BY: HAFSA BAIG

PIZZA STORE ANALYSIS - PowerBI & SQL

Data Cleaning:

I have used some transforming data query tools for data cleaning.

Data Processing:

Used some DAX functionalities to get a custom column with respect to our problem statement.

Data Visualization:

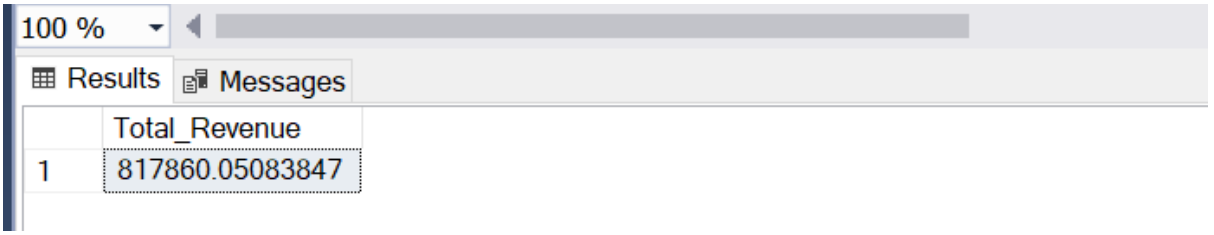
Used advanced functionality to format charts.

Problem Statement And Insights:

KPI's Requirement:

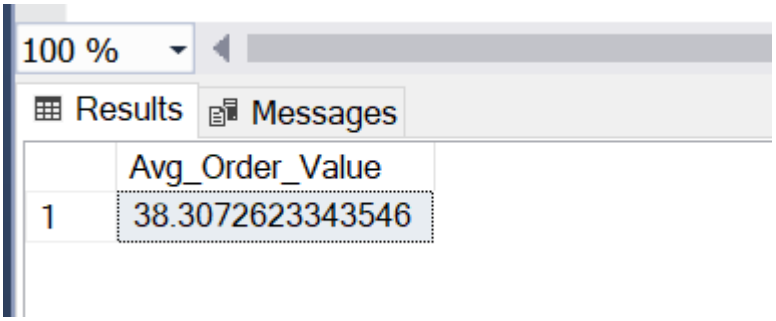
1. **Total Revenue:**
   The sum of the total price of all pizza orders.

   ```
   Select Sum(total_price) AS Total_Revenue from pizza_sales
   ```

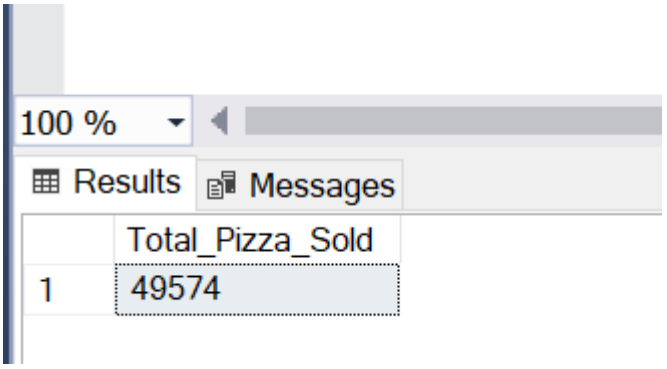
2. **Average Order Value:**
   The average amount spent per order, calculated by dividing the total revenue by the total number of orders.

   ```
   Select sum(total_price) / COUNT(distinct order_id) from pizza_sales
   ```



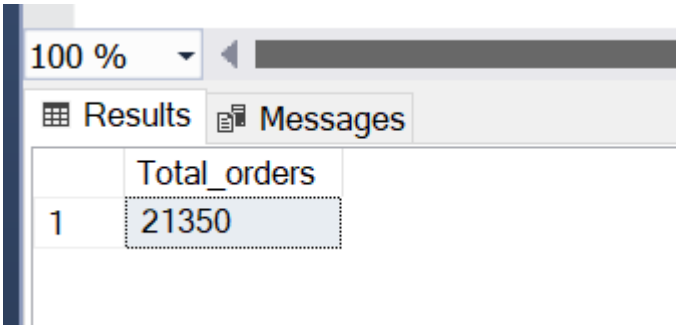
3. **Total Pizzas Sold:**
   The sum of the quantities of all pizzas sold.

