Lab : Populating a Data Warehouse using PostgreSQL

In this lab you will:

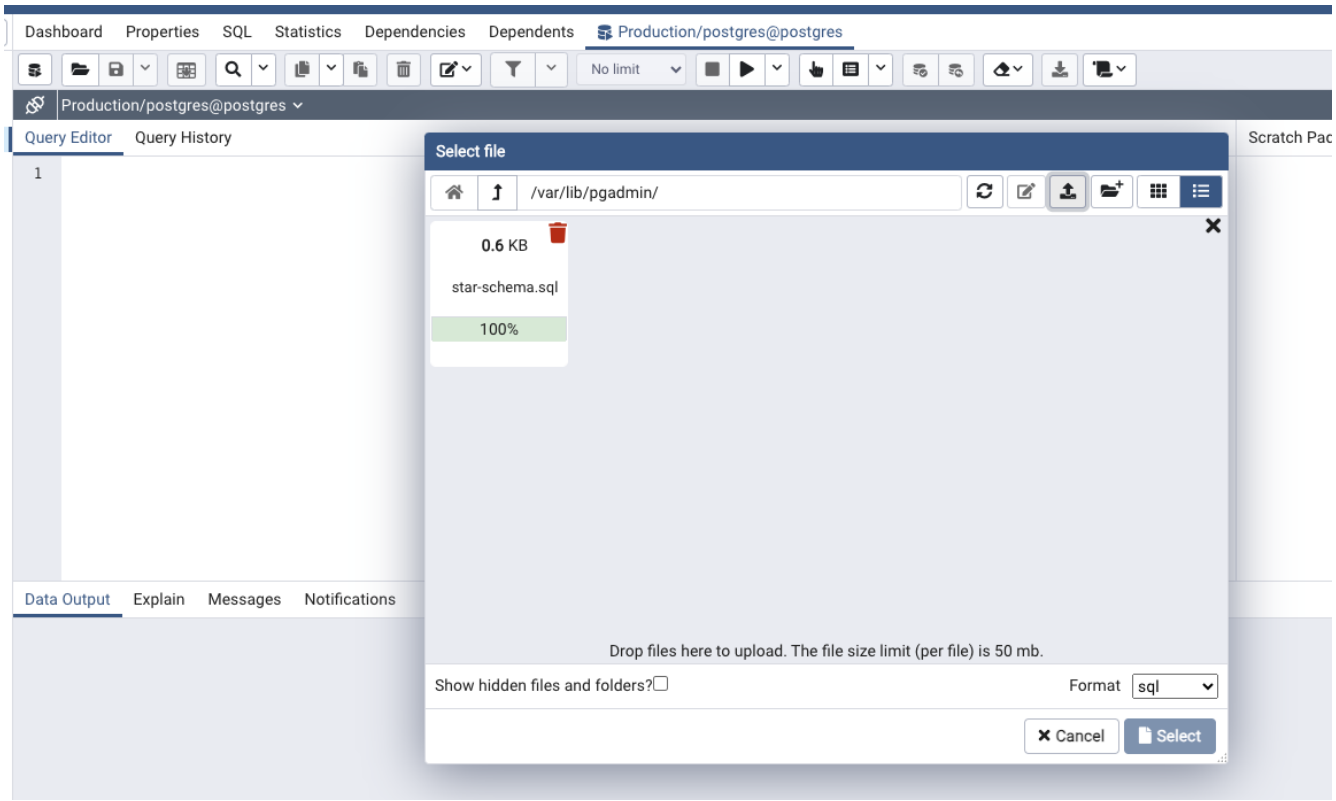
Create production related database and tables in a PostgreSQL instance.
Populate the production data warehouse byloading the tables from Scr

- Using an Instance of pgAdmin (Task A)

