**PROBLEM STATEMENT**

**KPI’s REQUIREMENT**

We need to analyze key indicators for our pizza sales data to gain insights into our business performance. Specifically, we want to calculate the following metrics:

1. **Total Revenue**: The sum of the total price of all pizza orders.
2. **Average Order Value**: The average amount spent per order, calculated by dividing the total revenue by the total number of orders.
3. **Total Pizzas Sold**: The sum of the quantities of all pizzas sold.
4. **Total Orders**: The total number of orders placed.
5. **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.

**CHARTS RQUIREMENT**

We would like to visualize various aspects of our pizza sales data to gain insights and understand key trends. We have identified the following requirements for creating charts:

1. **Daily Trend for Total Orders:**

Create a bar chart that displays the daily trend of total orders over a specific time period. This chart will help us identify any patterns or fluctuations in order volumes on a daily basis.

1. **Monthly Trend of Total Orders:**

Create a line chart that illustrates the hourly trend of total orders throughout the day. This chart will allow us to identify peak hours of periods of high order activity.

1. **Percentage of Sales by Pizza Category:**

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:**

Generate a pie chart that represents the percentage of sales attributed to different pizza sizes. This chart will help us understand customer preferences for pizza sizes and their impact on sales.

1. **Total Pizzas Sold by Pizza Category:**

Create a funnel chart that presents the total number of pizzas sold for each pizza category. This chart will allow us to compare the sales performance of different pizza categories.

1. **Top 5 Best Sellers by Revenue, Total Quantity and Total Orders:**

Create a bar chart highlighting the top 5 best-selling pizzas based on the Revenue, Total Quantity, Total Orders, this chart will help us identify the most popular pizza options.

1. **Bottom 5 Best Sellers by Revenue, Total Quantity and Total Orders:**

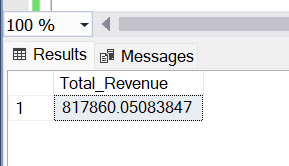
Create a bar chart showcasing the bottom 5 worst-selling pizzas based on the Revenue, Total Quantity, Total Orders, This chart will enable us to identify underperforming or less popular pizza options.

**################## SQL query and output of KPI’s Requirements ###########**

**!---KPI's Metrics---Total Revenue**

select sum(total\_price) as Total\_Revenue

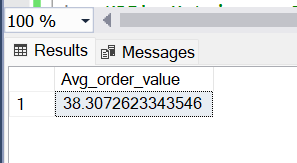
from pizza\_sales;



**!---KPI's Metrics--- Average Order Value (total price/total order)**

select (sum(total\_price) / count(distinct order\_id)) AS Avg\_order\_value

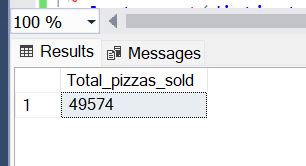
from pizza\_sales;



**!---KPI's Metrics--- Total Pizzas Sold**

select sum(quantity) AS Total\_pizzas\_sold

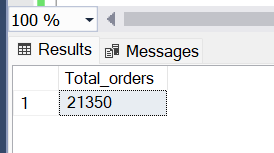
from pizza\_sales;



**!---KPI's Metrics--- Total Orders**

select count(distinct order\_id) AS Total\_orders

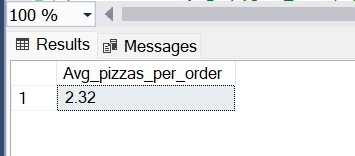
from pizza\_sales;



**!---KPI's Metrics--- Average Pizzas Per Order (total number of pizzas sold/ total number of order)**

select CAST(cast(sum(quantity) as decimal (10,2))/ cast(count(distinct order\_id) as decimal (10,2)) AS DECIMAL(10,2)) AS Avg\_pizzas\_per\_order

from pizza\_sales;

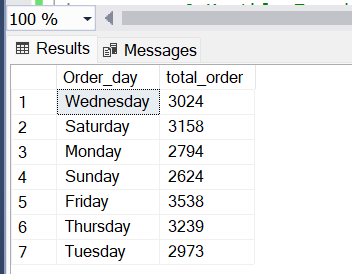


**!----------1-Datily Trend for Total Order**

select DATENAME(DW,order\_date) as Order\_day, count(distinct order\_id) as total\_order

from pizza\_sales

group by DATENAME(DW,order\_date);



**!----------2-Monthly Trend of Total Order**

select DATENAME(MONTH,order\_date) AS Month\_name, count(distinct order\_id) as Total\_orders

from pizza\_sales

group by DATENAME(MONTH,order\_date);



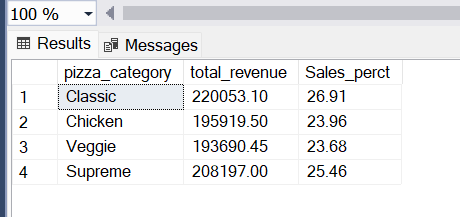
**!----------3-Percent of Sales by Pizzas Catagory (pizzas\_catagory, total\_revenue, percent\_of\_total\_revenue)**

select pizza\_category, cast (sum(total\_price) as decimal (10,2)) as total\_revenue,

cast (sum(total\_price)\*100 / (select sum(total\_price) from pizza\_sales) as decimal(10,2)) as Sales\_perct

from pizza\_sales

group by pizza\_category;