   Select sum(quantity) AS Total_Pizza_Sold from pizza_sales



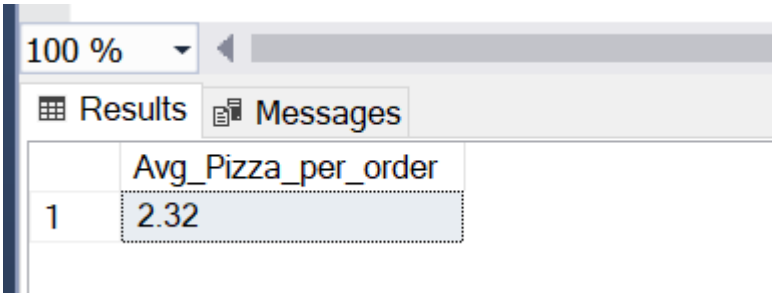
4. **Total Orders:**
   The total number of orders placed.

   Select count(distinct order_id) AS Total_orders from pizza_sales



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.

```
Select CAST(cast(sum(quantity) AS Decimal(10,2)) /
cast(count(distinct order_id) AS Decimal(10,2)) AS
Decimal(10,2))
AS Avg_Pizza_per_order
from pizza_sales
```



Charts Requirement:

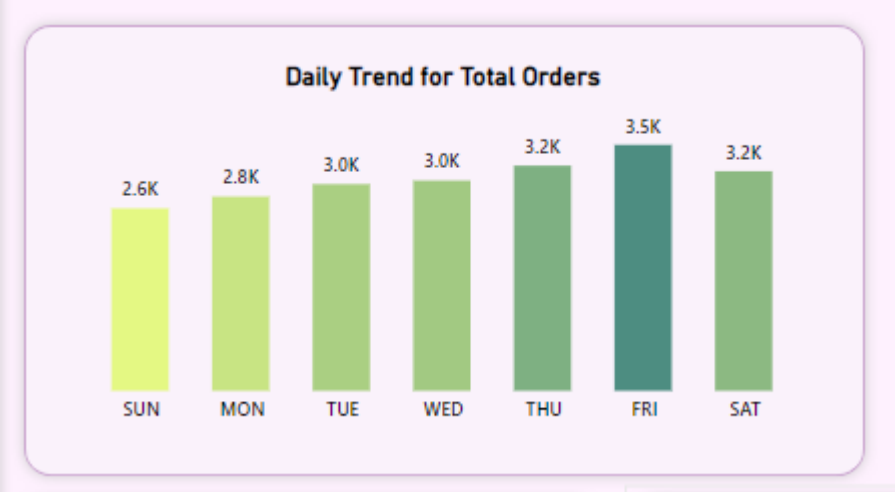
We would like to visualise various aspects of our pizza sales data to gain insights and understand key trends. We have identified the following requirements for creating charts:

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

```
Select DateName(DW, order_date) as order_day, count(distinct
order_id) as Total_orders
from pizza_sales
group by DateName(DW, order_date)
```

	order_day	Total_orders
1	Saturday	3158
2	Wednesday	3024
3	Monday	2794
4	Sunday	2624
5	Friday	3538
6	Thursday	3239
7	Tuesday	2973

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.

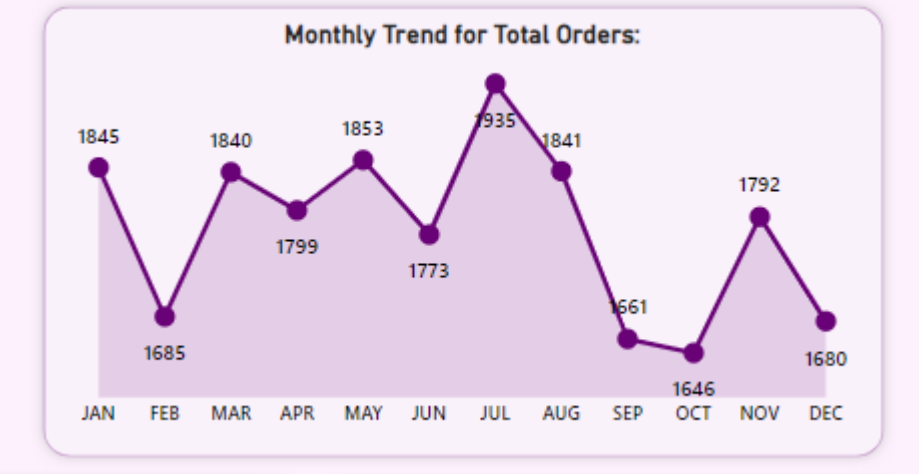


2. **Monthly Trend for Total Orders:**

```
select DateName(Month, order_date) AS Month_Name,
Count(distinct order_id) as Total_orders
from pizza_sales
group by DateName(Month, order_date)
order by Total_orders desc
```

