**To Create a database in sql**

-- Step 1: Create the database (run this in pgAdmin or psql if needed)

CREATE DATABASE sales\_data;

-- Step 2: Connect to the new database, then create the table

CREATE TABLE sales (

row\_id INT PRIMARY KEY,

order\_id TEXT,

order\_date DATE,

ship\_date DATE,

ship\_mode TEXT,

customer\_id TEXT,

customer\_name TEXT,

segment TEXT,

country TEXT,

city TEXT,

state TEXT,

postal\_code INT,

region TEXT,

product\_id TEXT,

category TEXT,

sub\_category TEXT,

product\_name TEXT,

cost FLOAT,

price FLOAT,

profit FLOAT,

quantity INT,

sales FLOAT

);

**To Insert File In Database**

COPY sales

FROM '/path/to/cleaned\_sales\_data.csv'

DELIMITER ','

CSV HEADER;

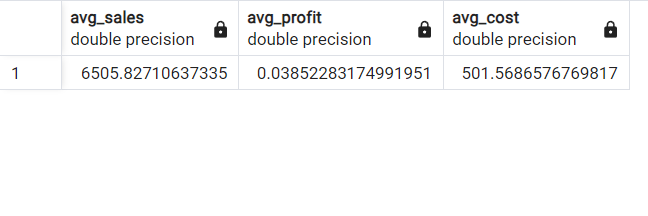
**Create Views**

View: Average Sales, Profit, Cost

CREATE VIEW AvgSalesProfitCost as

SELECT avg(sales) as avg\_sales, avg(profit) as avg\_profit, avg(cost) as avg\_cost FROM sales;

SELECT \* FROM AvgSalesProfitCost;

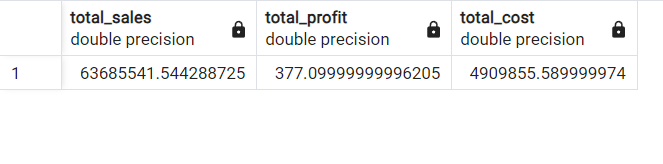


View: Total Sales, Profit, Cost

CREATE VIEW TotalSalesProfitCost as

SELECT sum(sales) as total\_sales, sum(profit) as total\_profit, sum(cost) as total\_cost FROM sales;

SELECT \* FROM TotalSalesProfitCost;

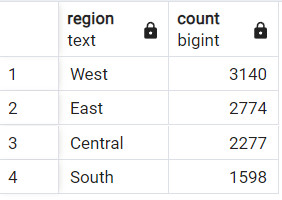


View: Count of entries by Region

CREATE VIEW RegionCount as

SELECT region, count(\*) as count FROM sales GROUP by region ORDER by count desc;

Select \* FROM RegionCount;

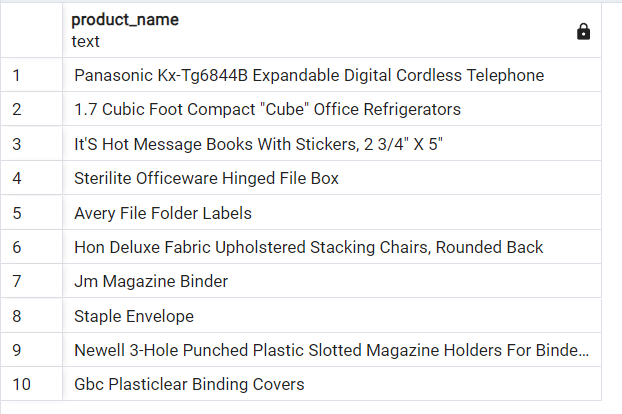


**Data Analysis Queries**

Products with “Standard Class”, Profit > 850, and Quantity < 5

SELECT product\_name FROM sales

WHERE ship\_mode = 'standard class' AND profit > 850 AND quantity < 5



**Top 10 Products below Average Sales**

SELECT product\_id, product\_name FROM sales

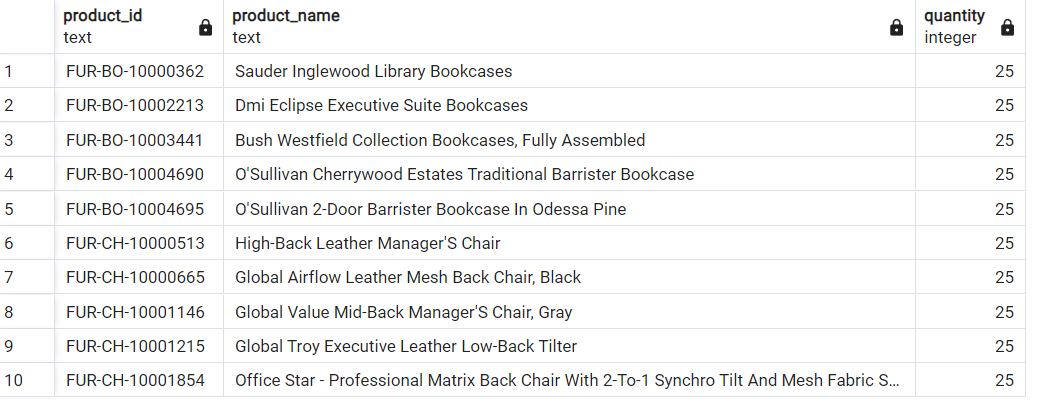
where sales < (SELECT avg(sales) from sales) ORDER by sales DESC LIMIT 10;



**Products with the Same Quantity (Standard Class), May Include Self-Match**

SELECT DISTINCT s1.product\_id, s1.product\_name, s1.quantity

FROM sales s1 JOIN sales s2 on s1.quantity = s2.quantity AND s1.ship\_mode = 'standard class' ORDER by s1.quantity DESC LIMIT 10;



**Products with Same Quantity (Standard Class), Excluding Self-Match**

SELECT DISTINCT s1.product\_id, s1.product\_name, s1.quantity

FROM sales s1 JOIN sales s2 on s1.quantity = s2.quantity AND s1.ship\_mode = 'standard class' AND s1.product\_id <> s2.product\_id ORDER by s1.quantity DESC LIMIT 10;

