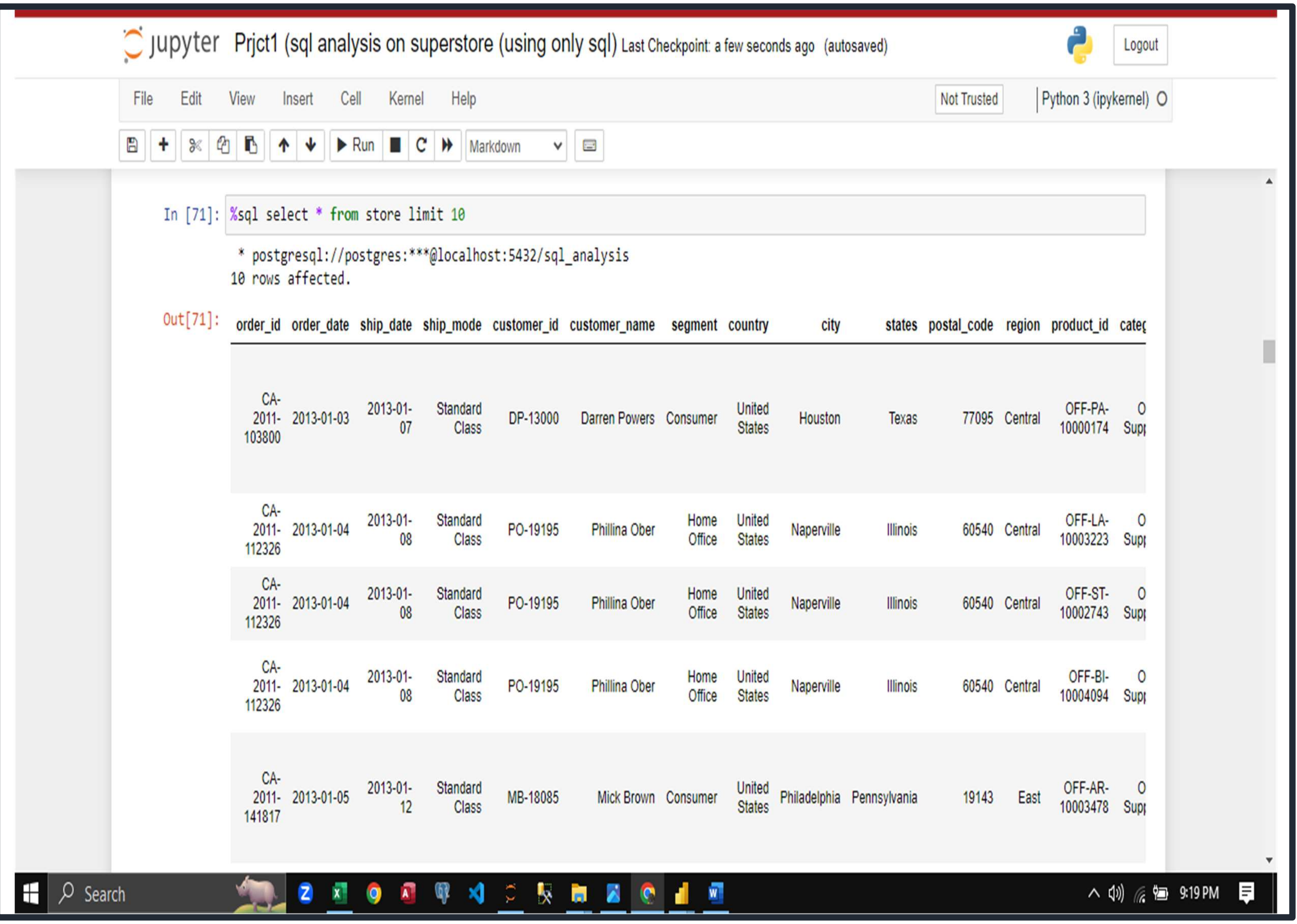
PROJECTREPORT

EXCEPTIONAL SALES ANALYSIS

(SQL BASED)



```
In [71]: %sql select * from store limit 10

 * postgresql://postgres:***@localhost:5432/sql_analysis
10 rows affected.
```

Out[71]:

order_id	order_date	ship_date	ship_mode	customer_id	customer_name	segment	country	city	states	postal_code	region	product_id	categ
CA-2011-103800	2013-01-03	2013-01-07	Standard Class	DP-13000	Darren Powers	Consumer	United States	Houston	Texas	77095	Central	OFF-PA-10000174	O Sup
CA-2011-112326	2013-01-04	2013-01-08	Standard Class	PO-19195	Phillina Ober	Home Office	United States	Naperville	Illinois	60540	Central	OFF-LA-10003223	O Sup
CA-2011-112326	2013-01-04	2013-01-08	Standard Class	PO-19195	Phillina Ober	Home Office	United States	Naperville	Illinois	60540	Central	OFF-ST-10002743	O Sup
CA-2011-112326	2013-01-04	2013-01-08	Standard Class	PO-19195	Phillina Ober	Home Office	United States	Naperville	Illinois	60540	Central	OFF-BI-10004094	O Sup
CA-2011-141817	2013-01-05	2013-01-12	Standard Class	MB-18085	Mick Brown	Consumer	United States	Philadelphia	Pennsylvania	19143	East	OFF-AR-10003478	O Sup

Name: Chand Mohammad

Date: 20/09/2023

Overview:

The following report presents a comprehensive analysis of sales data, meticulously conducted using SQL. This analysis delves into various facets of sales performance, customer behavior, product categories, and operational efficiency. By harnessing the power of data-driven insights, this report aims to provide actionable recommendations to drive revenue growth and enhance operational efficiency.

