**PIZZA SALES DATA ANALYSIS PROJECT**

### **Project Overview:**

Analysing Sales Data For a Pizza Business To Gain Insights And Improve Decision-Making.

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### **Project Objective:**

Generate A comprehensive Pizza Sales Dynamic Dashboard’s To Analyze And Visualize Sales Data For A Pizza Business.

### **Project Requirements:**

* Problem Statement
* Data Source
* Software’s Required

**Problem Statement:**

1. KPI’S Requirement
2. Chart’s Requirement

**KIP’S Requirement:**

We Need To Analyze Key Performance Indicator’s For Our Pizza Sales Data To Gain Insight’s Into Our Business Performance.

1. **Total Revenue**

**The Sum Of The Total Price Of All Pizza Orders**

1. **Average Order Value**

**The Average Amount Spent Per Order, Calculated By Dividing The Total Revenue By The Total Number Of Orders**

1. **Total Pizza Sold**

**The Sum Of The Quantities Of All Pizzas Sold**

1. **Total Orders**

**The Total Number Of Orders Placed**

1. **Average Pizzas Per Order**

**The Average Number Of Pizzas Sold Per Order, Calculated By Dividing The Total Number Of Pizzas Sold By The Total Number Of Orders**

**Chart’s Requirement:**

**We Would Like To visualize Various Aspects Of Our Pizza Sales Data To Gain Insights And Understand Key Trends**

1. **Daily Trend For Total Orders**

**I Create A Bar Chart That Displays The Daily Trend Of Total Orders Over A Specific Time Period. This Chart Will Help To Identify any Patterns Or Fluctuations In Order Volumes On a Daily Basis.**

1. **Monthly Trend For Total Orders**

**I Create A line Chart that Illustrates The Hourly trend Of Total Orders throughout The Day. This Chart Will Allow To Identity Peak Hours Or Periods Of High Order Activity.**

1. **Percentage Of Sales By Pizza Category**

**I create A Pie Chart That Shows The Distribution Of sales across Different Pizza Categories. This Chart Will Provide Insights Into The Popularity Of various Pizza categories And Their Contribution To Overall Sales.**

1. **Percentage Of Sales By pizza Size**

**I Generate A Pie Chart That Represents The Percentage Of Sales Attributed To Different Pizza sales. This Chart will help Us To Understand customer Preferences For Pizza Sizes And Their Impact On Sales.**

1. **Total Pizza Sold By Pizza category**

**I Create A Funnel Chart That Represents The Total Number Of Pizzas Sold For Each Pizza category. This Chart will Allow To Compare The sales Performance Of Different Pizza Categories.**

1. **Top 5 Best Seller’s By Revenue, Total Quantity and Total Order’s**

**I Create A Bar Chart highlighting The Top 5 Best-selling Pizzas based On revenue ,Total Quantity and Total Orders. This Chart Will Help To identity The Most Popular Pizza Options.**

1. **Bottom 5 Worst Seller’s By Revenue, Total Quantity and Total Order’s**

**I Create A Bar Chart Showcasing The Top 5 Worst-selling Pizzas based On revenue ,Total Quantity and Total Orders. This Chart Will Help To identity The Most Popular Pizza Options.**

**Data Source:**

The Data Collected From The Stakeholders Of Pizza Business

Data Collection Tool : MS excel

**Software’s Used:**

Database : MY SQL

BI Tool : Microsoft Power BI

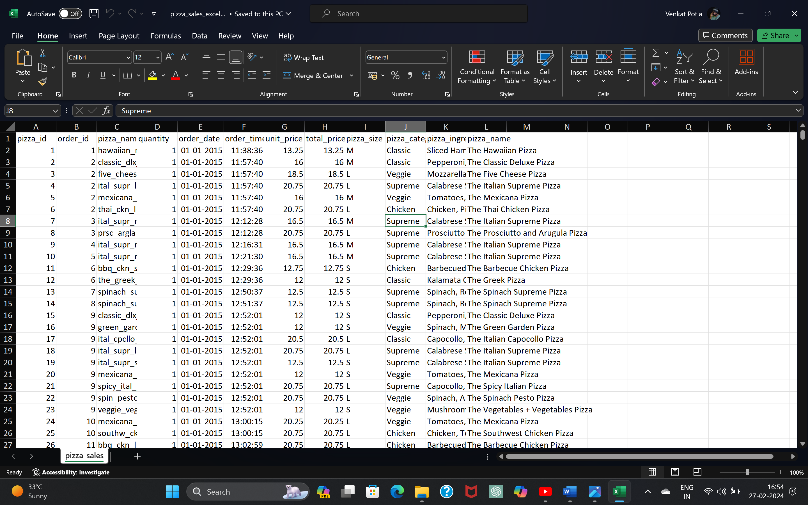
### **Project Process:**

**Step By Step Process:**

1. Collecting the Data set
2. Importing Data set Into MYSQL Data base
3. Writing The SQL Queries To Evaluate The Values
4. Creating Report For MYSQL Server
5. Connect MYSQL Server To Power BI
6. Data Cleaning
7. Data Processing
8. Data Visualization
9. Final Dash Board

**1.Collecting Data**

The Data set collected From The pizza Business Stakeholder’s In The Form Of Excel Sheets.



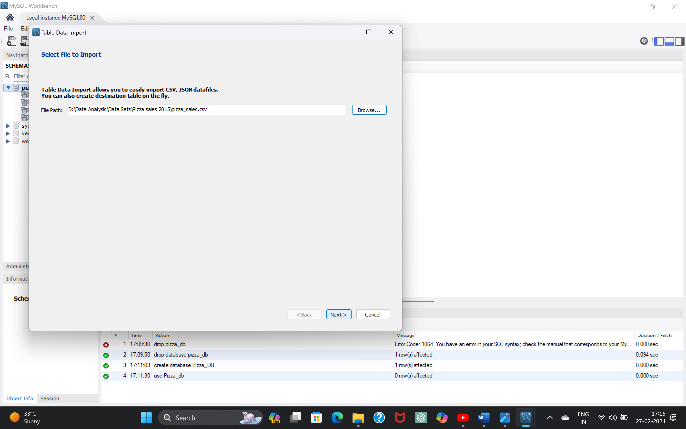
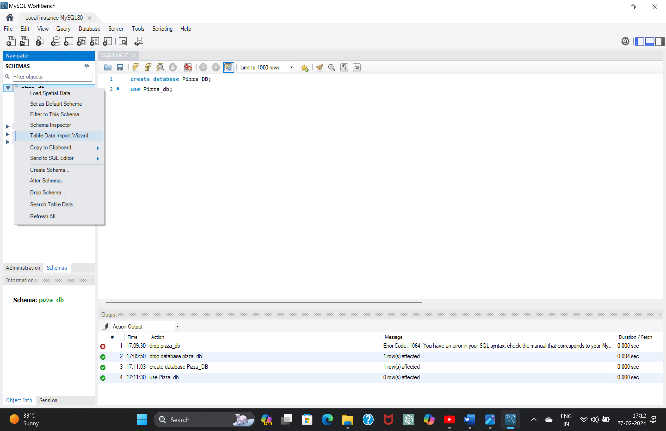
**2.Importing Data set Into MYSQL Database**

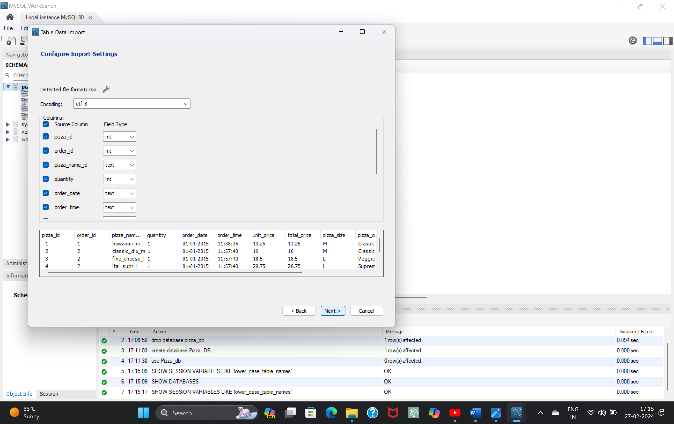
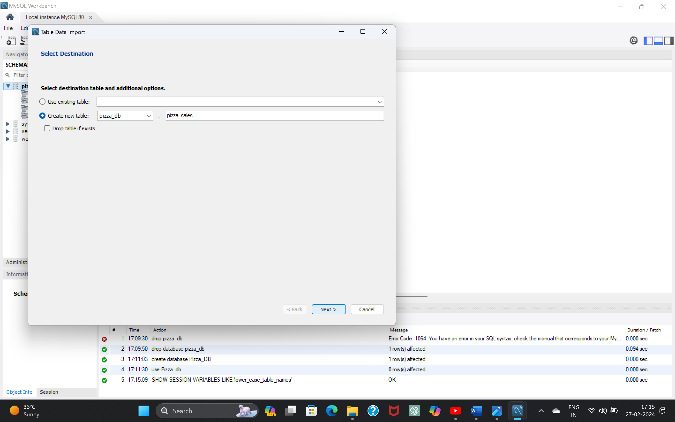
* To Import Dataset into The MYSQL Database, first We Need To create A New Database