	Month_Name	Total_orders
1	July	1935
2	May	1853
3	January	1845
4	August	1841
5	March	1840
6	April	1799
7	November	1792
8	June	1773
9	February	1685
10	December	1680
11	September	1661
12	October	1646

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



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

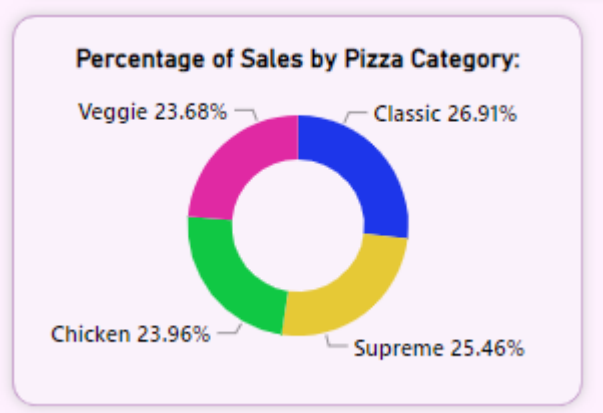
```
select pizza_category,sum(total_price) as total_sales,
sum(total_price) * 100 /
(select sum(total_price) from pizza_sales where
Month(order_date) = 1 ) AS PCT    --To get an entire sales
from pizza_sales
```

```
where Month(order_date) = 1      --want to see only for 1st
month
group by pizza_category
```

Results | Messages

	pizza_category	total_sales	PCT
1	Classic	18619.4000015259	26.6779189176038
2	Chicken	16188.75	23.1952780348435
3	Veggie	17055.4000778198	24.4370162489706
4	Supreme	17929.7499866486	25.6897867985821

Create a donut 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.



4. **Percentage of Sales by pizza size:**

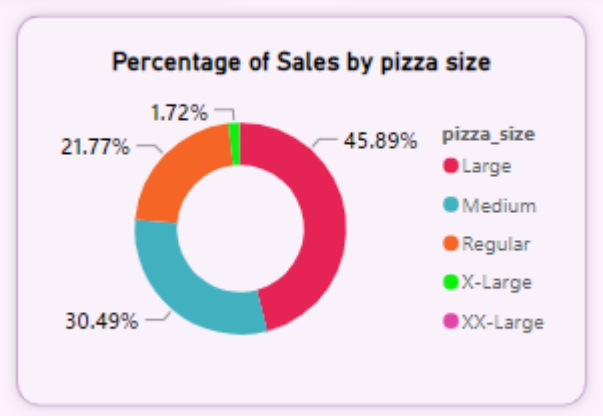
```
select pizza_size,CAST(sum(total_price) AS decimal(10,2)) as
total_sales,CAST(sum(total_price) * 100 /
(select sum(total_price) from pizza_sales where Datepart
(quarter, order_date)=1) as decimal(10,2) ) AS PCT --To get an
entire sales
from pizza_sales
where Datepart (quarter, order_date)=1 -- for 1st quarter
```

```
group by pizza_size
order by PCT desc   -- size with percentage of total
```

Results | Messages

	pizza_size	total_sales	PCT
1	L	95229.65	46.37
2	M	61159.00	29.78
3	S	45384.25	22.10
4	XL	3289.50	1.60
5	XXL	287.60	0.14

Generate a donut 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.



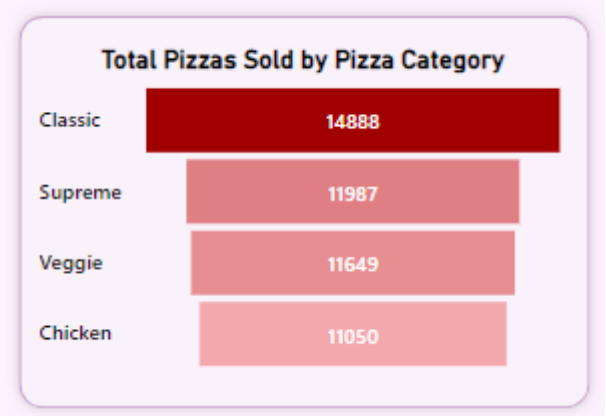
5. **Total Pizzas Sold by Pizza Category:**

```
select pizza_category, sum(quantity) as Pizzas_sold
from pizza_sales
group by pizza_category
order by Pizzas_sold desc
```

Results | Messages

	pizza_category	Pizzas_sold
1	Classic	14888
2	Supreme	11987
3	Veggie	11649
4	Chicken	11050

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.