Objectives:

1. **Uncover Sales Trends:** Explore patterns and trends in sales data to identify areas of opportunity and potential challenges.
2. **Customer Segmentation:** Analyze customer segments to understand buying behavior and tailor marketing efforts accordingly.
3. **Product Performance:** Evaluate the performance of products and categories to optimize inventory and marketing strategies.
4. **Shipping and Returns Efficiency:** Assess shipping modes and returns to streamline operations and improve customer satisfaction.

Report Structure:

1. **Executive Summary:** Provides a high-level overview of key findings and recommendations.
2. **Detailed Analysis:** Offers in-depth insights into specific aspects of the sales data, including regional performance, customer analysis, and product breakdown.
3. **Visual Insights:** Incorporates charts and graphs to visually represent key metrics and trends.
4. **Recommendations:** Offers actionable suggestions based on the analysis to drive strategic decisions.
5. **Conclusion:** Summarizes the report's findings and emphasizes the potential impact of implementing the provided recommendations.

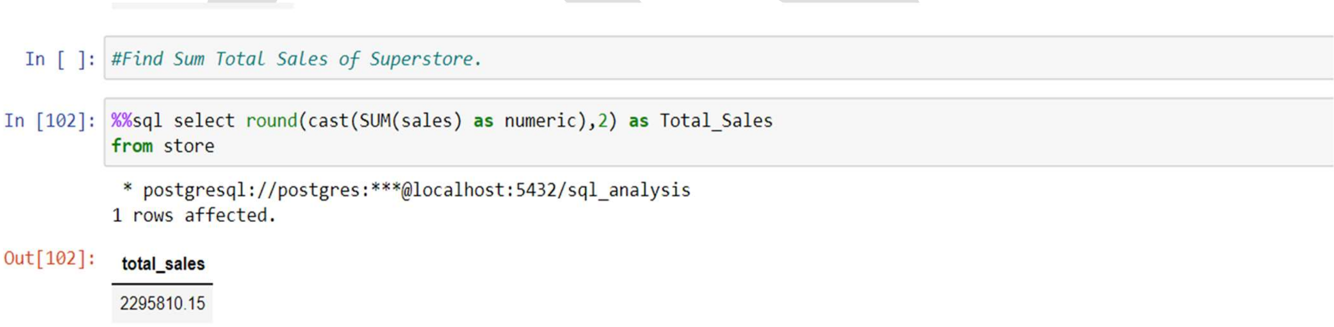
Executive Summary:

This dynamic report encapsulates a deep-dive analysis of the sales data, leveraging the power of SQL. The insights garnered serve as a strategic compass to drive revenue growth and enhance customer satisfaction.

Key Findings:

1. Sales Performance:

- Total Sales: $[2295810.15]



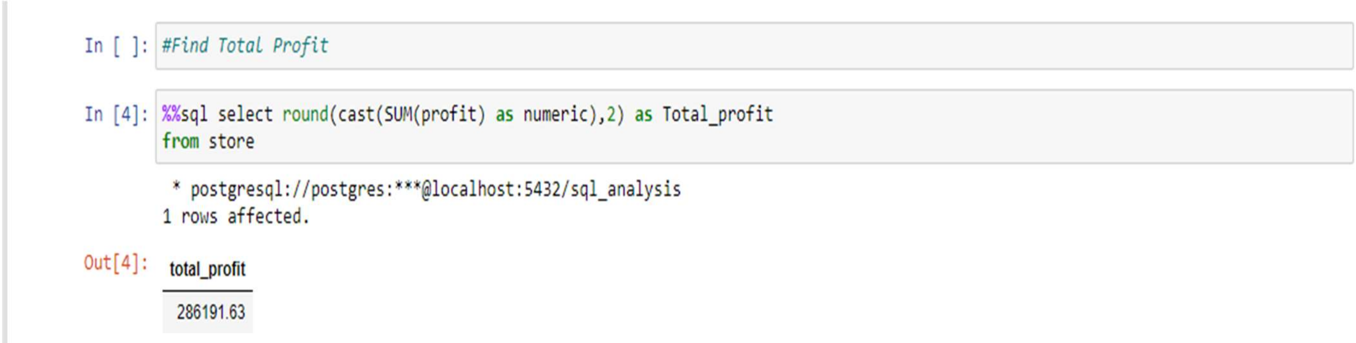
```
In [ ]: #Find Sum Total Sales of Superstore.

In [102]: %%sql select round(cast(SUM(sales) as numeric),2) as Total_Sales
          from store

 * postgresql://postgres:***@localhost:5432/sql_analysis
1 rows affected.

Out[102]: total_sales
          2295810.15
```

- Total Profit: $[286191.63]



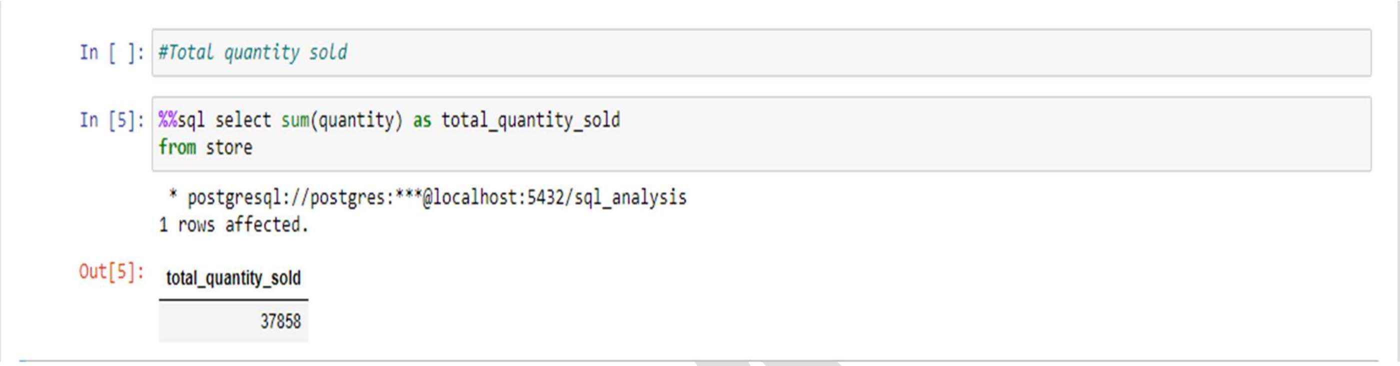
```
In [ ]: #Find Total Profit

In [4]: %%sql select round(cast(SUM(profit) as numeric),2) as Total_profit
        from store

 * postgresql://postgres:***@localhost:5432/sql_analysis
1 rows affected.

Out[4]: total_profit
        286191.63
```