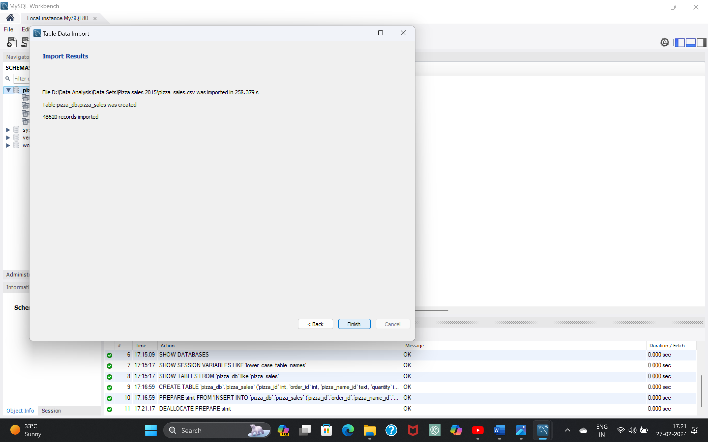
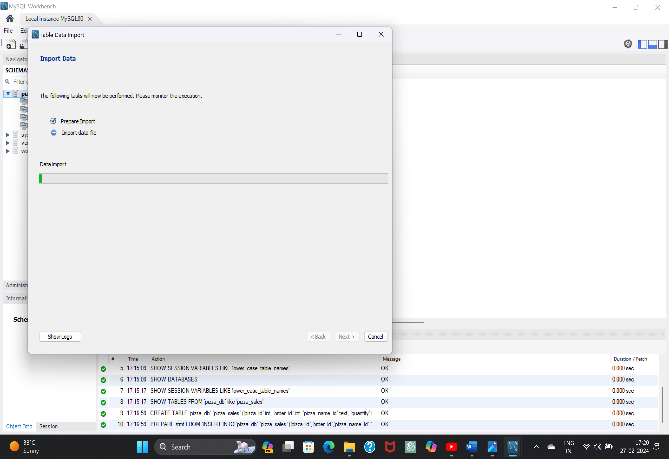
Syntax: Create Database Database\_name;

Create Database Pizza\_DB;

* To Import the Dataset Into The Database, Right click on Database Name, Go To Table Data Import Wizard ,and Then Choose file That We want To Import Into Database.
* After a successful Import ,The Data Will Be Displayed In the Form Of A Table. We Can Retrieve The Table Data By Writing Queries.



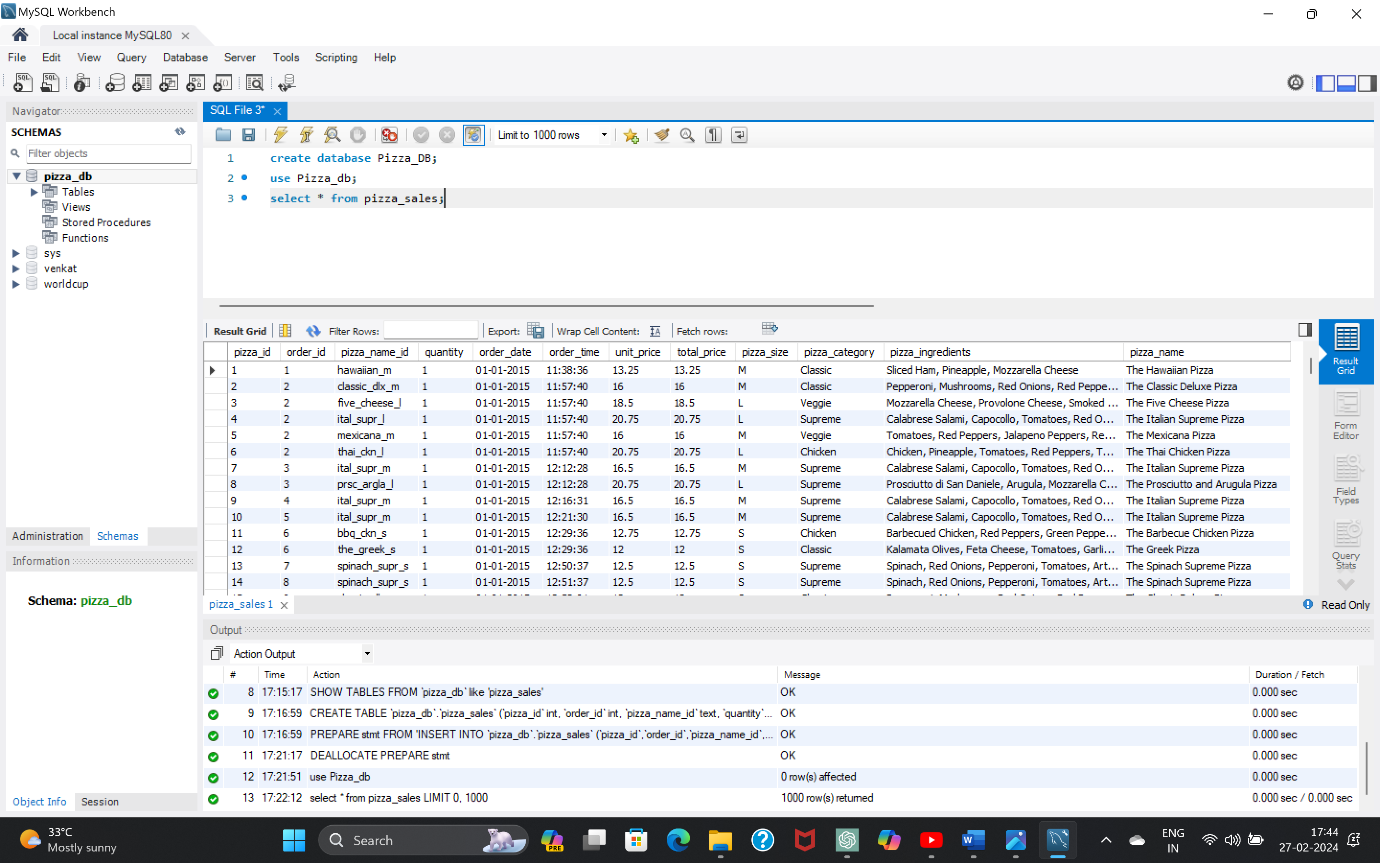
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* After Importing, Retrieve The table data By Writing DQL Commands.

Syntax: Select \* From Table\_name;

Select \* From Pizza\_sales;

