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

Charts Requirement

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

1. Daily Trends for Total Orders: Create a bar chart that displays the daily trends of total orders over a specific time period. This chart will help us identify any patters or fluctuation in order volumes on a daily basis.
2. Hourly Trends for Total Orders: Create a line chart that illustrate the hourly trend to total orders throughout the day. This chat will allow us to identify peak hours of high order activity.
3. 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.
4. 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 preference for pizza sizes and their impact on sales.
5. Total Pizza Sold by Pizza Category: Create a funnel chart that presents the total number of pizza category. This chart will allow us to compare the sales performance of different pizza categories.
6. Top 5 Best Sellers by Total Pizza Sold: Create a bar chart highlighting the top 5 best selling pizza based on the total number of pizza sold. This chart will help us identify the most popular pizza options.
7. Bottom 5 worst seller by Total Pizza Sold: Create a bar chart showcasing the bottom 5 worst selling pizza based on the total number of pizzas sold. This chart will enable us to identify underperforming or less popular pizza options.

Software Used

Microsoft Office, Microsoft Excel: Version 07

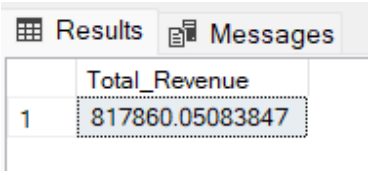
Microsoft SQL Server: 19.0

SQL Queries

KPI's Queries

1. **Total Revenue:**

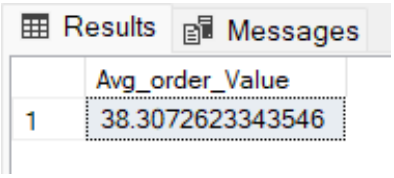
   SELECT SUM(total_price) AS Total_Revenue FROM pizza_sales;



	Total_Revenue
1	817860.05083847

2. **Average Order Value**

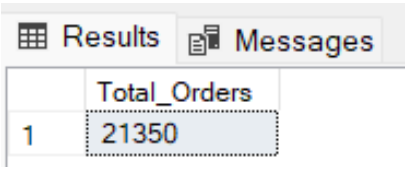
   SELECT (SUM(total_price)/COUNT(DISTINCT order_id)) AS Avg_order_Value FROM pizza_sales



	Avg_order_Value
1	38.3072623343546

3. **Total Pizza Sold**

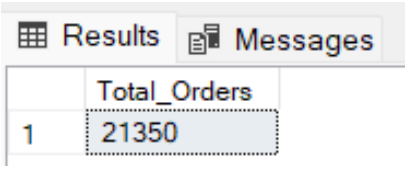
   SELECT COUNT(DISTINCTorder_id) AS Total_Orders FROM pizza_sales



	Total_Orders
1	21350

4. **Total Orders**

   SELECT COUNT(DISTINCT order_id) AS Total_Orders FROM pizza_sales



	Total_Orders
1	21350

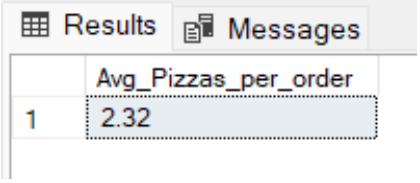
5. **Average Pizza per Order**

   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



	Avg_Pizzas_per_order
1	2.32

Chart Queries

Daily Trends 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)
```

Results Messages

	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

Hourly Trends for Orders

```
SELECT DATEPART (HOUR,order_time) as order_hours, COUNT(DISTINCT order_id) as total_orders
From pizza_sales
Group by DATEPART(HOUR,order_time)
Order by DATEPART(HOUR,order_time)
```

Results Messages

	order_hours	total_orders
1	9	1
2	10	8
3	11	1231
4	12	2520
5	13	2455
6	14	1472
7	15	1468
8	16	1920
9	17	2336
10	18	2399
11	19	2009
12	20	1642
13	21	1198
14	22	663
15	23	28

% of Sales by Pizza Category

```
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 PCT
FROM pizza_sales
GROUP BY pizza_category
```

Results Messages

	pizza_category	total_revenue	PCT
1	Classic	220053.10	26.91
2	Chicken	195919.50	23.96
3	Veggie	193690.45	23.68
4	Supreme	208197.00	25.46

% of Sales by 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
FROM pizza_sales
GROUP BY pizza_size
ORDER BY pizza_size
```

Results Messages

	pizza_size	total_revenue	PCT
1	L	375318.70	45.89
2	M	249382.25	30.49
3	S	178076.50	21.77
4	XL	14076.00	1.72
5	XXL	1006.60	0.12

Total Pizza Sold by Pizza Category

```
SELECT pizza_category, SUM(quantity) as Total_Quantity_Sold
FROM pizza_sales
WHERE MONTH(order_date)= 2
GROUP BY pizza_category
ORDER BY Total_Quantity_Sold DESC
```

Results Messages

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

Top 5 Sellers by Total Pizza Sold

```
SELECT Top 5 pizza_name, SUM(quantity) AS Total_Pizza_Sold
FROM pizza_sales
GROUP BY pizza_name
ORDER BY Total_Pizza_Sold DESC
```

	pizza_name	Total_Pizza_Sold
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

Bottom 5 Sellers/ by Total Pizzas Sold

```
SELECT TOP  5 pizza_name, SUM(quantity) AS Total_Pizza_Sold
FROM pizza_sales
GROUP BY pizza_name
ORDER BY Total_Pizza_Sold ASC
```

Results Messages

	pizza_name	Total_Pizza_Sold
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