6. **Top 5 Best sellers by Revenue, Total Quantity and Total Orders:**

By Revenue:

```
select TOP 5 pizza_name, sum(total_price) AS Total_Revenue
from pizza_sales
group by pizza_name
order by Total_Revenue desc
```

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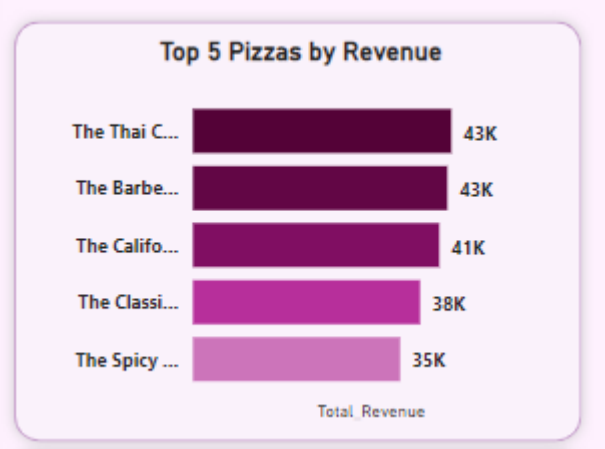
Results | Messages

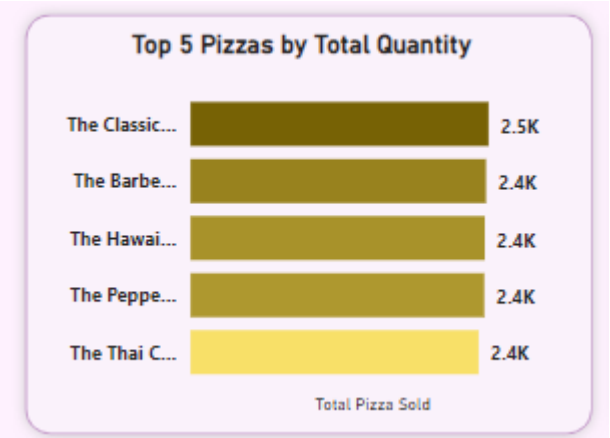
	pizza_name	Total_Revenue
1	The Thai Chicken Pizza	43434.25
2	The Barbecue Chicken Pizza	42768
3	The California Chicken Pizza	41409.5
4	The Classic Deluxe Pizza	38180.5
5	The Spicy Italian Pizza	34831.25



By Total Quantity:

```
select TOP 5 pizza_name, sum(quantity) AS Total_Quantity
from pizza_sales
group by pizza_name
order by Total_Quantity desc
```

	pizza_name	Total_Quantity
1	The Classic Deluxe Pizza	2453
2	The Barbecue Chicken Pizza	2432
3	The Hawaiian Pizza	2422
4	The Pepperoni Pizza	2418
5	The Thai Chicken Pizza	2371



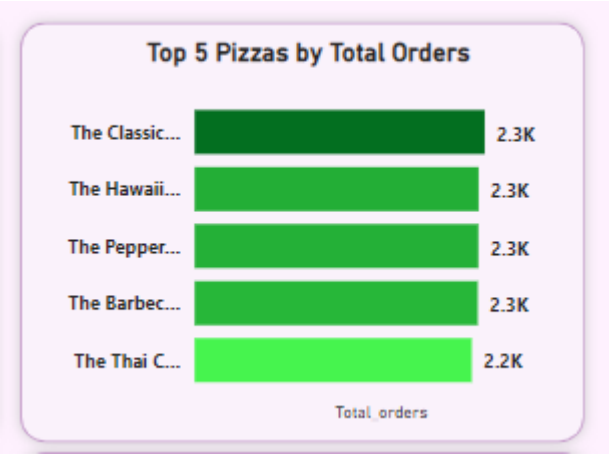
By Total Orders:

```
select TOP 5 pizza_name, count(distinct order_id) AS
Total_Orders from pizza_sales
group by pizza_name
order by Total_Orders desc
```

Results | Messages

	pizza_name	Total_Quantity
1	The Brie Carre Pizza	490
2	The Mediterranean Pizza	934
3	The Calabrese Pizza	937
4	The Spinach Supreme Pizza	950
5	The Soppressata Pizza	961

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.