- Total Quantity Sold: [37858]



```
In [ ]: #Total quantity sold

In [5]: %%sql select sum(quantity) as total_quantity_sold
        from store

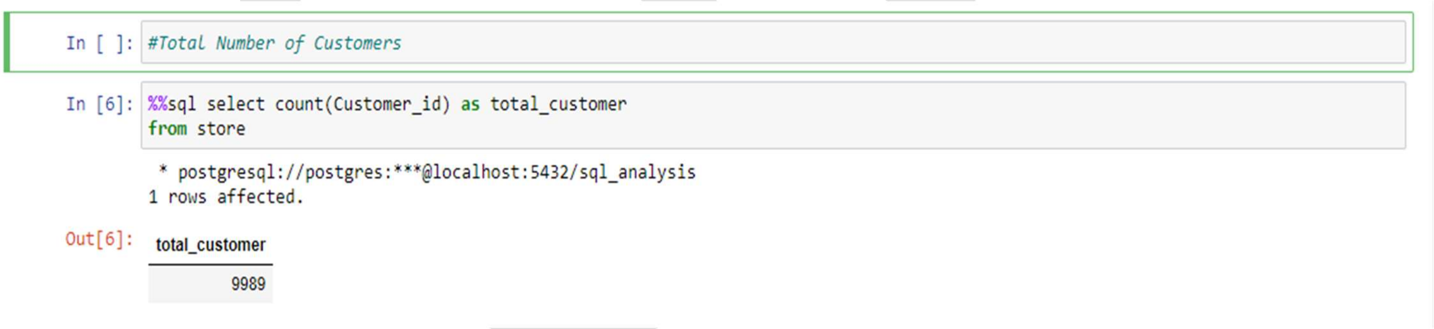
         * postgresql://postgres:***@localhost:5432/sql_analysis
        1 rows affected.
```

Out[5]:

total_quantity_sold
37858

2. Customer Insights:

- Total Number of Customers: [9989]



```
In [ ]: #Total Number of Customers

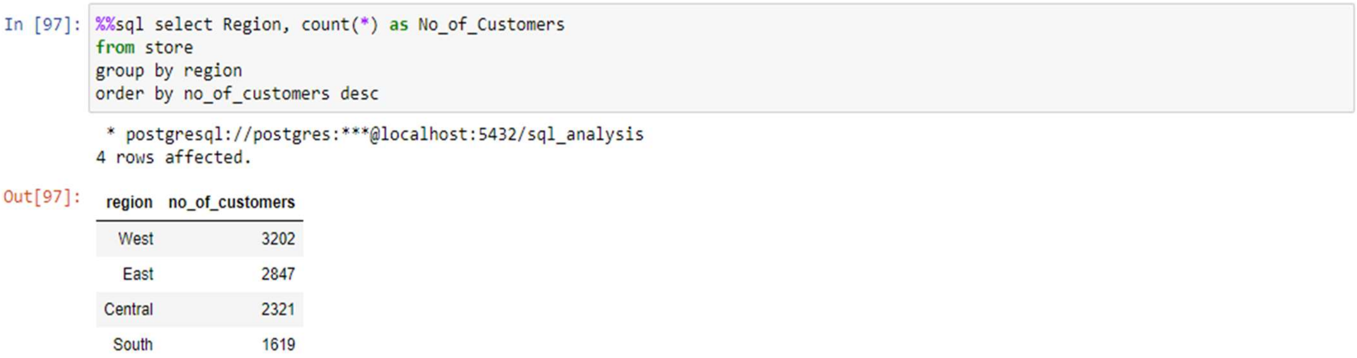
In [6]: %%sql select count(Customer_id) as total_customer
        from store

         * postgresql://postgres:***@localhost:5432/sql_analysis
        1 rows affected.
```

Out[6]:

total_customer
9989

- Customer Segment



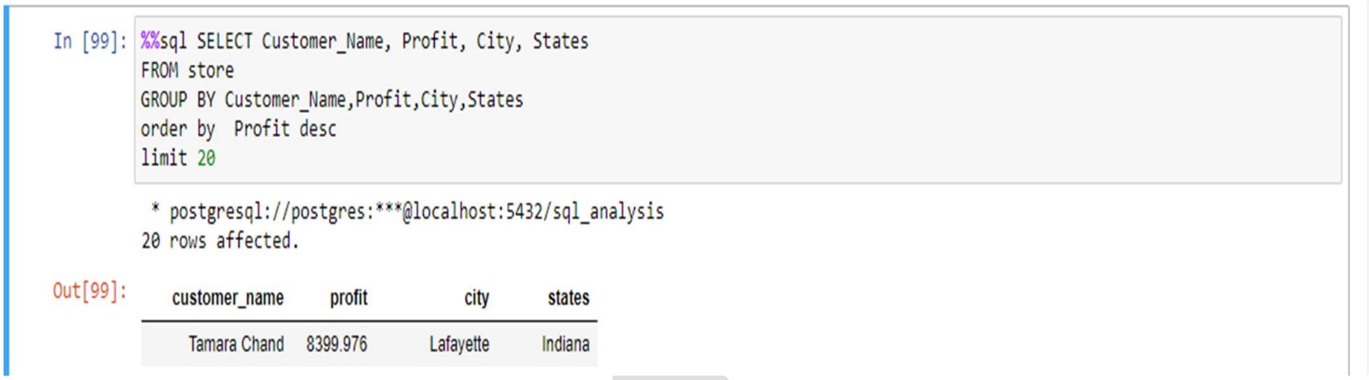
```
In [97]: %%sql select Region, count(*) as No_of_Customers
         from store
         group by region
         order by no_of_customers desc

          * postgresql://postgres:***@localhost:5432/sql_analysis
         4 rows affected.
```