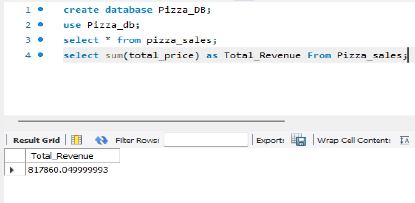


**MYSQL Queries To Evaluate The Values**

**Here, I’m Writing SQL Queries Based On the Requirements To Evaluate The Values For Dashboards.**

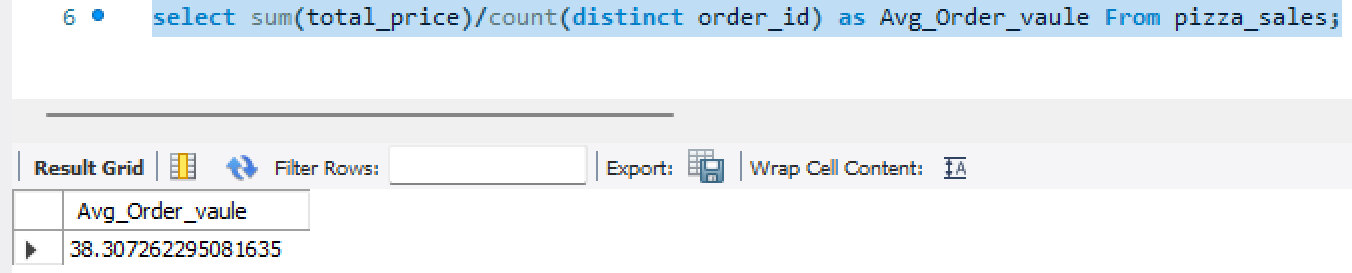
1. **Total Revenue**

**select sum(total\_price) as Total\_Revenue From Pizza\_sales;**

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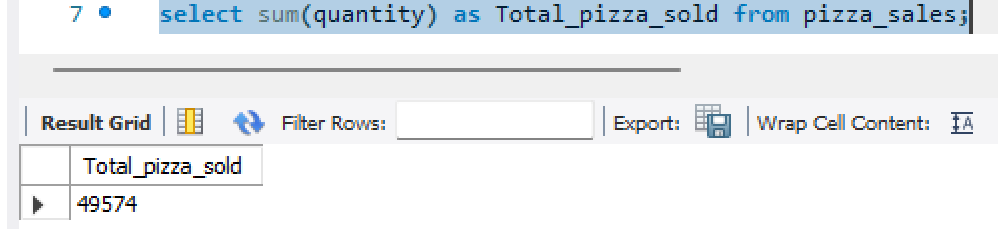
1. **Average Order Value**

**select sum(total\_price)/count(distinct order\_id) as Avg\_Order\_vaule From pizza\_sales;**

****

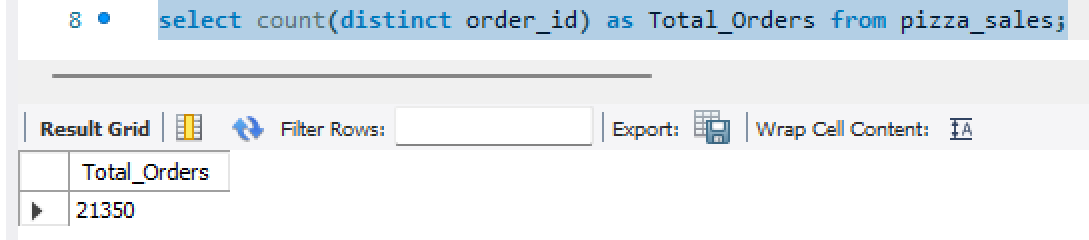
1. **Total Pizza Sold**

**select sum(quantity) as Total\_pizza\_sold from pizza\_sales;**

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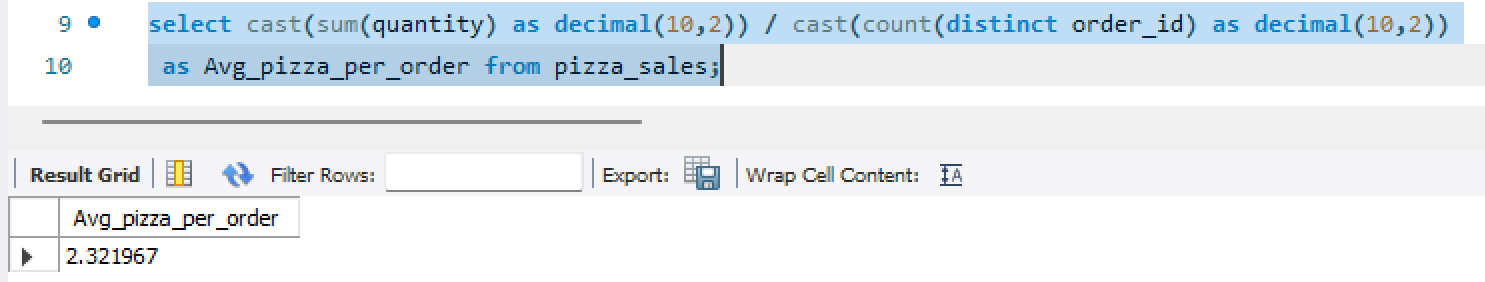
1. **Total Orders**

**select count(distinct order\_id) as Total\_Orders from pizza\_sales;**

****

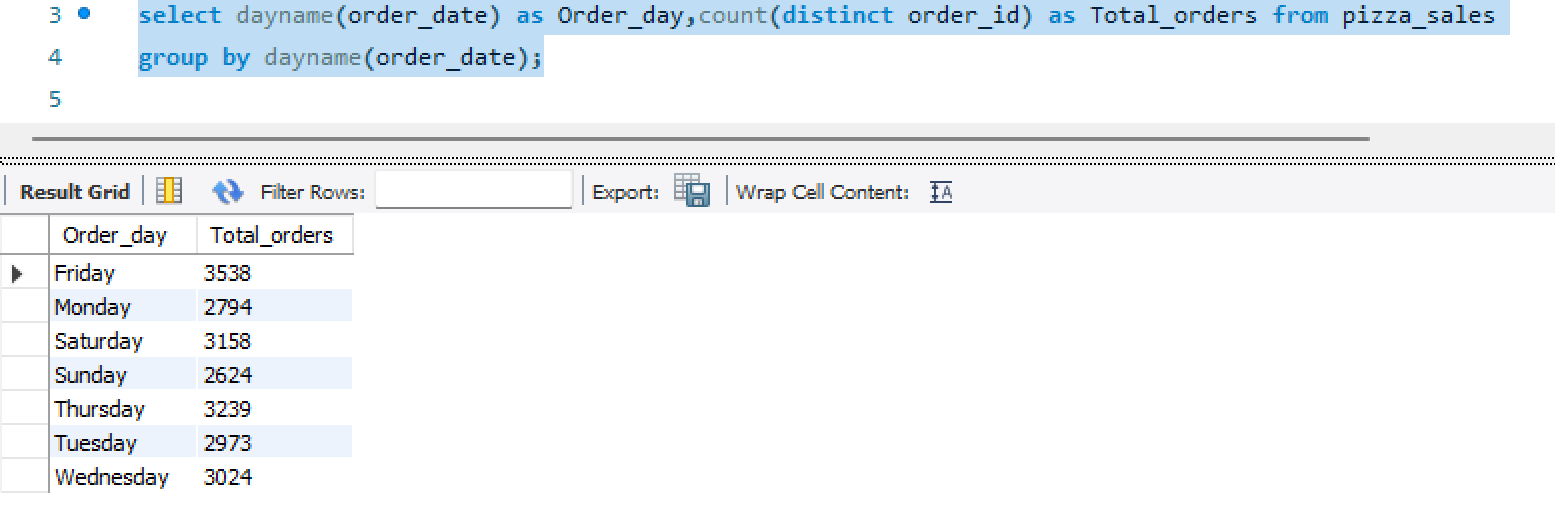
1. **Average Pizza Per Order**

**select cast(sum(quantity) as decimal(10,2)) / cast(count(distinct order\_id) as decimal(10,2)) as Avg\_pizza\_per\_order from pizza\_sales;**