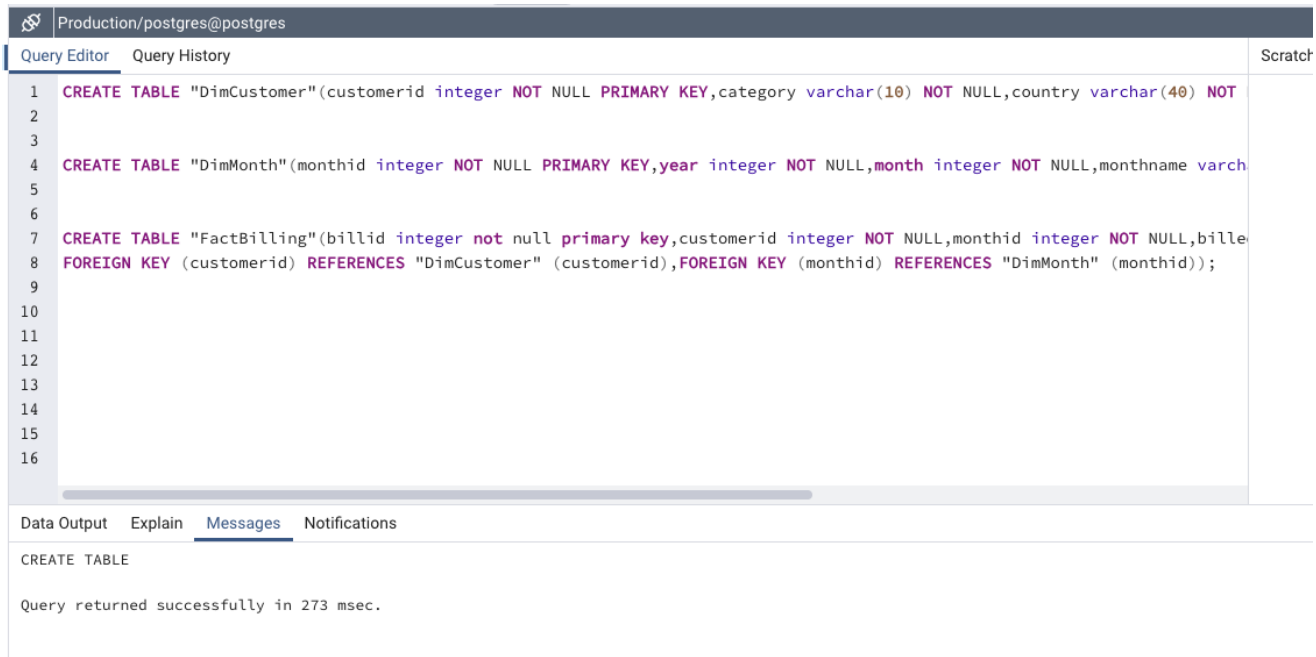
Task B: Create tables

Now, that you have your PostgreSQL service active and have created the Production database using pgAdmin, let's go ahead and create a few tables to populate the database and store the data that we wish to eventually upload into it.

1. In the top of the page go to Query tool" and then click on Open File. Next a new page pops up called Select File. Click on Upload icon as shown in the screenshot.