Out[97]:

region	no_of_customers
West	3202
East	2847
Central	2321
South	1619

- Customer with the Highest Profit: [Tamara chand , 8399.976]



```
In [99]: %%sql SELECT Customer_Name, Profit, City, States
         FROM store
         GROUP BY Customer_Name,Profit,City,States
         order by  Profit desc
         limit 20
```

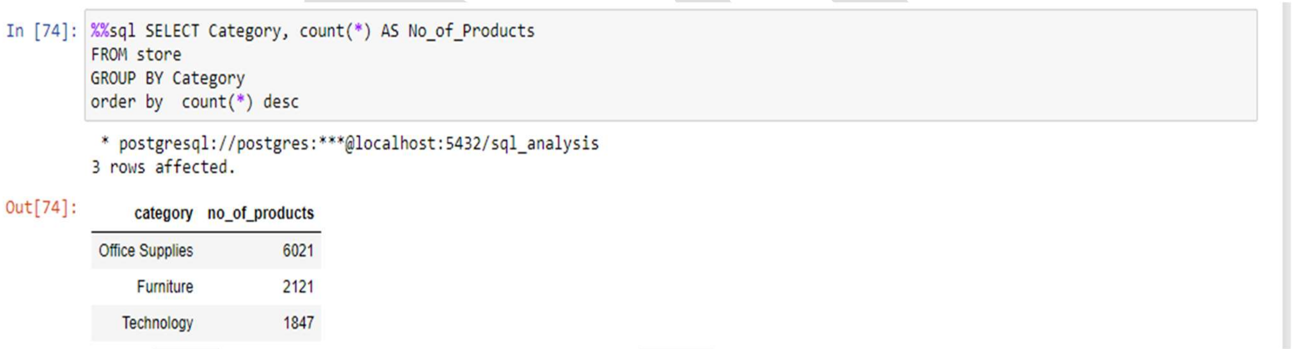
```
 * postgresql://postgres:***@localhost:5432/sql_analysis
20 rows affected.
```

Out[99]:

customer_name	profit	city	states
Tamara Chand	8399.976	Lafayette	Indiana

3. Product Categories:

- Most Sold Category: [Office Supplies]



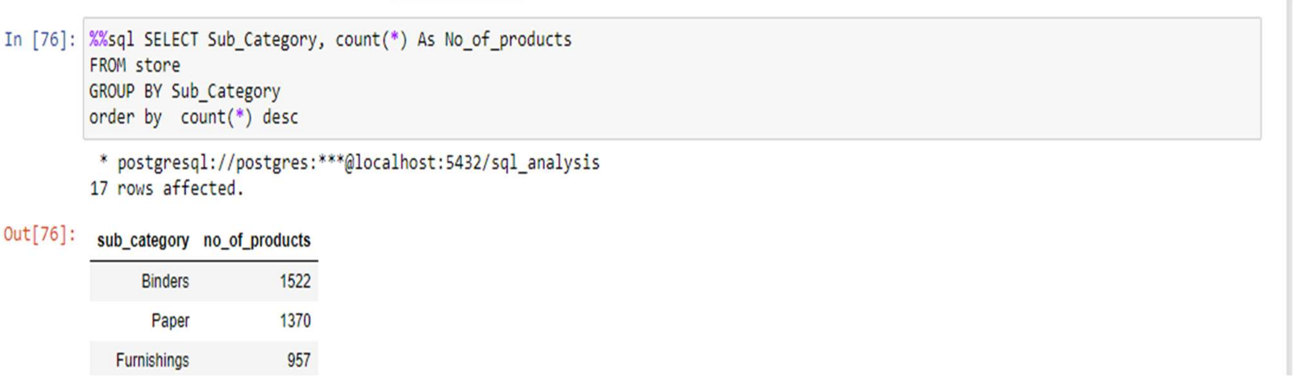
```
In [74]: %%sql SELECT Category, count(*) AS No_of_Products
         FROM store
         GROUP BY Category
         order by  count(*) desc
```

```
 * postgresql://postgres:***@localhost:5432/sql_analysis
3 rows affected.
```

Out[74]:

category	no_of_products
Office Supplies	6021
Furniture	2121
Technology	1847

- Sub-category with Highest Sales: [Binder]



```
In [76]: %%sql SELECT Sub_Category, count(*) As No_of_products
         FROM store
         GROUP BY Sub_Category
         order by  count(*) desc
```