****

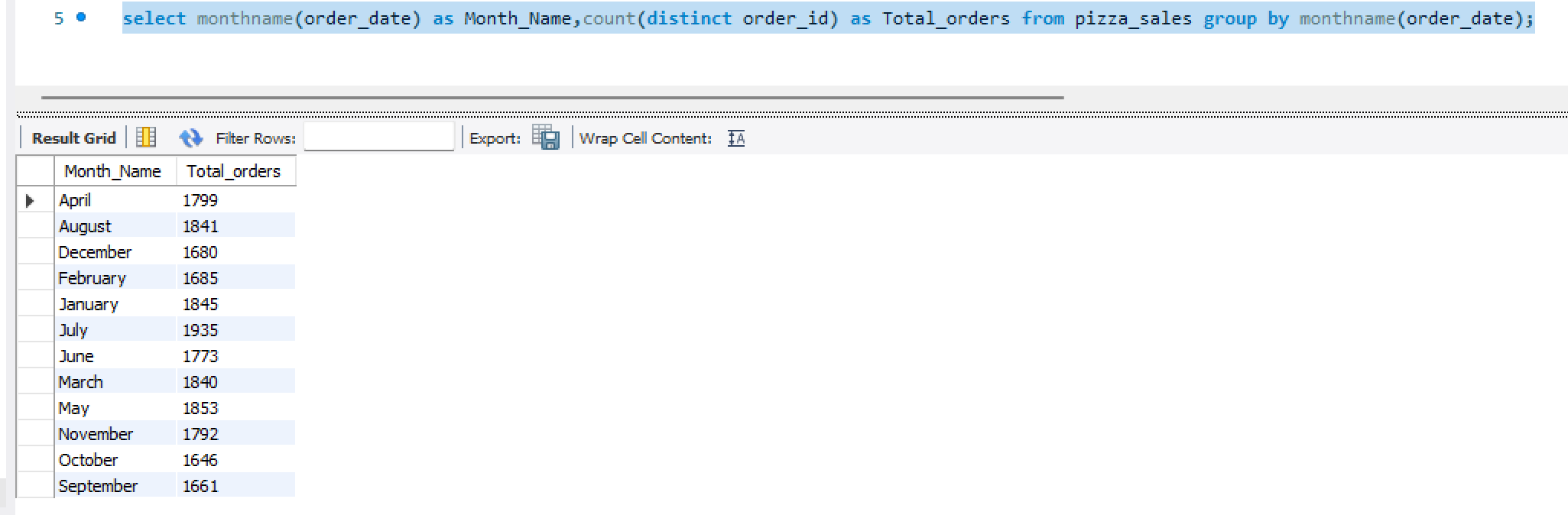
1. **Daily Trend For Total Orders**

**select dayname(order\_date) as Order\_day,count(distinct order\_id) as Total\_orders from pizza\_sales group by dayname(order\_date);**

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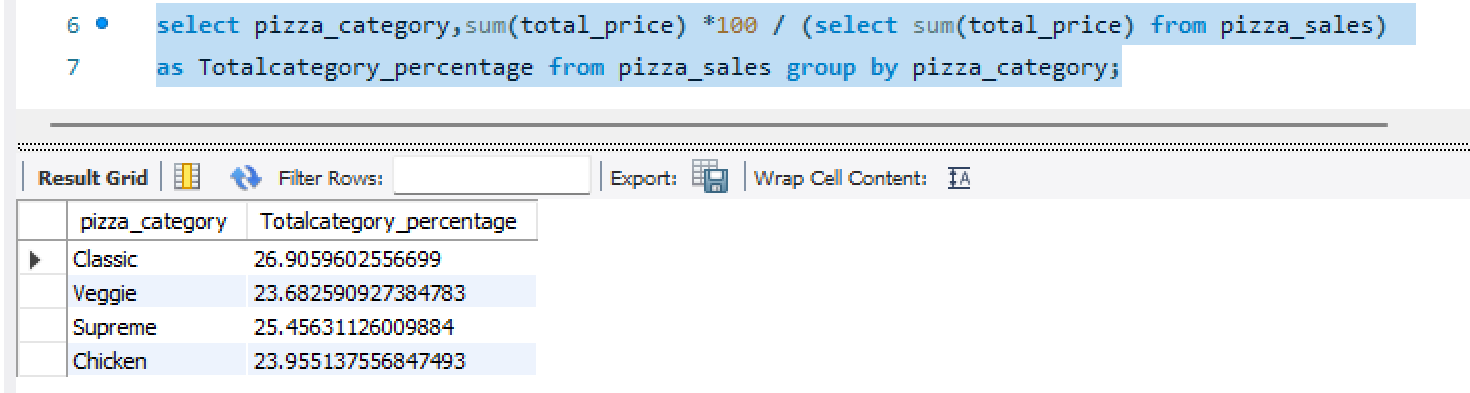
1. **Monthly Trend For Total Orders**

**select monthname(order\_date) as Month\_Name,count(distinct order\_id) as Total\_orders from pizza\_sales group by monthname(order\_date);**

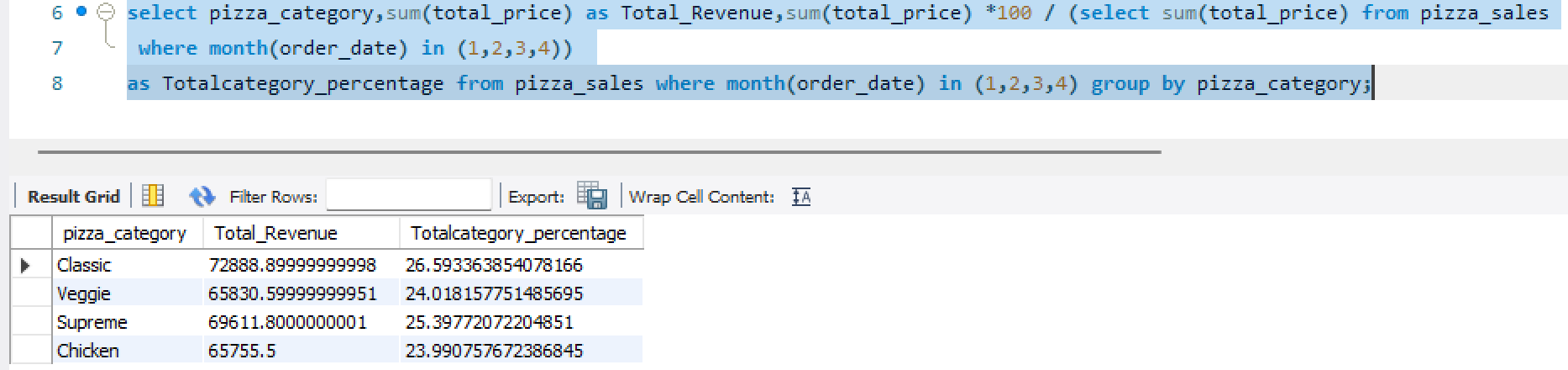
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1. **Percentage of sales By Pizza category**

**select pizza\_category,sum(total\_price) \*100 / (select sum(total\_price) from pizza\_sales) as Totalcategory\_percentage from pizza\_sales group by pizza\_category;**

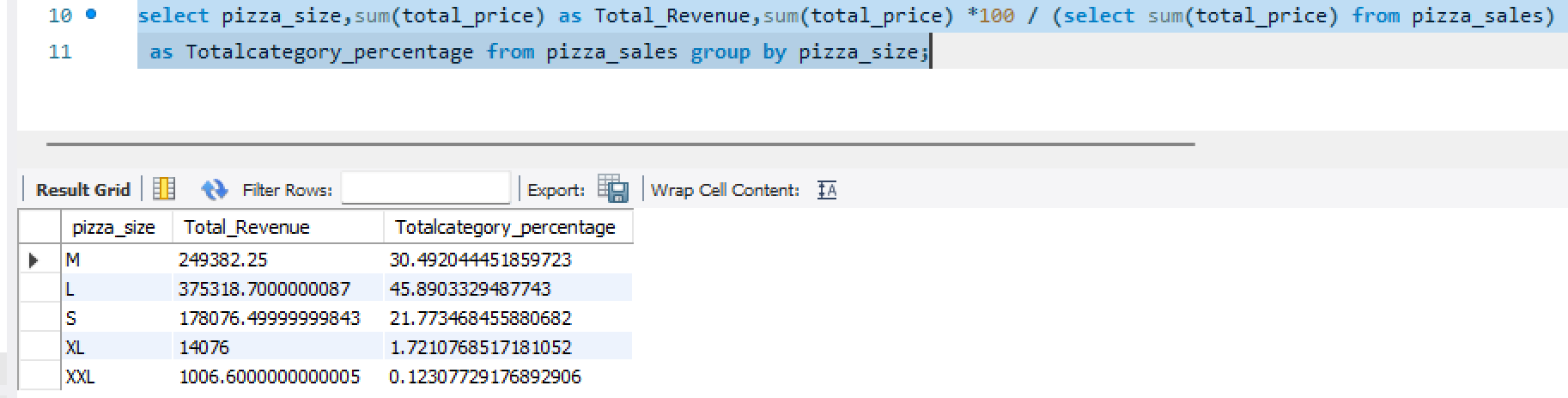
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**select pizza\_category,sum(total\_price) as Total\_Revenue,sum(total\_price) \*100 / (select sum(total\_price) from pizza\_sales where month(order\_date) in (1,2,3,4)) as Totalcategory\_percentage from pizza\_sales where month(order\_date) in (1,2,3,4) group by pizza\_category;**

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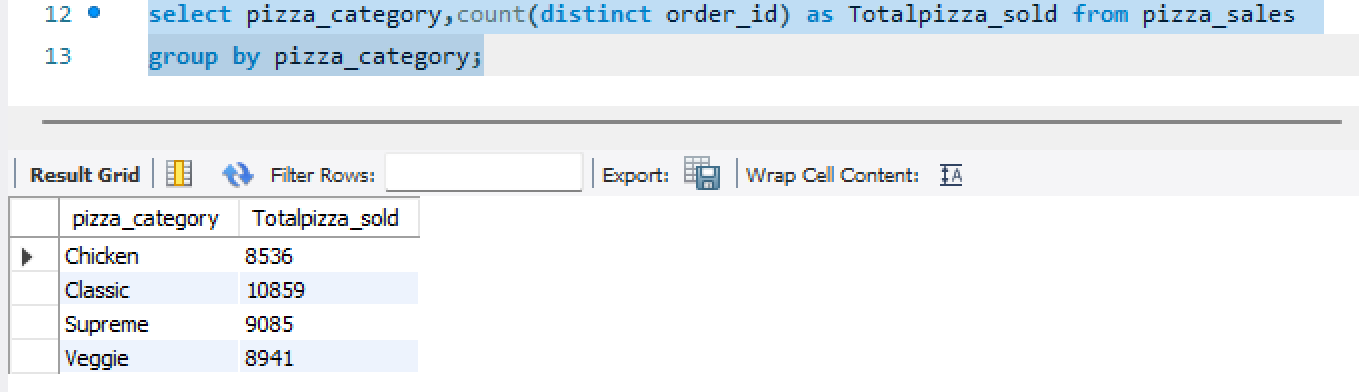
1. **Percentage of sales By Pizza Size**

**select pizza\_size,sum(total\_price) as Total\_Revenue,sum(total\_price) \*100 / (select sum(total\_price) from pizza\_sales) as Totalcategory\_percentage from pizza\_sales group by pizza\_size;**

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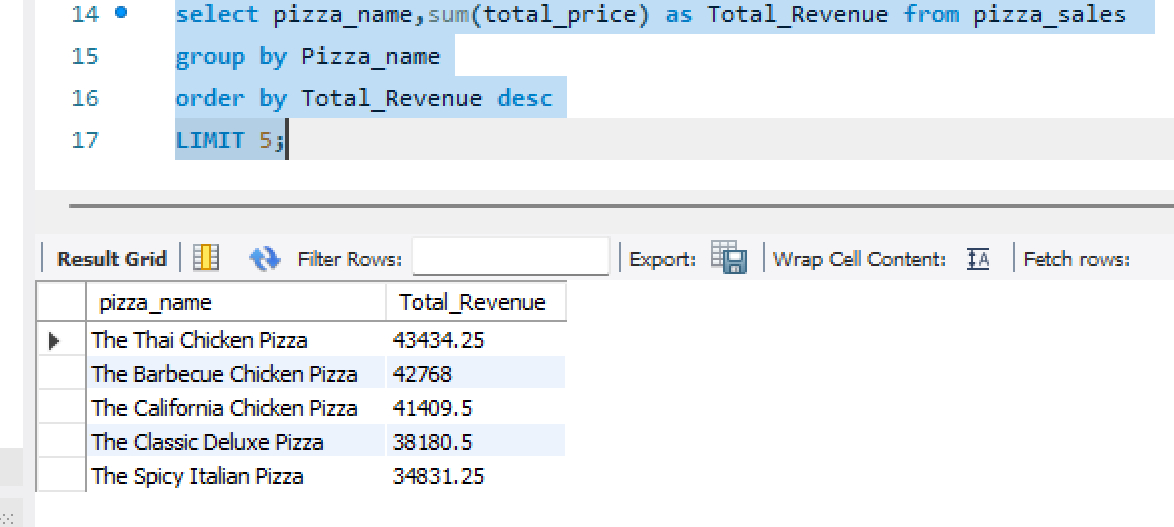
1. **Total Pizza Sold By Pizza category**

**select pizza\_category,count(distinct order\_id) as Totalpizza\_sold from pizza\_sales group by pizza\_category;**

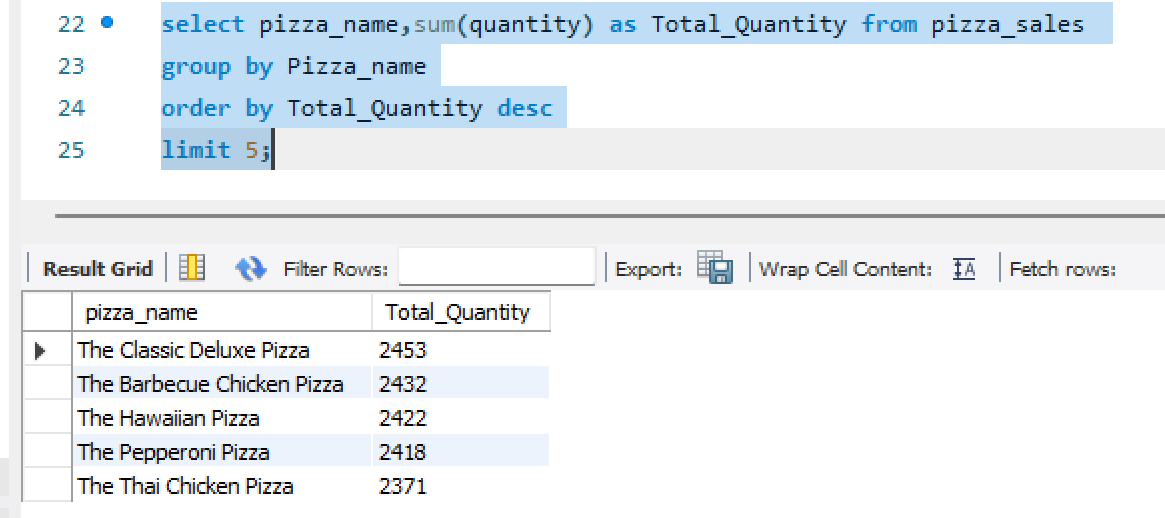


1. **Top 5 Best Seller’s By Revenue, Total Quantity and Total Order’s**

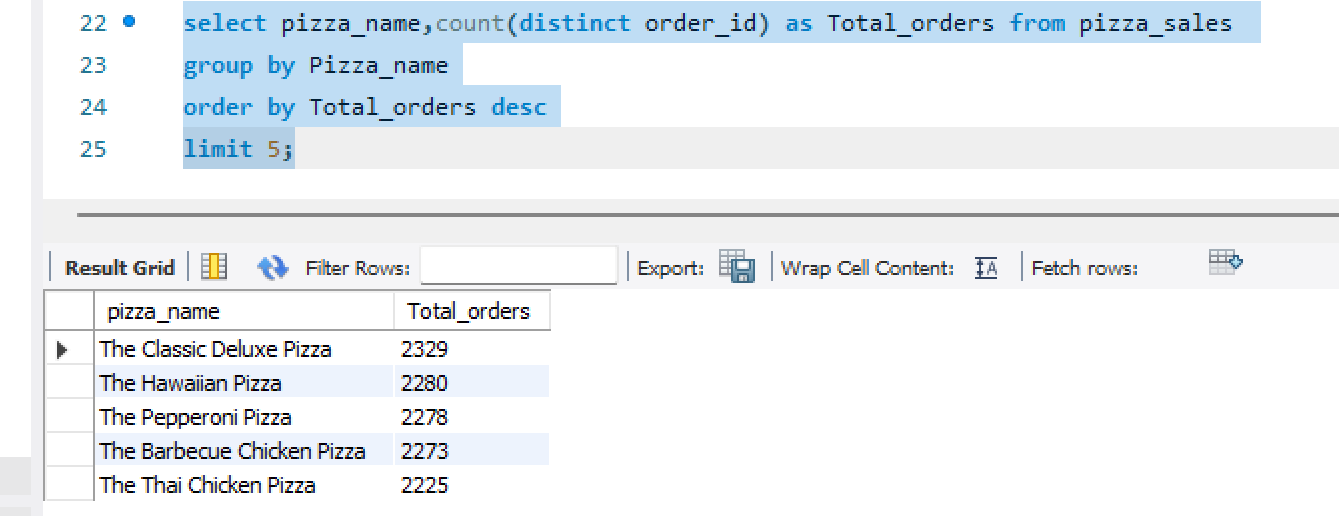
**select pizza\_name,sum(total\_price) as Total\_Revenue from pizza\_sales group by Pizza\_name order by Total\_Revenue desc limit 5;**

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**select pizza\_name,sum(quantity) as Total\_Quantity from pizza\_sales group by Pizza\_name order by Total\_Quantity desc limit 5;**