**!----------4-Percentage of Sales by Pizza Size (pizza\_size, total\_sales, pct\_total\_sale\_on\_pizza\_size)**

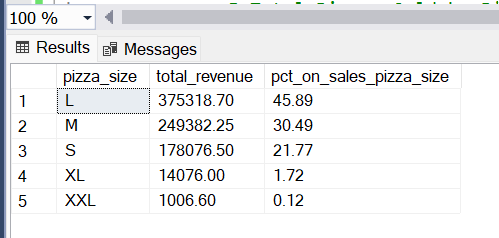
select pizza\_size, cast(sum(total\_price) as decimal(10,2)) as total\_revenue,

cast(sum(total\_price)\*100 / (select sum(total\_price) from pizza\_sales) as decimal(10,2)) as pct\_on\_sales\_pizza\_size

from pizza\_sales

group by pizza\_size

order by pizza\_size;

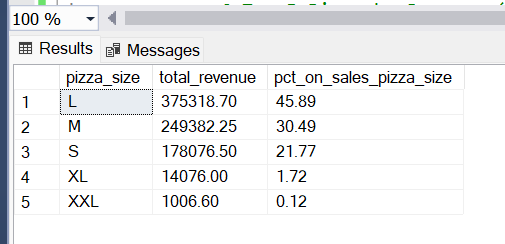


**!--------------5-Total Pizzas Sold by Pizza Category (pizza\_category, total\_quantity\_sold)**

select pizza\_category, sum(quantity) as toal\_quantity\_sold

from pizza\_sales

group by pizza\_category;



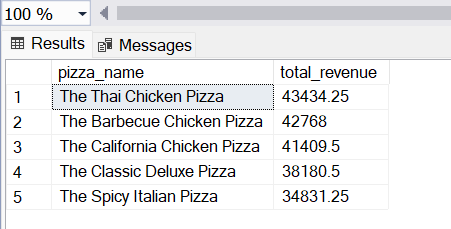
**!-------------6-Top 5 Pizza by Revenue (top 5 pizza\_name, total\_revenue)**

select top 5 pizza\_name, sum(total\_price) as total\_revenue

from pizza\_sales

group by pizza\_name

order by total\_revenue DESC;



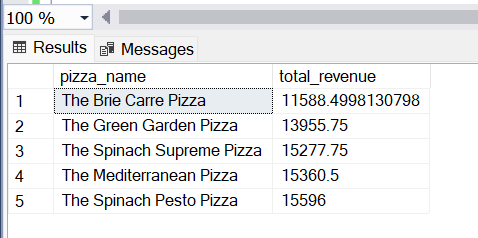
**!--------------Bottom 5 Pizza by Revenue (Botoom 5 pizza\_name, total\_revenue)**

select top 5 pizza\_name, sum(total\_price) as total\_revenue

from pizza\_sales

group by pizza\_name

order by total\_revenue ASC;



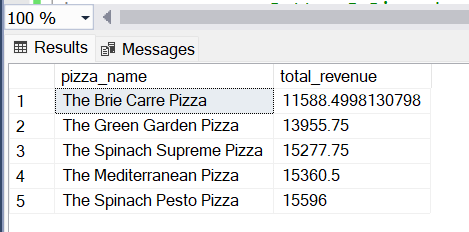
**!----------------7- Top 5 Pizza by Quantity ( Top 5 pizza\_name, total\_quantity)**

select top 5 pizza\_name, sum(quantity) as total\_quantity

from pizza\_sales

group by pizza\_name

order by total\_quantity DESC;



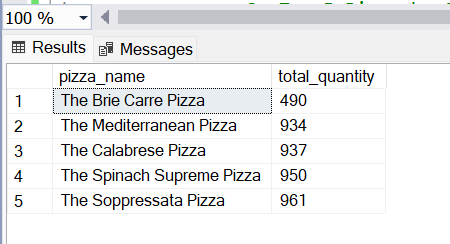
**!----------------- Bottom 5 Pizza by Quantity**

select top 5 pizza\_name, sum(quantity) as total\_quantity

from pizza\_sales

group by pizza\_name

order by total\_quantity ASC;



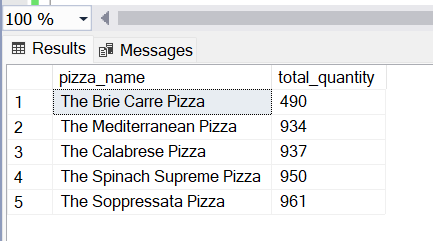
**!----------------8- Top 5 Pizza by Orders ( Top 5 pizza\_name, total\_orders)**

select top 5 pizza\_name, count(distinct order\_id) as total\_orders

from pizza\_sales

group by pizza\_name

order by total\_orders DESC;



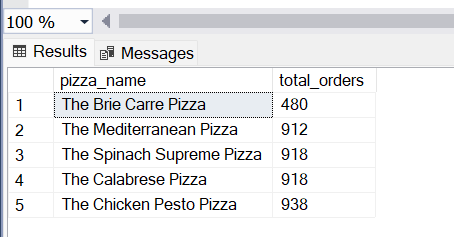
**!-----------------Bottom 5 Pizza by Orders**

select top 5 pizza\_name, count(distinct order\_id) as total\_orders

from pizza\_sales

group by pizza\_name

order by total\_orders ASC;



**### NOTE ##**

If want to apply Month, Week, Quarter filter, it can be use WHERE clause

Example: filtering for January

select DATENAME(DW,order\_date) as Order\_day, count(distinct order\_id) as total\_order

from pizza\_sales

where MONTH(order\_date) = 1

group by DATENAME(DW,order\_date);

*Example; filtering first quarter*

select pizza\_category, cast (sum(total\_price) as decimal (10,2)) as total\_revenue,

cast (sum(total\_price)\*100 / (select sum(total\_price) from pizza\_sales where DATEPART(quarter, order\_date) = 1

) as decimal(10,2)) as Sales\_perct

from pizza\_sales

where DATEPART(quarter, order\_date) = 1

group by pizza\_category;