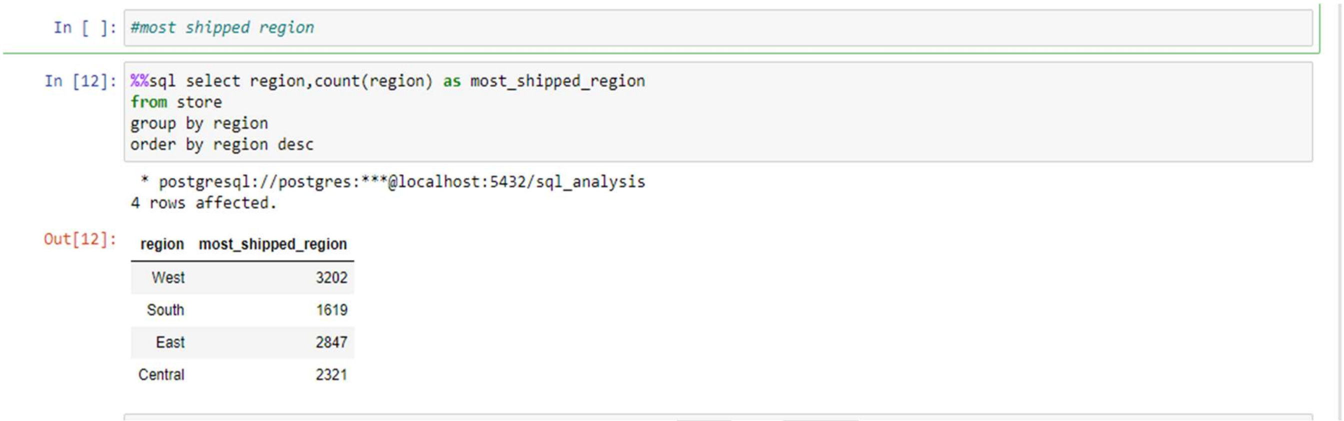
```
 * postgresql://postgres:***@localhost:5432/sql_analysis
17 rows affected.
```

Out[76]:

sub_category	no_of_products
Binders	1522
Paper	1370
Furnishings	957

4. Shipping Details:

- Most Common Region for Shipping: [west]



In [ ]:
```
#most shipped region
```

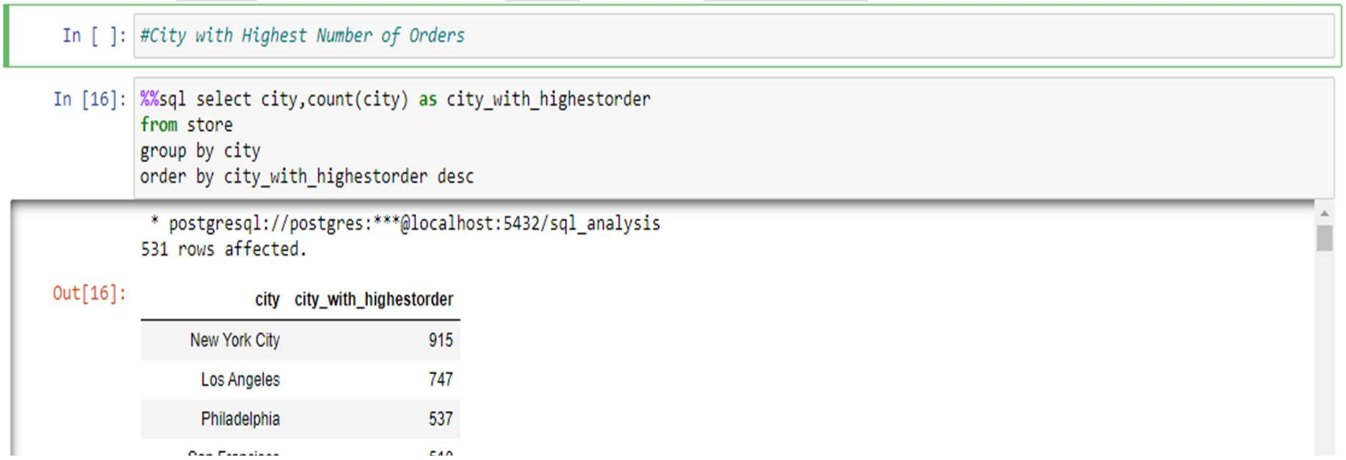
In [12]:
```
%%sql select region,count(region) as most_shipped_region
from store
group by region
order by region desc
```

```
 * postgresql://postgres:***@localhost:5432/sql_analysis
4 rows affected.
```

Out[12]:

region	most_shipped_region
West	3202
South	1619
East	2847
Central	2321

- City with Highest Number of Orders: [New York]



In [ ]:
```
#City with Highest Number of Orders
```

In [16]:
```
%%sql select city,count(city) as city_with_highestorder
from store
group by city
order by city_with_highestorder desc
```

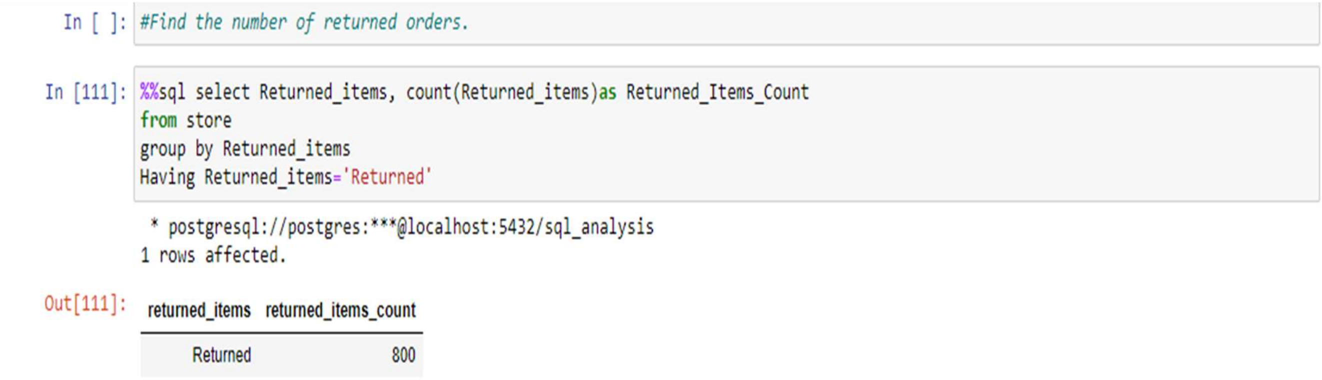
```
 * postgresql://postgres:***@localhost:5432/sql_analysis
531 rows affected.
```

Out[16]:

city	city_with_highestorder
New York City	915
Los Angeles	747
Philadelphia	537
San Francisco	510

5. Returns Analysis:

- Total Returned Items: [800]



```
In [ ]: #Find the number of returned orders.

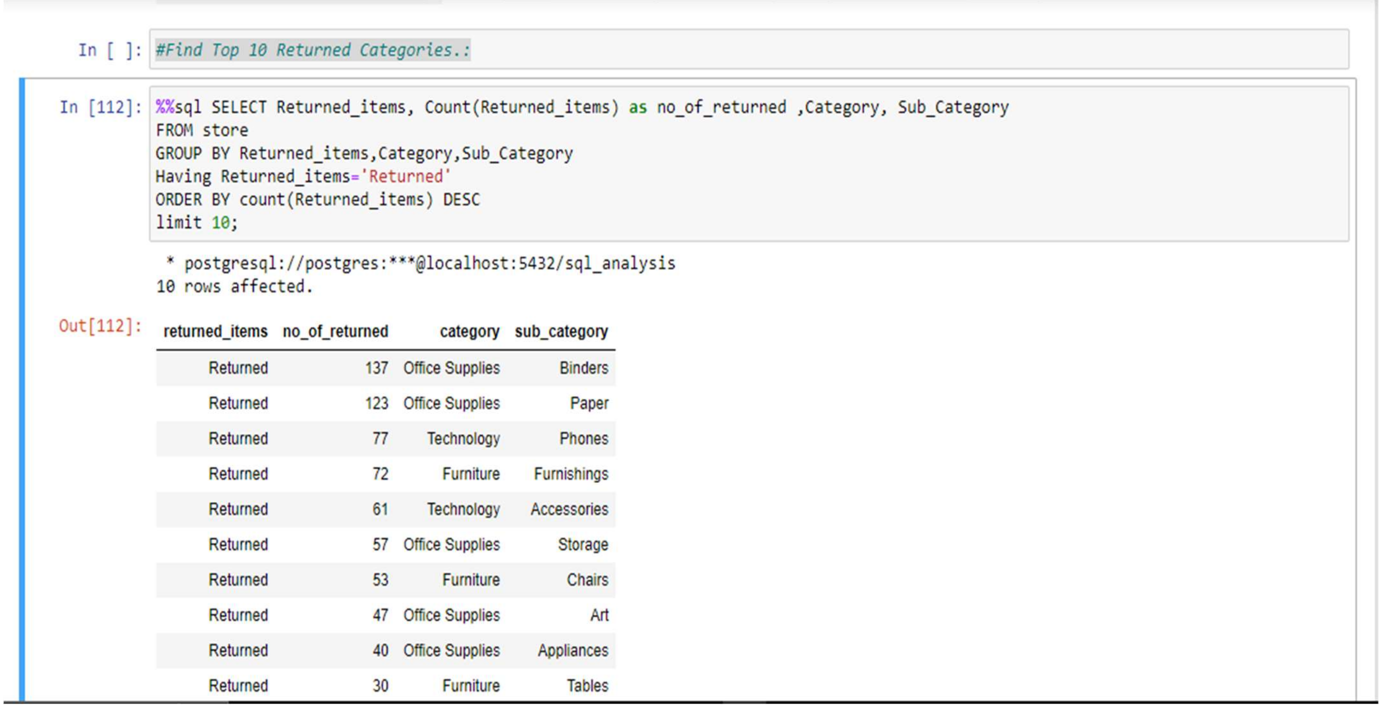
In [111]: %%sql select Returned_items, count(Returned_items)as Returned_Items_Count
          from store
          group by Returned_items
          Having Returned_items='Returned'

 * postgresql://postgres:***@localhost:5432/sql_analysis
1 rows affected.
```

Out[111]:

returned_items	returned_items_count
Returned	800

- Top 10 Returned Categories.:



```
In [ ]: #Find Top 10 Returned Categories.:

In [112]: %%sql SELECT Returned_items, Count(Returned_items) as no_of_returned ,Category, Sub_Category
          FROM store
          GROUP BY Returned_items,Category,Sub_Category
          Having Returned_items='Returned'
          ORDER BY count(Returned_items) DESC
          limit 10;

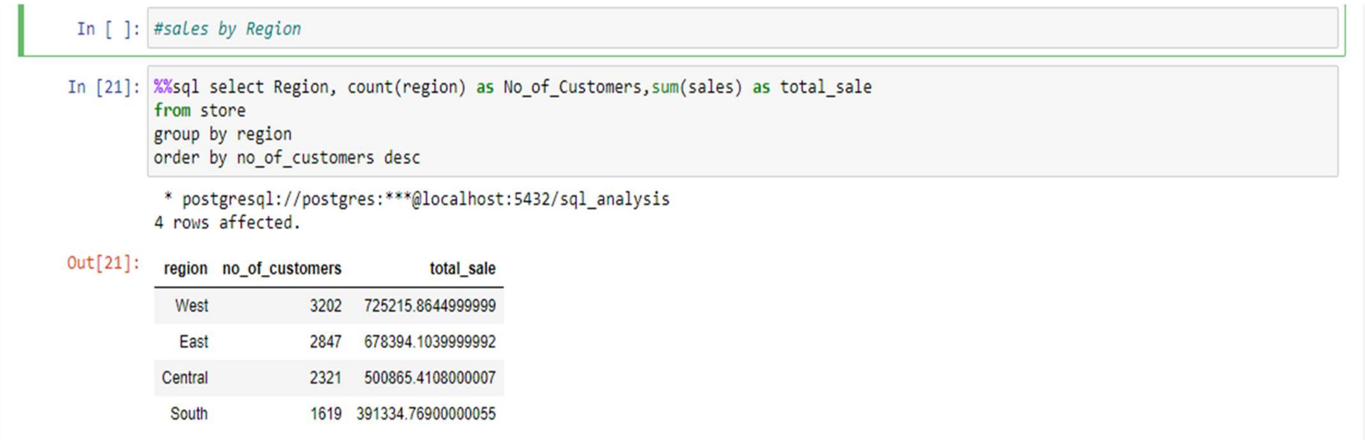
 * postgresql://postgres:***@localhost:5432/sql_analysis
10 rows affected.
```