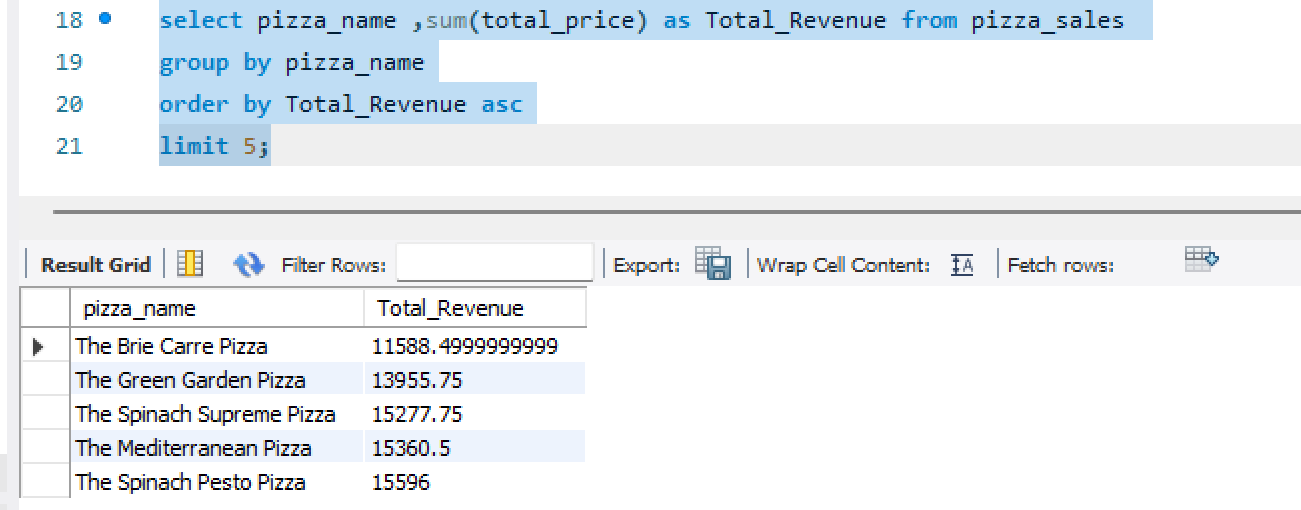
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**select pizza\_name,count(distinct order\_id) as Total\_orders from pizza\_sales group by Pizza\_name order by Total\_orders desc limit 5;**

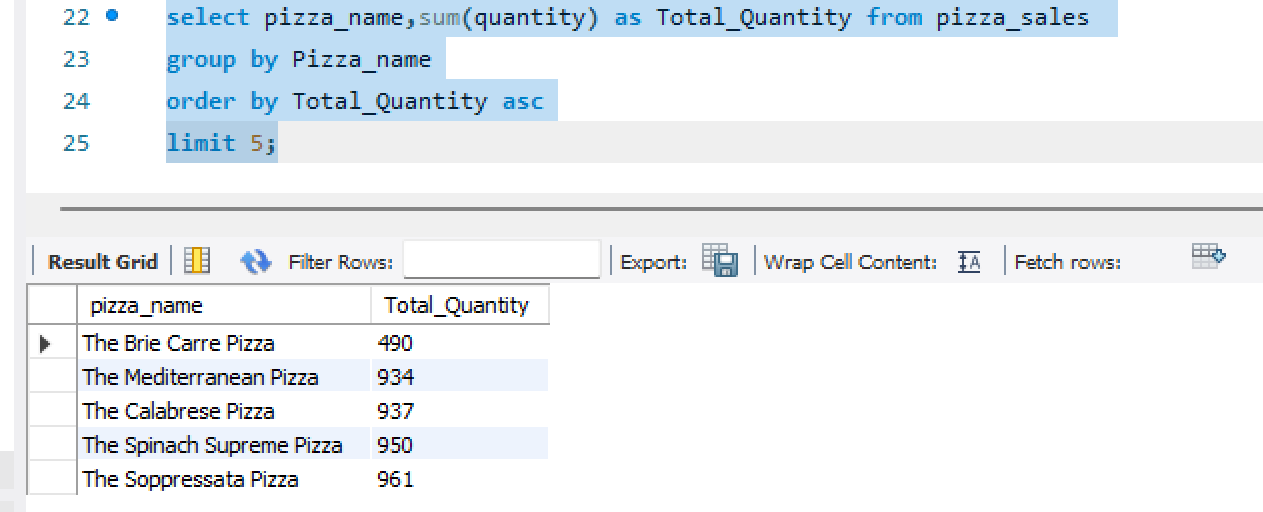
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1. **Bottom 5 Worst Seller’s By Revenue, Total Quantity and Total Order’s**

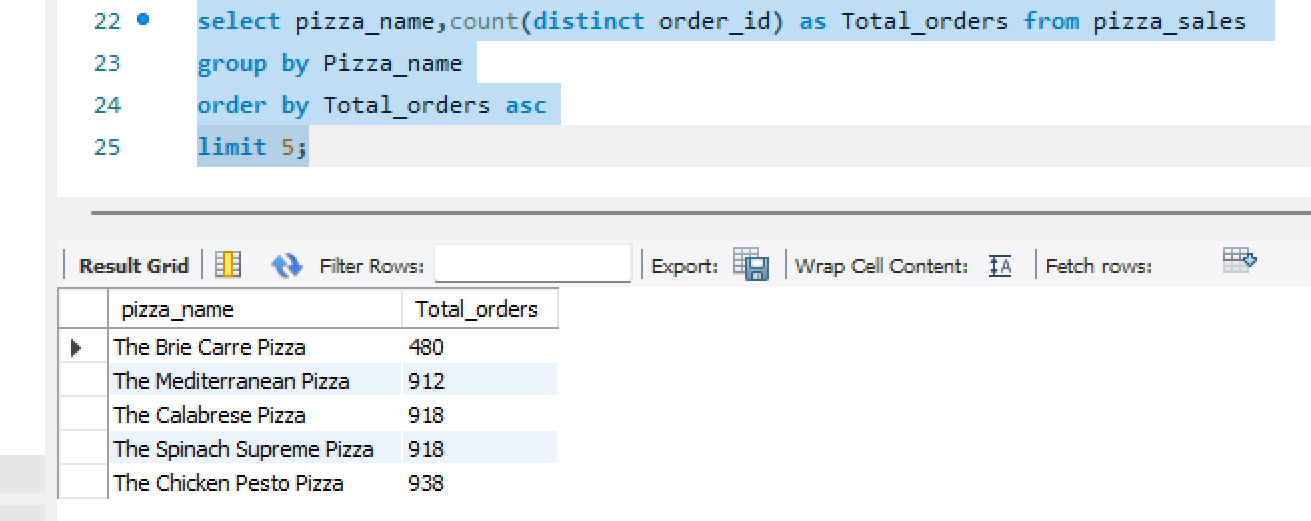
**select pizza\_name,sum(total\_price) as Total\_Revenue from pizza\_sales group by Pizza\_name order by Total\_Revenue asc limit 5;**

****

**select pizza\_name,sum(quantity) as Total\_Quantity from pizza\_sales group by Pizza\_name order by Total\_Quantity asc limit 5;**

****

**select pizza\_name,count(distinct order\_id) as Total\_orders from pizza\_sales group by Pizza\_name order by Total\_orders asc limit 5;**