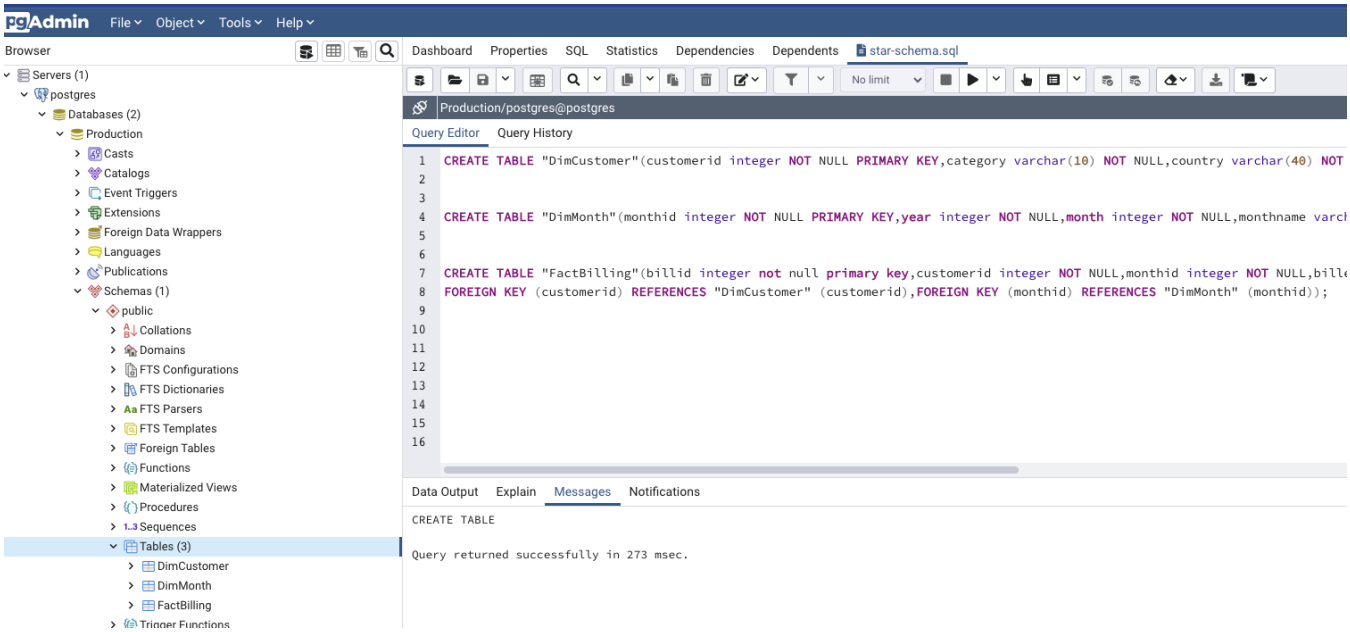


- From the Query tool here we can use the upload icon in the select File Option to upload a sql file under 50 mb



- After clicking “X” on the upload sql file pop-up box, you can then select the uploaded sql file and execute the commands to create your tables
- Note that the query editor is available after selecting a Database with which to run the sql schema file

- Next, right-click on the Production database and click on Refresh option from the dropdown.
    - After the database is refreshed the 3 tables(DimCustomer, DimMonth,FactBilling) are created under the Databases > Production > Schema > Public > Tables.



Task C: Load tables

- With the sql files similar to the schema/table creation, you can then simply insert data

Practice exercises

- Use PGAdmin QUERY Tool for some regular SQL type exploration

Problem 1: Using the PostgreSQL tool, find the count of rows in the table FactBilling