Out[112]:

returned_items	no_of_returned	category	sub_category
Returned	137	Office Supplies	Binders
Returned	123	Office Supplies	Paper
Returned	77	Technology	Phones
Returned	72	Furniture	Furnishings
Returned	61	Technology	Accessories
Returned	57	Office Supplies	Storage
Returned	53	Furniture	Chairs
Returned	47	Office Supplies	Art
Returned	40	Office Supplies	Appliances
Returned	30	Furniture	Tables

Visual Insights:

Sales by Region:[West Region have highest sale with 725215.85]



```
In [ ]: #sales by Region
```

```
In [21]: %%sql select Region, count(region) as No_of_Customers,sum(sales) as total_sale
         from store
         group by region
         order by no_of_customers desc
```

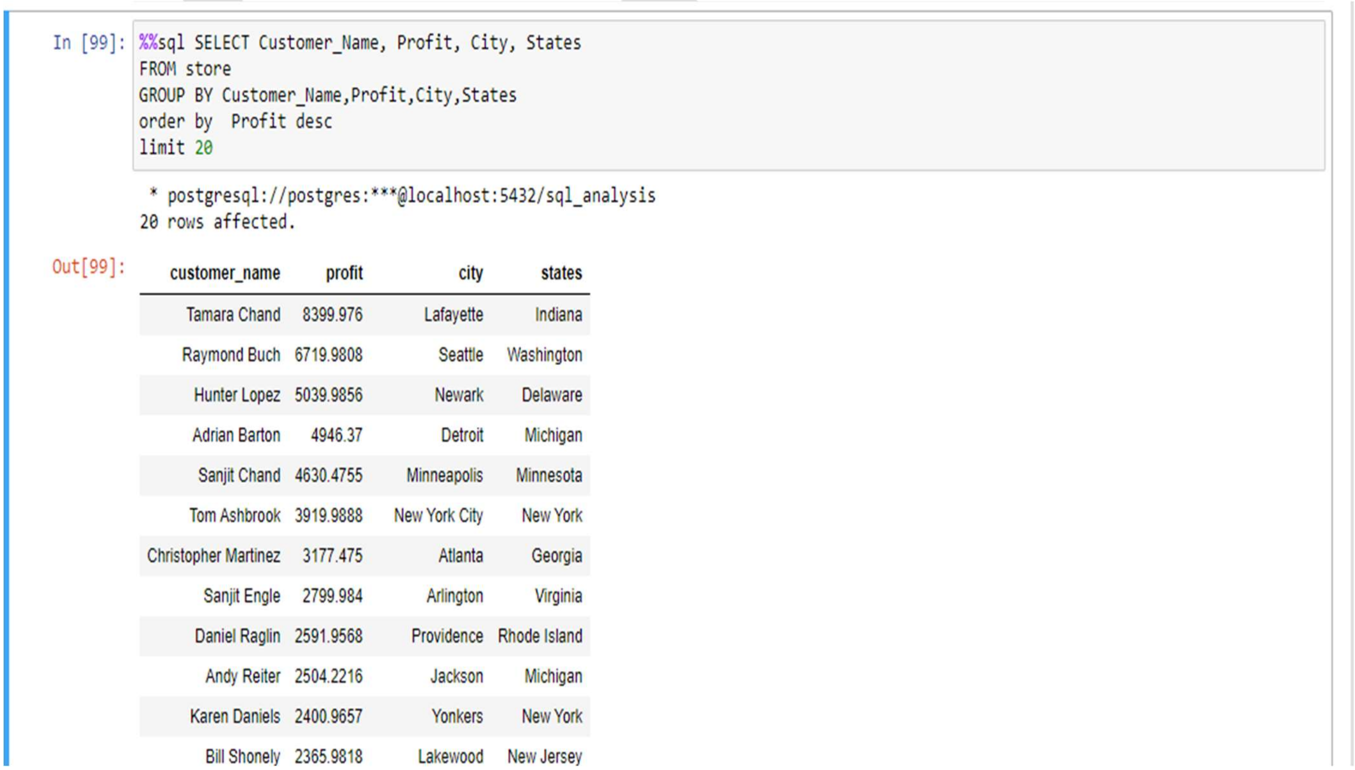
```
 * postgresql://postgres:***@localhost:5432/sql_analysis
4 rows affected.
```

Out[21]:

region	no_of_customers	total_sale
West	3202	725215.8644999999
East	2847	678394.1039999992
Central	2321	500865.4108000007
South	1619	391334.76900000055

Customer Analysis:

Top Customers



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         limit 20
```

```
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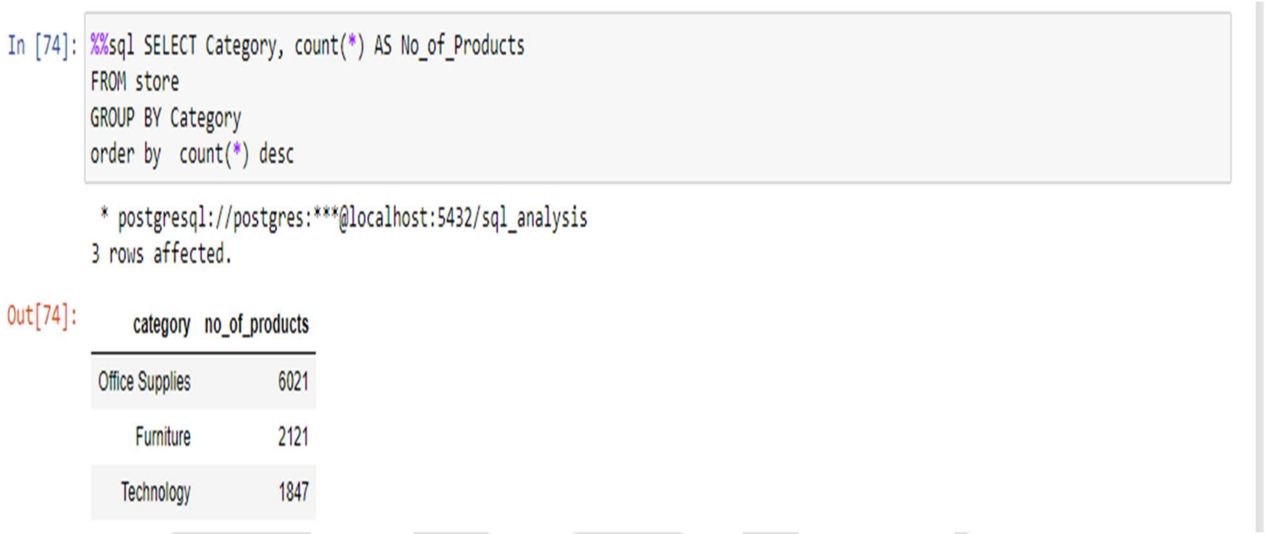
20 rows affected.
```

Out[99]:

customer_name	profit	city	states
Tamara Chand	8399.976	Lafayette	Indiana
Raymond Buch	6719.9808	Seattle	Washington
Hunter Lopez	5039.9856	Newark	Delaware
Adrian Barton	4946.37	Detroit	Michigan
Sanjit Chand	4630.4755	Minneapolis	Minnesota
Tom Ashbrook	3919.9888	New York City	New York
Christopher Martinez	3177.475	Atlanta	Georgia
Sanjit Engle	2799.984	Arlington	Virginia
Daniel Raglin	2591.9568	Providence	Rhode Island
Andy Reiter	2504.2216	Jackson	Michigan
Karen Daniels	2400.9657	Yonkers	New York
Bill Shonely	2365.9818	Lakewood	New Jersey

Product Analysis:

Top Products By Category



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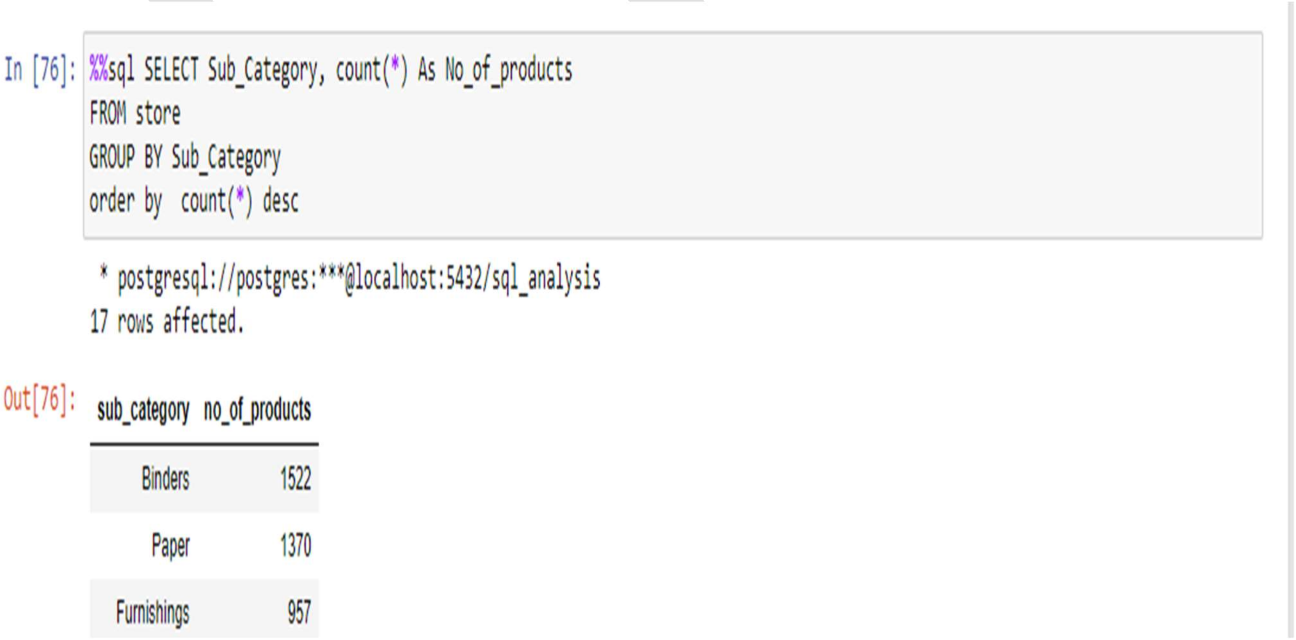
3 rows affected.
```

Out[74]:

category	no_of_products
Office Supplies	6021
Furniture	2121
Technology	1847

Top Products By Sub Category



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         GROUP BY Sub_Category
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```

```
 * postgresql://postgres:***@localhost:5432/sql_analysis
17 rows affected.
```

Out[76]:

sub_category	no_of_products
Binders	1522
Paper	1370
Furnishings	957

Recommendations:

Based on the analysis, the following recommendations are suggested:

1. Maximize Marketing Efforts: Focus on targeted marketing campaigns for high-potential customer segments.

2. Optimize Product Mix: Highlight and promote the top-selling products and categories.

3. Enhance Shipping Experience: Explore options to expedite shipping without compromising cost-effectiveness.

Conclusion:

In conclusion, this report encapsulates a powerful SQL-driven analysis that uncovers actionable insights to propel sales strategies. The fusion of data-driven decision-making and strategic recommendations lays the foundation for remarkable growth and customer-centricity.
