminal Help
msdocs-flask-postgresql-sample-app-azd [Codespaces: super potato]
\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql
Run on active connection | Select block | Run | Select | Active: 194.233.84.26 | anaf54_restaurant_reviews
menu
Search Results
Export
Cost: 6ms
1
Total 0
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS 2 DATAMATES COMMENTS QUERY RESULTS LINEAGE DOCUMENTATION EDITOR ACTIONS SNOWFLAKE
Filter

```sql
CREATE TABLE menu (
    id SERIAL PRIMARY KEY,
    restaurant_id INT NOT NULL,
    menu_name VARCHAR(100)
);
```

id integer	restaurant_id integer	menu_name varchar(100)

```
2025-10-15 16:48:32 [ INFO] Executing: WITH cte AS (     SELECT         restaurant_id,         ROUND(AVG(rating), 1) AS avg_rating,         COUNT(rating) AS total_review,
max_review_date     FROM review     GROUP BY restaurant_id) SELECT     rs.name,     cte.max_review_date FROM restaurant rs INNER JOIN cte ON rs.id = cte.restaurant_id LIMIT 100
2025-10-15 16:48:32 [ INFO] Result: 3 rows retrieved in 6ms
2025-10-15 16:51:42 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews_tree
2025-10-15 16:53:38 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews
2025-10-15 16:53:38 [ INFO] Executing: CREATE TABLE menu (     id SERIAL PRIMARY KEY,     restaurant_id INT NOT NULL,     menu_name VARCHAR(100) )
2025-10-15 16:53:38 [ INFO] Result: Completed in 54ms
```



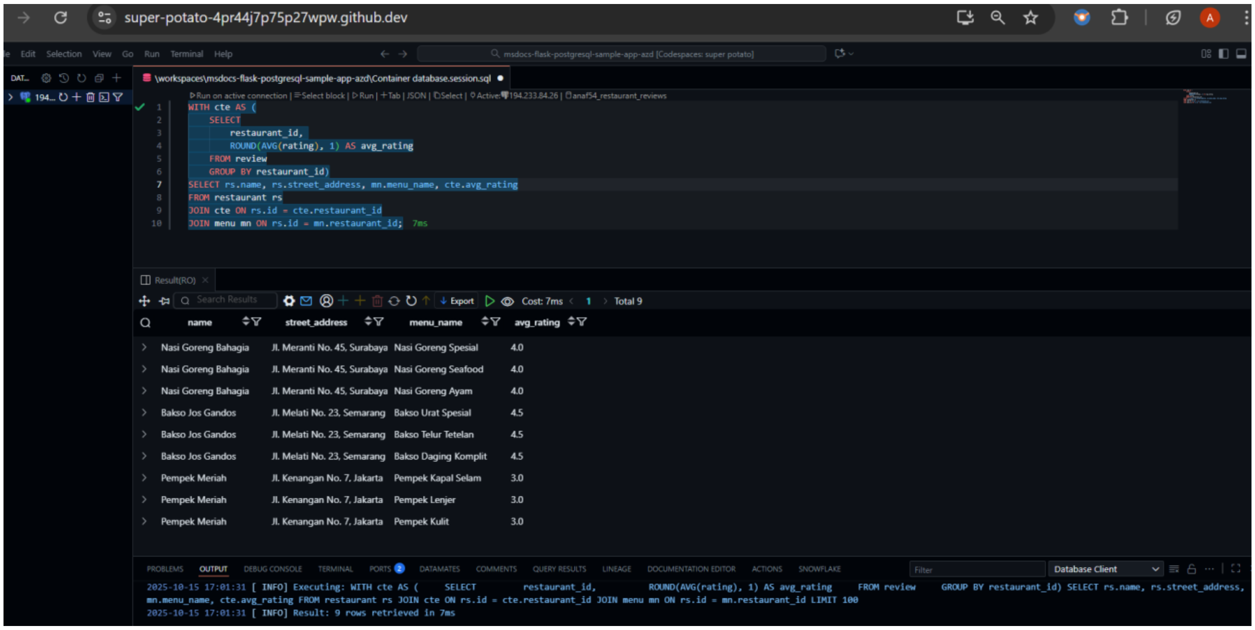
super-potato-4pr44j7p75p27wpw.github.dev
Edit Selection View Go Run Terminal Help
msdocs-flask-postgresql-sample-app-azd [Codespaces: super potato]
\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql
Run on active connection | Select block | Run | Select | Active: 194.233.84.26 | anaf54_restaurant_reviews
menu
Search Results
Export
Cost: 5ms
1
Total 9
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS 2 DATAMATES COMMENTS QUERY RESULTS LINEAGE DOCUMENTATION EDITOR ACTIONS SNOWFLAKE
Filter
Database Client

```sql
INSERT INTO menu (restaurant_id, menu_name)
VALUES
(2, 'Nasi Goreng Spesial'),
(2, 'Nasi Goreng Seafood'),
(2, 'Nasi Goreng Ayam'),
(3, 'Bakso Urat Spesial'),
(3, 'Bakso Telur Tetelan'),
(3, 'Bakso Daging Komplit'),
(4, 'Pempek Kapal Selam'),
(4, 'Pempek Lenjer'),
(4, 'Pempek Kulit');
```

id integer	restaurant_id integer	menu_name varchar(100)
1	2	Nasi Goreng Spes
2	2	Nasi Goreng Seafo
3	2	Nasi Goreng Ayan
4	3	Bakso Urat Spesia
5	3	Bakso Telur Tetela
6	3	Bakso Daging Kor
7	4	Pempek Kapal Sel
8	4	Pempek Lenjer
9	4	Pempek Kulit

```
2025-10-15 16:51:42 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews_tree
2025-10-15 16:53:38 [DEBUG] Creating PostgreSQL connection for 1760539626418/anaf54_restaurant_reviews
2025-10-15 16:53:38 [ INFO] Executing: CREATE TABLE menu (     id SERIAL PRIMARY KEY,     restaurant_id INT NOT NULL,     menu_name VARCHAR(100) )
2025-10-15 16:53:38 [ INFO] Result: Completed in 54ms
2025-10-15 16:56:04 [ INFO] Executing: INSERT INTO menu (restaurant_id, menu_name) VALUES (2, 'Nasi Goreng Spesial'), (2, 'Nasi Goreng Seafood'), (2, 'Nasi Goreng Ayam'), (3, 'Bakso Urat Spesial'), (3, 'Bakso
Telur Tetelan'), (3, 'Bakso Daging Komplit'), (4, 'Pempek Kapal Selam'), (4, 'Pempek Lenjer'), (4, 'Pempek Kulit')
2025-10-15 16:56:04 [ INFO] Result: 9 rows affected in 11ms
```

2. Write a query to display each restaurant with its menu and the average rating from its reviews.



super-potato-4pr44j7p75p27wpw.github.dev
Edit Selection View Go Run Terminal Help
msdocs-flask-postgresql-sample-app-azd [Codespaces: super potato]
\workspaces\msdocs-flask-postgresql-sample-app-azd\Container database.session.sql
▷Run on active connection | ☰Select block | ▷ Run | +Tab | JSON | Select | Active: 194.233.84.26 | anaf54_restaurant_reviews
Result(RO)
Search Results
Export
Cost: 7ms
1
Total 9
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS 2
DATAMATES
COMMENTS
QUERY RESULTS
LINEAGE
DOCUMENTATION EDITOR
ACTIONS
SNOWFLAKE
Filter
Database Client

```sql
WITH cte AS (
    SELECT
        restaurant_id,
        ROUND(AVG(rating), 1) AS avg_rating
    FROM review
    GROUP BY restaurant_id)
SELECT rs.name, rs.street_address, mn.menu_name, cte.avg_rating
FROM restaurant rs
JOIN cte ON rs.id = cte.restaurant_id
JOIN menu mn ON rs.id = mn.restaurant_id;  7ms
```

name	street_address	menu_name	avg_rating
Nasi Goreng Bahagia	Jl. Meranti No. 45, Surabaya	Nasi Goreng Spesial	4.0
Nasi Goreng Bahagia	Jl. Meranti No. 45, Surabaya	Nasi Goreng Seafood	4.0
Nasi Goreng Bahagia	Jl. Meranti No. 45, Surabaya	Nasi Goreng Ayam	4.0
Bakso Jos Gandos	Jl. Melati No. 23, Semarang	Bakso Urat Spesial	4.5
Bakso Jos Gandos	Jl. Melati No. 23, Semarang	Bakso Telur Tetelan	4.5
Bakso Jos Gandos	Jl. Melati No. 23, Semarang	Bakso Daging Komplit	4.5
Pempek Meriah	Jl. Kenangan No. 7, Jakarta	Pempek Kapal Selam	3.0
Pempek Meriah	Jl. Kenangan No. 7, Jakarta	Pempek Lenjer	3.0
Pempek Meriah	Jl. Kenangan No. 7, Jakarta	Pempek Kulit	3.0

```
2025-10-15 17:01:31 [ INFO] Executing: WITH cte AS (     SELECT         restaurant_id,         ROUND(AVG(rating), 1) AS avg_rating     FROM review     GROUP BY restaurant_id) SELECT rs.name, rs.street_address,
mn.menu_name, cte.avg_rating FROM restaurant rs JOIN cte ON rs.id = cte.restaurant_id JOIN menu mn ON rs.id = mn.restaurant_id LIMIT 100
2025-10-15 17:01:31 [ INFO] Result: 9 rows retrieved in 7ms
```