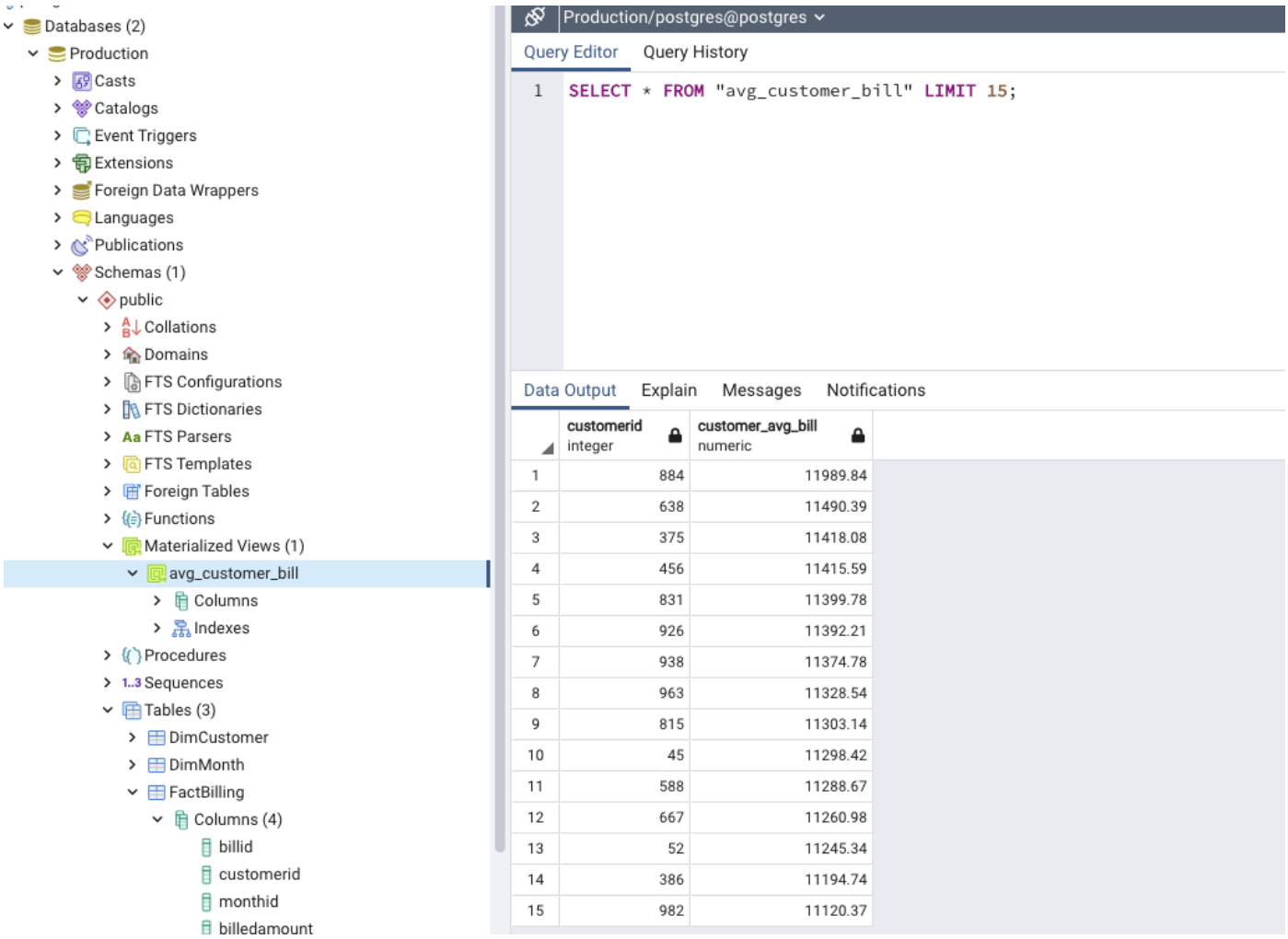
```
SELECT COUNT(*) FROM "FactBilling";
```

- Yes … the encapsulation is required within the query tool for the particular database

Count
132000

Problem 2: Using the PostgreSQL tool, create a simple MQT named avg_customer_bill with fields customerid and averagebillamount.

```
CREATE MATERIALIZED VIEW avg_customer_bill
AS
SELECT
      customerid, ROUND(AVG(billedamount), 2) AS customer_avg_bill
FROM "FactBilling"
GROUP BY customerid
ORDER BY customer_avg_bill DESC;
```



Problem 3: Refresh the newly created MQT

```
REFRESH MATERIALIZED VIEW avg_customer_bill;
```

Problem 4: Using the newly created MQT find the customers whose average billing is more than 11000.

```
SELECT * FROM "avg_customer_bill" WHERE customer_avg_bill > 11000;
```

Production/postgres@postgres

Query Editor Query History

```
1 SELECT * FROM "avg_customer_bill" WHERE customer_avg_bill > 11000;
2
3
```

Data Output Explain Messages Notifications

	customerid integer	customer_avg_bill numeric
1	884	11989.84
2	638	11490.39
3	375	11418.08
4	456	11415.59
5	831	11399.78
6	926	11392.21
7	938	11374.78
8	963	11328.54
9	815	11303.14
10	45	11298.42
11	588	11288.67
12	667	11260.98
13	52	11245.34
14	386	11194.74
15	982	11120.37
16	810	11115.14
17	740	11072.17
18	416	11065.35
19	206	11056.01
20	371	11037.86
21	201	11033.23
22	458	11007.92
23	194	11000.02