**Tools: SQL, Excel**

**Server Name:** SRIHARSHAVARMA\HUMBER\_DB

**Data:** pizza\_sales (4821 rows & 12 Columns)

Creating the Report for Queries for Testing

Connecting Excel to SQL Server

Data Cleaning

Data Processing

Data Analysis by using the Pivot tables

Data Visualization

Dashboard

**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 REQUIREMENT**

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:** (Bar Chat with Trend line)

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.**Hourly Trend for 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 or periods of high order activity.

3.**Percentage of Sales by Pizza Category:** (Pie Chart)

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 preferences for pizza sizes and their impact on sales.

5.**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.

6.**Top 5 Best Sellers by Tolal Pizzas Sold: (Bar chart)**

Create a bar chart highlighting the top 5 best-selling pizzas based on the total number of pizzas sold. This chart will help us identify the most popular pizza options.

7.**Bottom 5 Worst Sellers by Total Pizzas Sold:**

Create a bar chart showcasing the bottom 5 worst-selling pizzas based on the total number of pizza sold. This chart will enable us to identify underperforming or less popular pizza options.

**SQL Report**

**KPI**

1. **Total Revenue**

SELECT SUM(total\_price) AS Total\_Revenue

FROM pizza\_sales

A screenshot of a computer

Description automatically generated

1. **Average Order Value**

SELECT SUM(total\_price)/COUNT(DISTINCT order\_id) AS Avg\_Order\_Value

FROM pizza\_sales

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1. **Total Pizza Sold**

SELECT SUM(quatity) 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

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1. **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\_PizzasPer\_Order

FROM pizza\_sales

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**Charts**

1. **Daily Trend**

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 BY DATENAME(DW,order\_date)

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1. **Hourly Trend**

SELECT DATEPART(HOUR, order\_time) AS order\_hour,

COUNT(DISTINCT order\_id) AS Total\_orders

FROM pizza\_sales

GROUP BY DATEPART(HOUR, order\_time)

ORDER BY DATEPART(HOUR, order\_time)

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1. **Percentage of Sales by Category**

--WHERE MONTH(order\_date) = 12

--WHERE DATEPART(QUARTER,order\_date) = 1

--Whenever using the above code you need to add the same code in Subquery

SELECT pizza\_category,CAST(SUM(total\_price) AS DECIMAL (10,2)) AS Total\_sales, 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

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1. **Percentage of sales by 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) AS DECIMAL (10,2)) AS PCT

FROM pizza\_sales

GROUP BY pizza\_size

ORDER BY PCT DESC

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1. **Total Pizza Sold**

SELECT pizza\_category, SUM(quantity) AS Total\_Pizza\_sold

FROM pizza\_sales

GROUP BY pizza\_category

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1. **Top 5 Best Seller**

SELECT TOP 5 pizza\_name,SUM(quantity) AS Total\_Pizza\_Sold

FROM pizza\_sales

GROUP BY pizza\_name

ORDER BY SUM(quantity) DESC

A screenshot of a menu

Description automatically generated

1. **Bottom 5 Worst Selling Pizza**

SELECT TOP 5 pizza\_name,SUM(quantity) AS Total\_Pizza\_Sold

FROM pizza\_sales

GROUP BY pizza\_name

ORDER BY SUM(quantity) ASC

A screenshot of a menu

Description automatically generated

Dashboard – Excel

Cleaning the data

* Changing the shortforms

Ex: L – Large,S – Regular , M – Medium, Xlarge – X-Large and XX-Large

Processing the data

* Creating the day column for day-to-day sales

**=TEXT([@[order\_date]],"dddd")** to get the day name

* Created a column for distinct order as total\_order

**=1/COUNTIF(B:B,[@[order\_id]])** so this formula will see how many time the order is repeating and will sum of 1 for each order id so we get **distinct count**

Data Analysis

* Total Revenue

Using **Pivot table** to summarize the sales and data