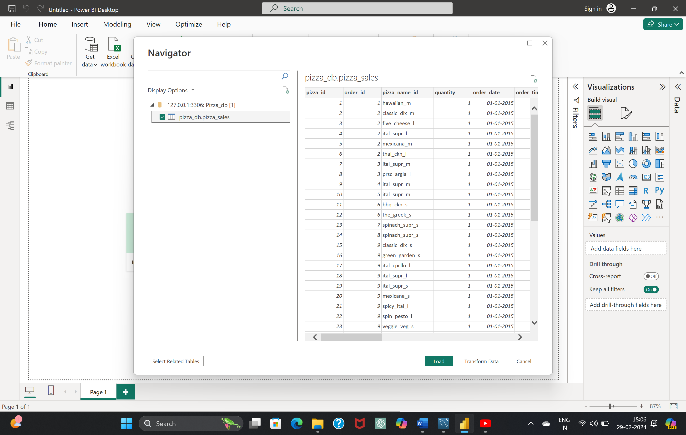
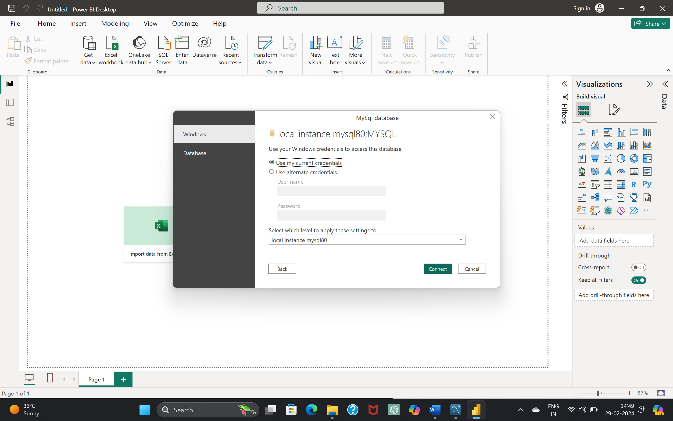
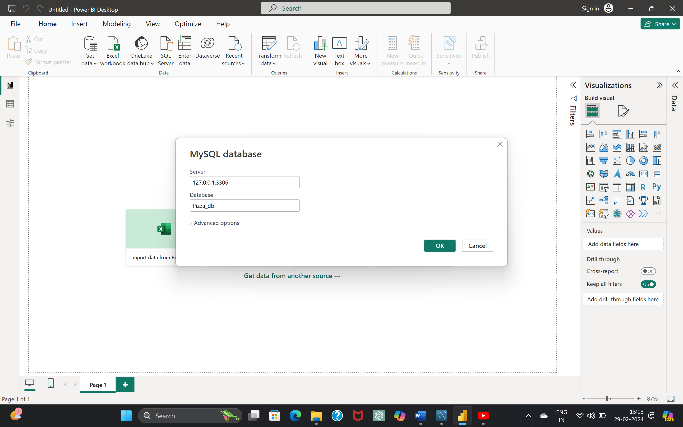
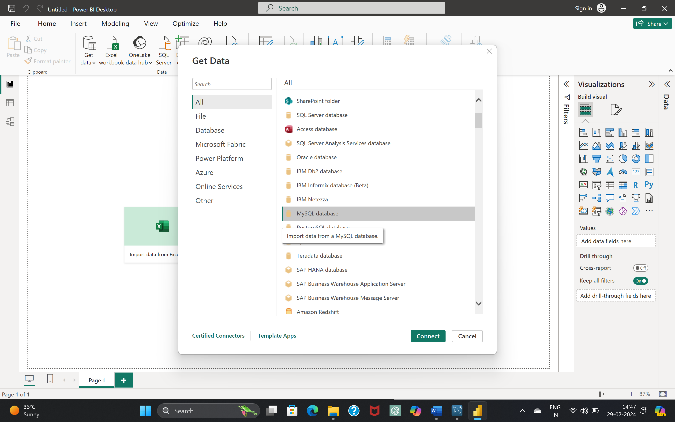
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**4.Creating Report For MYSQL Server**

Now, Save All The Queries That We Wrote To Evaluate the Values With The Dashboards. Create a Report For MYSQL Queries

**5.Connect MYSQL Server With Power BI**

* For That, Open Power BI, Go to Get Data and Select MYSQL Database Then, Make a Connection With MYSQL Database

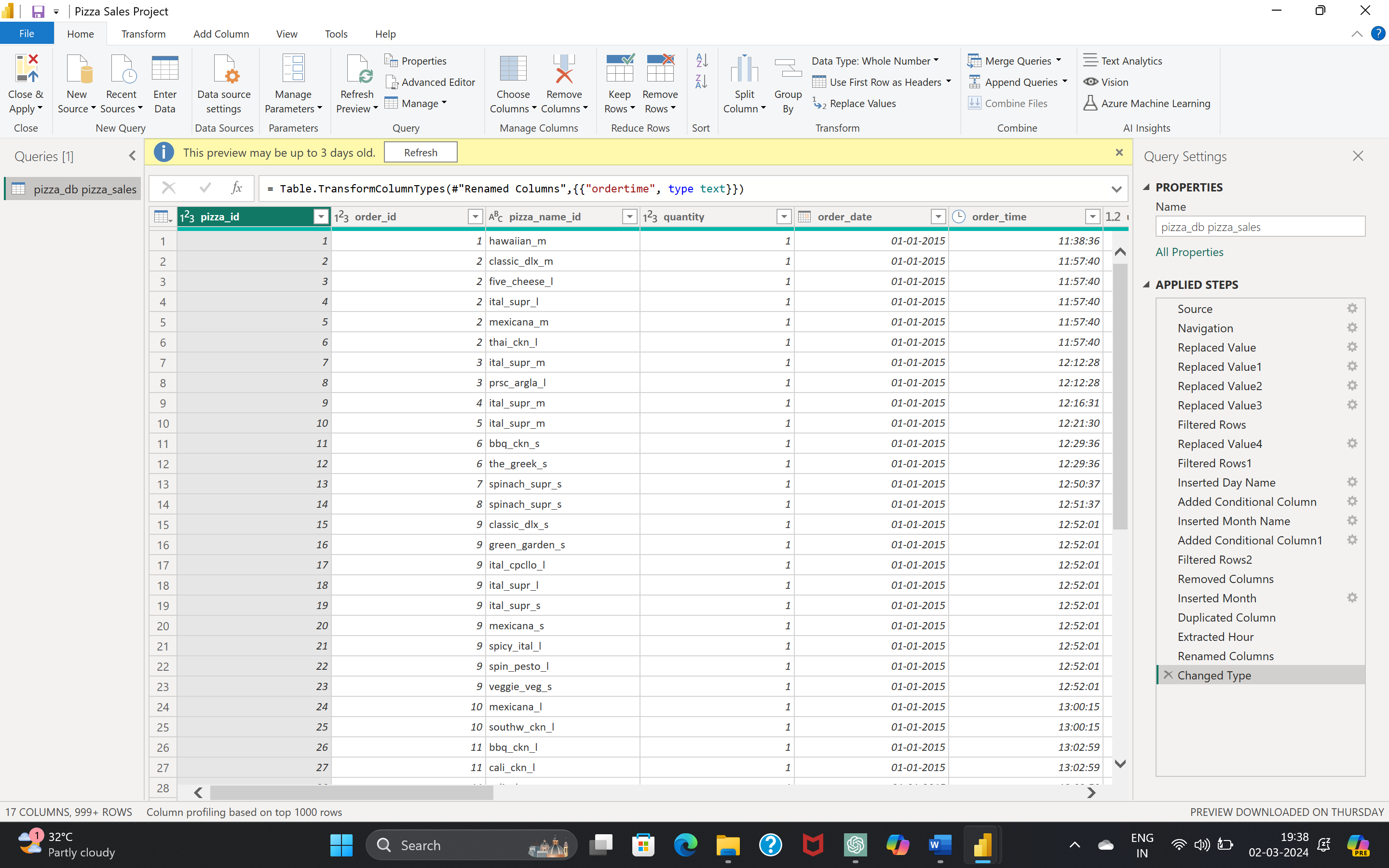


* After Completion of Connection we can Load Or Transform Data Based On Requirement