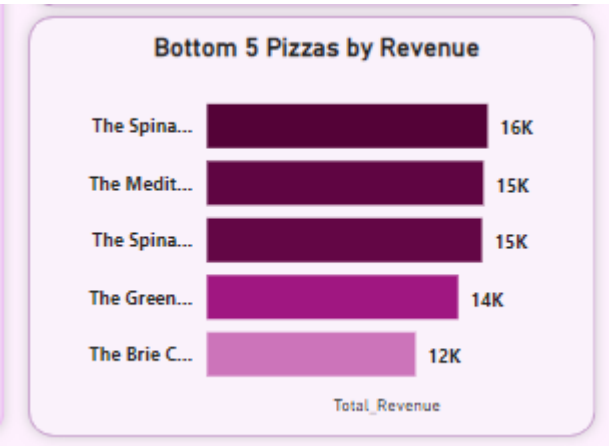
7. **Bottom 5 Best Sellers by revenue, Total Quantity and Total Orders:**

By Revenue:

```
select TOP 5 pizza_name, CAST(sum(total_price)as
decimal(10,2)) AS Total_Revenue from pizza_sales
group by pizza_name
order by Total_Revenue ASC
```

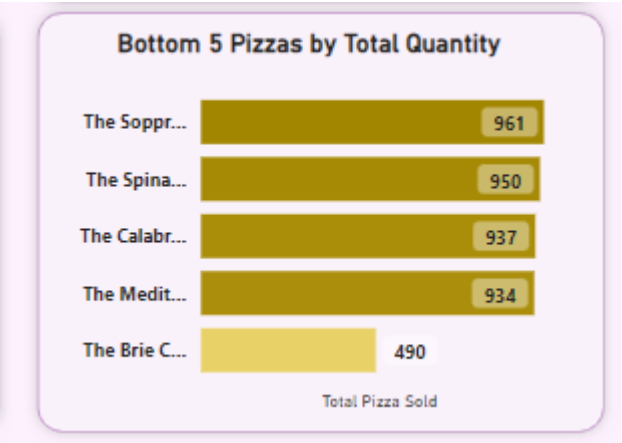
Results Messages

	pizza_name	Total_Revenue
1	The Brie Carre Pizza	11588.50
2	The Green Garden Pizza	13955.75
3	The Spinach Supreme Pizza	15277.75
4	The Mediterranean Pizza	15360.50
5	The Spinach Pesto Pizza	15596.00



By Total Quantity:

```
select TOP 5 pizza_name, sum(quantity) AS Total_Quantity
from pizza_sales
group by pizza_name
order by Total_Quantity Asc
```



By 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 asc
```

Results Messages

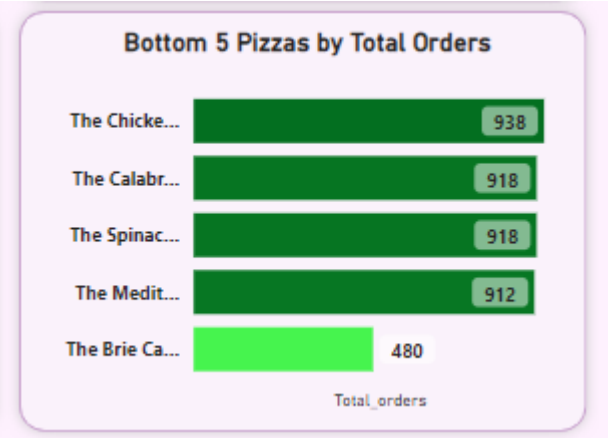
	pizza_name	Total_Quantity
1	The Brie Carre Pizza	490
2	The Mediterranean Pizza	934
3	The Calabrese Pizza	937
4	The Spinach Supreme Pizza	950
5	The Soppressata Pizza	961

100 %

Results Messages

	pizza_name	Total_Orders
1	The Brie Carre Pizza	480
2	The Mediterranean Pizza	912
3	The Spinach Supreme Pizza	918
4	The Calabrese Pizza	918
5	The Chicken Pesto Pizza	938

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.



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DASHBOARDS: