

Database creation and Data populating in PostgreSQL.

DTS207TC - DATABASE DEVELOPMENT AND DESIGN

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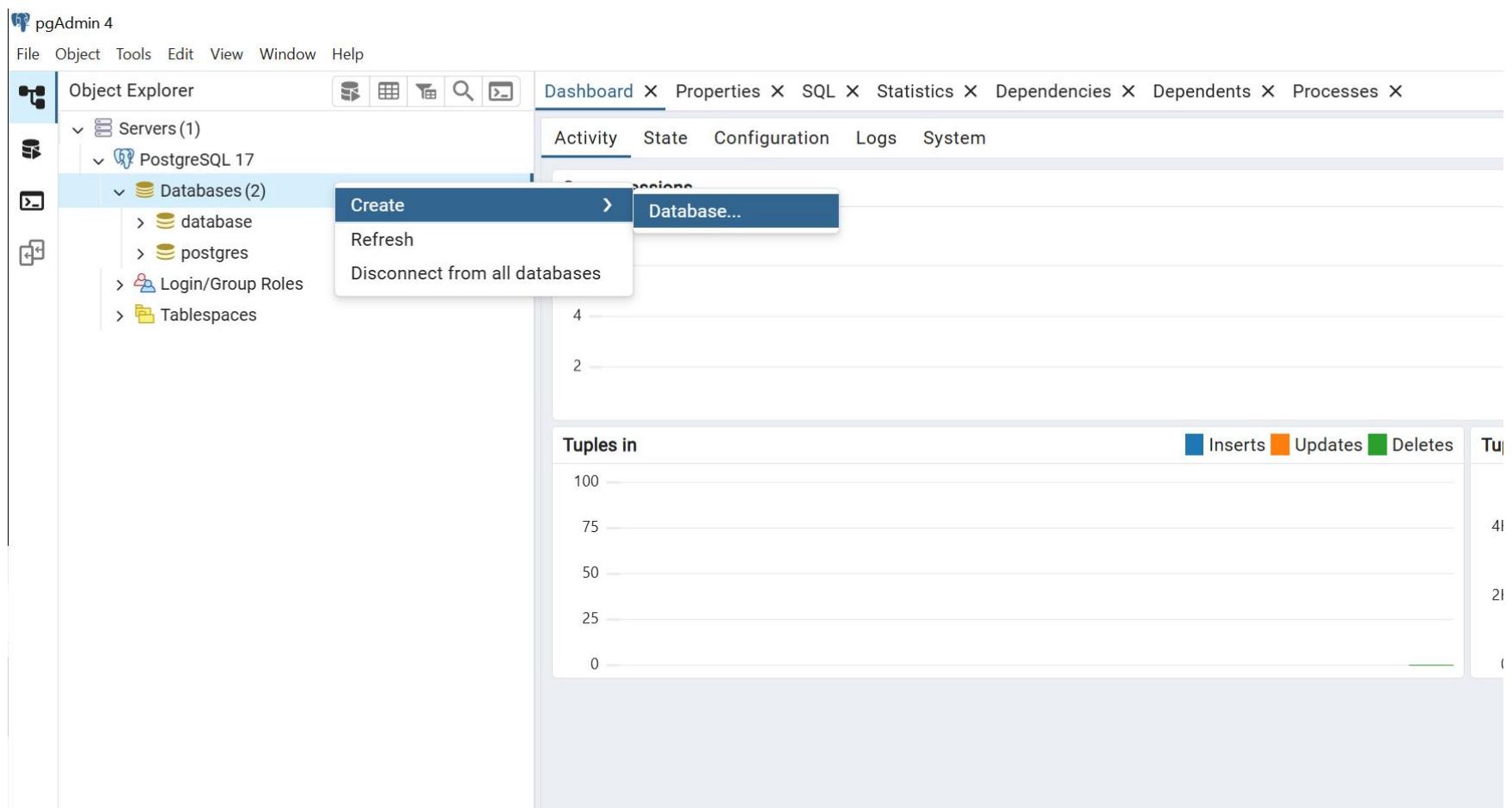
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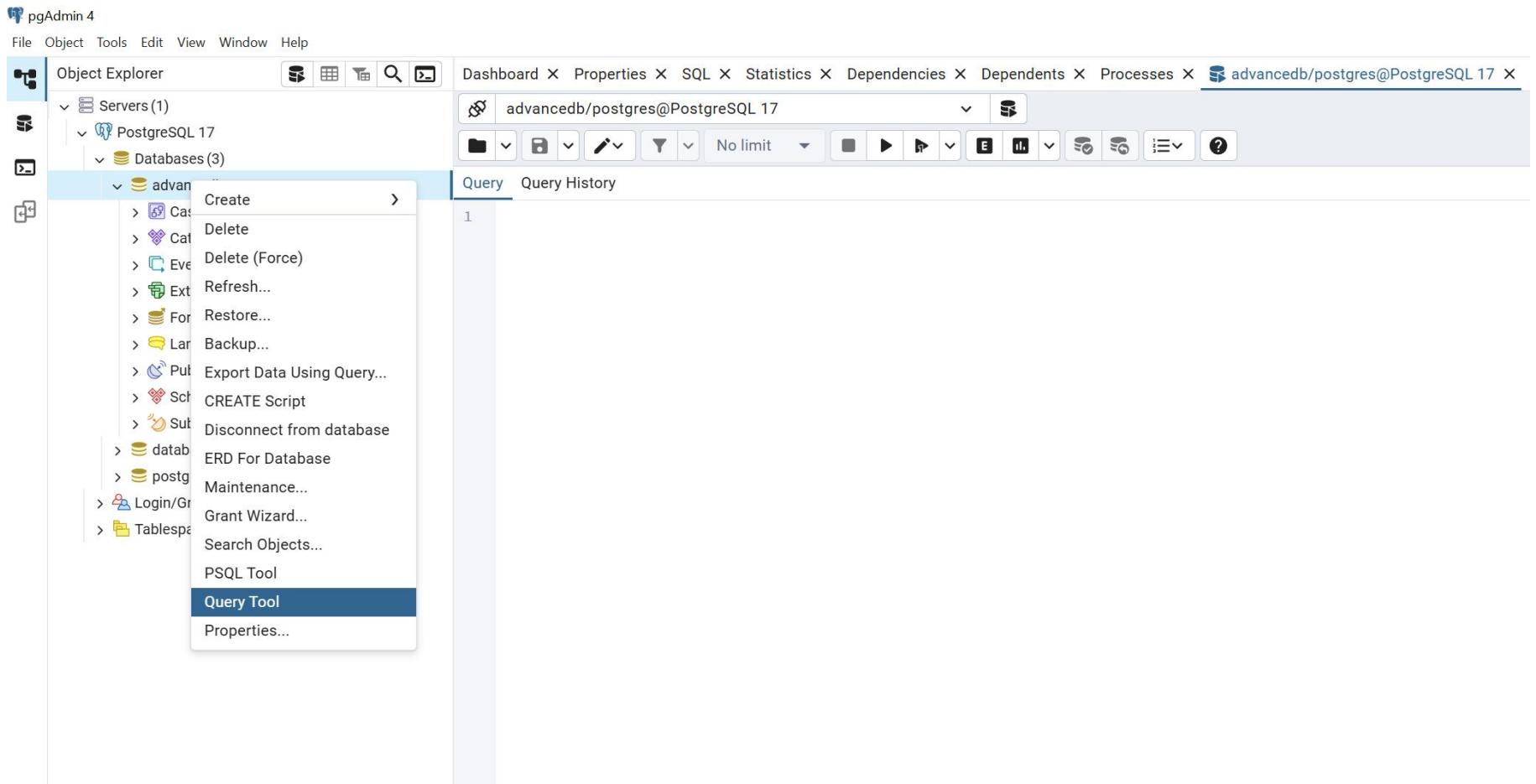
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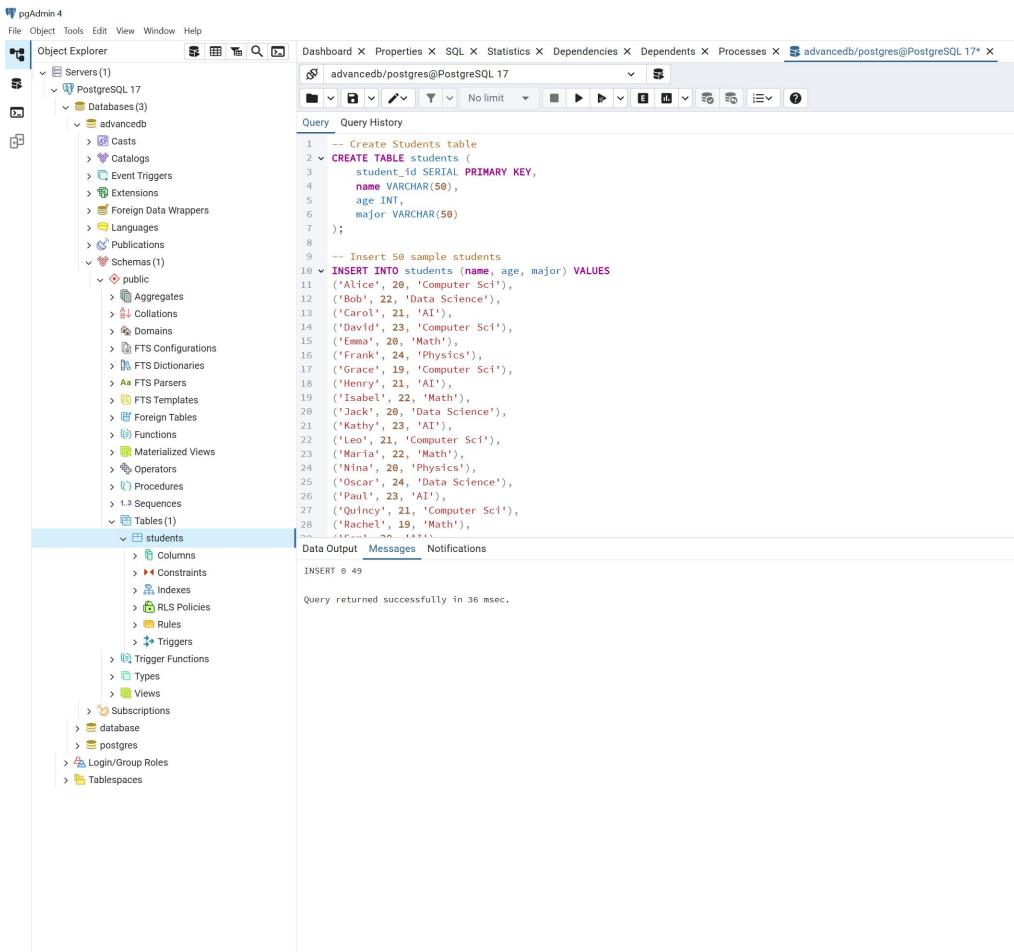
Creating Database – Step 1



Opening Query Tool – Step 2



Running the Given Queries – Step 3 to populate data



The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying the database structure. The right pane is the Query Editor, showing a SQL script being run.

```
-- Create Students table
CREATE TABLE students (
    student_id SERIAL PRIMARY KEY,
    name VARCHAR(50),
    age INT,
    major VARCHAR(50)
);

-- Insert 50 sample students
INSERT INTO students (name, age, major) VALUES
('Alice', 20, 'Computer Sci'),
('Bob', 22, 'Data Science'),
('Carol', 21, 'AI'),
('David', 23, 'Computer Sci'),
('Emma', 20, 'Math'),
('Frank', 24, 'Physics'),
('Grace', 19, 'Computer Sci'),
('Henry', 21, 'AI'),
('Isabel', 22, 'Math'),
('Jack', 20, 'Data Science'),
('Kathy', 23, 'AI'),
('Leo', 21, 'Computer Sci'),
('Maria', 22, 'Math'),
('Nina', 20, 'Physics'),
('Oscar', 24, 'Data Science'),
('Paul', 23, 'AI'),
('Quincy', 21, 'Computer Sci'),
('Rachel', 19, 'Math'),
('Sam', 25, 'Physics');
```

The Data Output tab shows the results of the INSERT statement:

```
INSERT 0 49
```

The message area indicates:

```
Query returned successfully in 36 msec.
```

Reconfirm data is successfully imported – Step 4

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

- Left Panel (Object Browser):** Shows the database structure under "PostgreSQL 17" and "advancedb". The "Tables(1)" section is expanded, showing the "students" table.
- Top Bar:** Includes "File", "Object", "Tools", "Edit", "View", "Window", and "Help" menus.
- Toolbar:** Includes icons for "New", "Open", "Save", "Print", "Copy", "Paste", "Delete", "Refresh", "Zoom In", "Zoom Out", and "Help".
- Query Editor:** Displays the following SQL query and its results:

```
1
2 v SELECT *
3   FROM students;
4
5
6
7
8 -- Create Students table
9 v CREATE TABLE students (
10   student_id SERIAL PRIMARY KEY,
11   name VARCHAR(50),
12   age INT,
13   major VARCHAR(50)
14 );
15
16 -- Insert 50 sample students
17 v INSERT INTO students (name, age, major) VALUES
18   ('Alice', 20, 'Computer Sci'),
19   ('Bob', 22, 'Data Science'),
20   ('Carol', 21, 'AI'),
21   ('David', 23, 'Computer Sci'),
22   ('Emma', 20, 'Math'),
23   ('Frank', 24, 'Physics'),
24   ('Grace', 19, 'Computer Sci'),
25   ('Henry', 21, 'AI'),
26   ('Isabel', 22, 'Math'),
27   ('Jack', 20, 'Data Science'),
28   ('Kathy', 23, 'AI'),
```
- Data Output:** A table showing the data from the "students" table. The columns are "student_id", "name", "age", and "major". The data consists of 21 rows, each representing a student with their name, age, and major.

student_id	name	age	major
1	Alice	20	Computer Sci
2	Bob	22	Data Science
3	Carol	21	AI
4	David	23	Computer Sci
5	Emma	20	Math
6	Frank	24	Physics
7	Grace	19	Computer Sci
8	Henry	21	AI
9	Isabel	22	Math
10	Jack	20	Data Science
11	Kathy	23	AI
12	Leo	21	Computer Sci
13	Maria	22	Math
14	Nina	20	Physics
15	Oscar	24	Data Science
16	Paul	23	AI
17	Quincy	21	Computer Sci
18	Rachel	19	Math
19	Sam	20	AI
20	Tina	22	Data Science
21	Uma	23	Physics

Queries to run

All the SQL queries required to populate data for this lab are provided in a separate **.txt** file. Please refer to the **Learning Mall course folder** to access them.