**6.Data Cleaning &Processing**

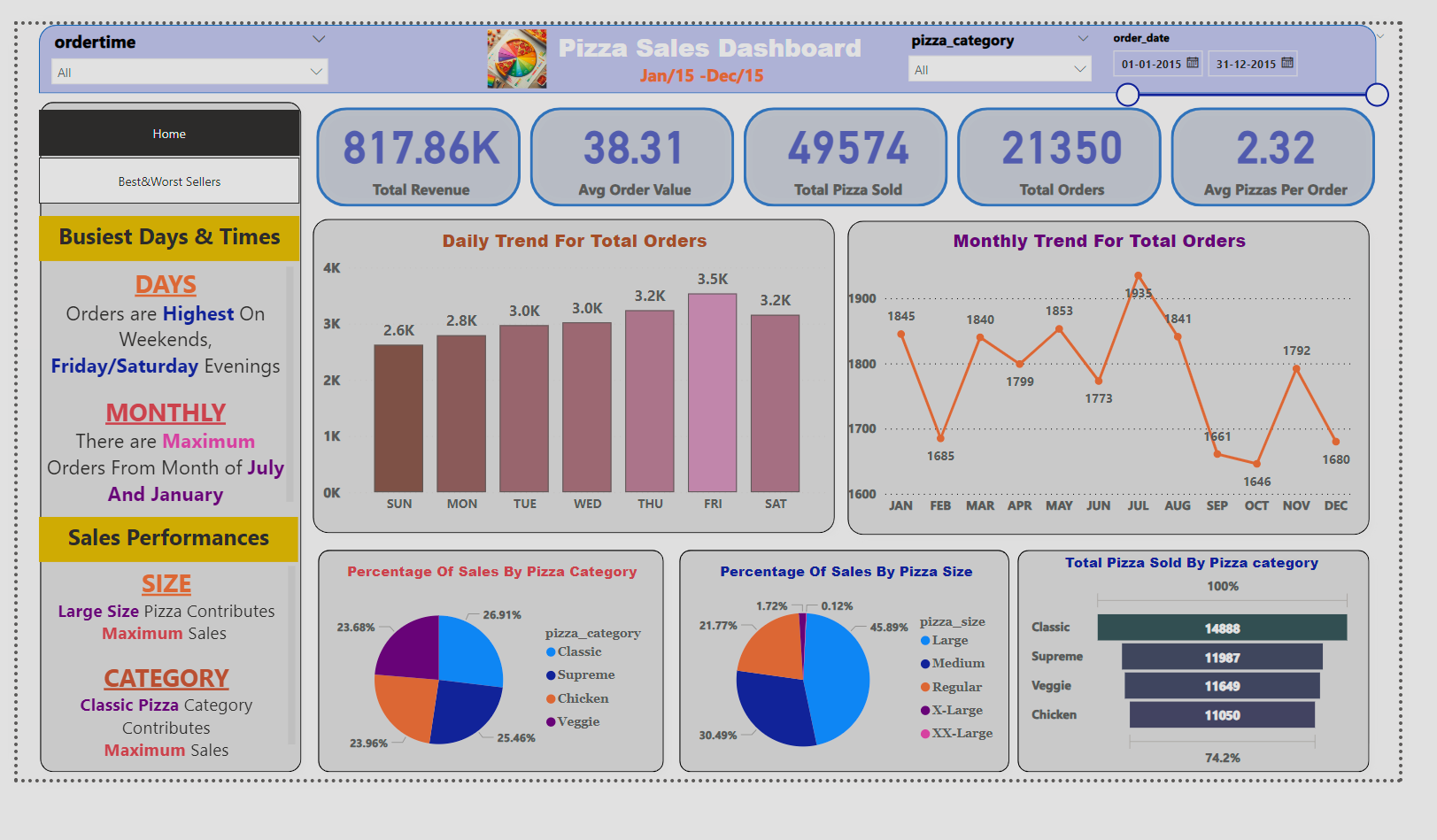
* After Loading Data Into PowerBI By Using The Power Query Editor, We Perform DAX(Data Analysis Express) For Data cleaning and Processing
* These Are Some Of DAX Formulas written for Data Visualization

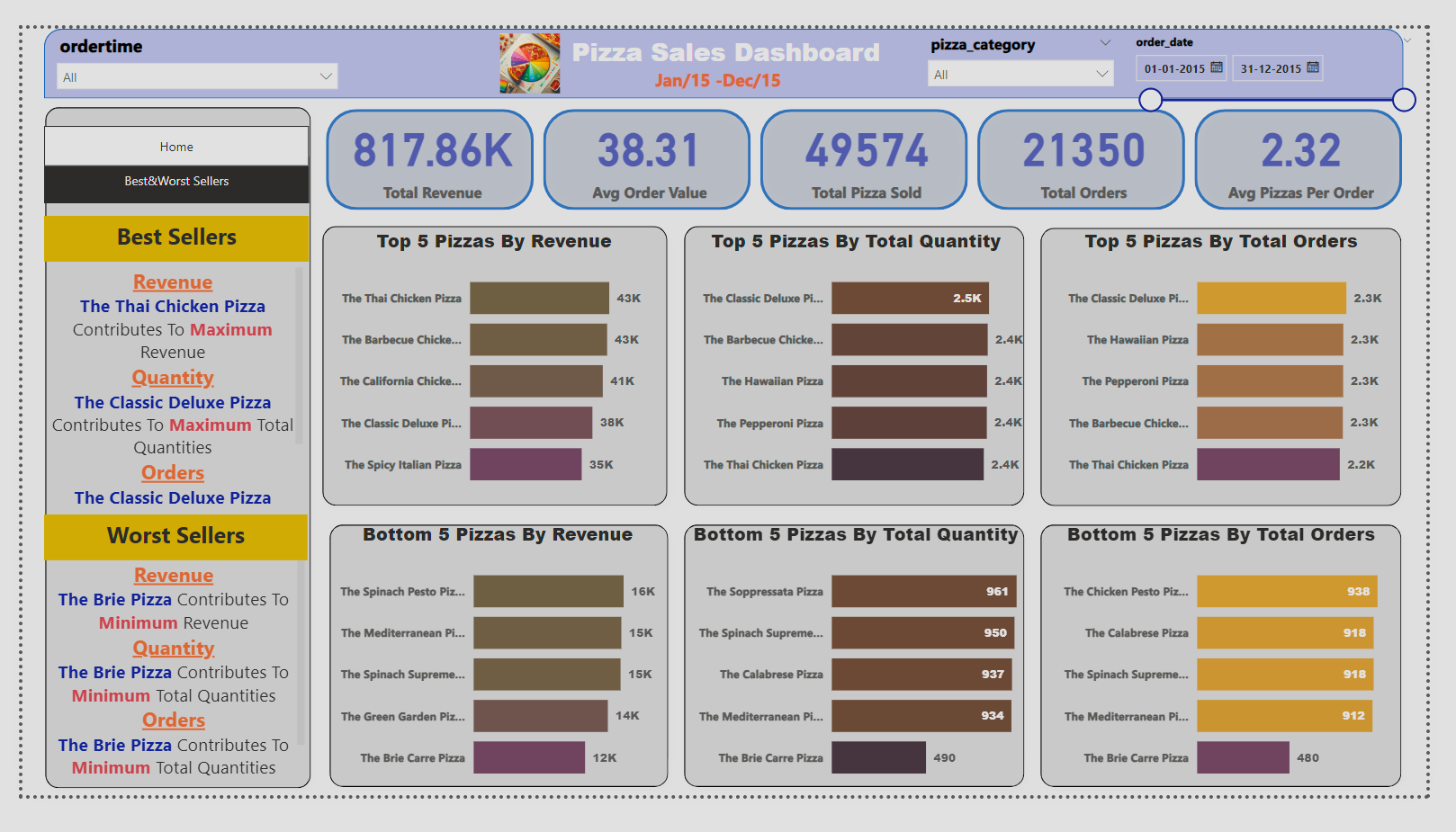
1. Total Orders = DISTINCTCOUNT('pizza\_db pizza\_sales'[order\_id])
2. Total Pizza Sold = sum('pizza\_db pizza\_sales'[quantity])
3. Total Revenue = sum('pizza\_db pizza\_sales'[total\_price])
4. Avg Pizzas Per Order = [Total Pizza Sold]/[Total Orders]
5. Avg Order Value = [Total Revenue]/[Total Orders]
6. Order Day = upper(LEFT('pizza\_db pizza\_sales'[Day Name],3))
7. Order Month = upper(LEFT('pizza\_db pizza\_sales'[Month Name],3))



**8.Data Visualization**

* After Cleaning And Processing The Data According To The Requirements of Business Stakeholders, Prepare Dashboards’ For a Pizza Business To Gain Insights And Improve Decision-Making





### **Conclusion:**

**Overall Performance:**

* + - The pizza sales data reveals a total revenue of **817.86K** with an average order value of **38.31**. This indicates a healthy financial performance.
    - A total of **49,574 pizzas** were sold, resulting in **21,350 orders**. On average, each order contains **2.32 pizzas**.
    - The Thai Chicken Pizza is the highest revenue-generating item, contributing significantly to the total revenue of **817.86K**.
    - The Classic Deluxe Pizza is popular in terms of quantity sold and total orders placed
* On average, each order contains approximately **2.32 pizzas**.

**Busiest Days and Times:**

* **Weekends**, particularly **Friday and Saturday evenings**, witness the highest order volumes. It’s crucial to allocate resources effectively during these peak hours.
* The months of **July and January** consistently show the maximum number of orders. Seasonal trends should be considered for inventory planning.

**Sales Performances:**

* **Large size pizzas** contribute significantly to overall sales. Focusing on promoting this category could yield further growth.
* The **classic pizza** category also plays a substantial role in sales.