**Data analyst portfolio project**

**Part 1**

**MS SQL Server**

Import raw data to MYSQL serer

Writing queries as per problem statement given by client

Create report

**Part 2**

Connect MS SQL Server to power bi

Data cleaning

Data processing using DAX functions to get custom columns and conditional columns

Data visualization- building charts, use advance functionality to format charts

Build dynamic dashboard (first)

Build sales dashboard (second)

**PROBLEM STATEMENT in 2 section**

**1st section- 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.

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**PROBLEM STATEMENT**

**Section 2- 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:*

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:*

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:*

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.

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*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 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.

*7. 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.

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SOFTWARE USED

MS OFFICE/ EXCEL: VERSION 2021

MS SQL SERVER: 19.0

SQL SERVER MANAGEMENT STUDIO - 19.0.20209.0

POWER BI: JUNE 2023 Version

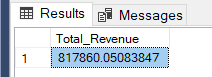
1. I created database named Pizza DB in MS SQL server
2. Added flat file (CSV file) named ‘pizza sales’.
3. Now firing queries as required in problem statement 1.

**PIZZA SALES SQL QUERIES**

**A. KPI**

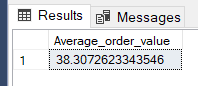
**1. Total Revenue:**

select SUM(total\_price) as Total\_Revenue from pizza\_sales



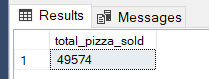
**2. Average Order Value:**

select SUM(total\_price) as Total\_Revenue from pizza\_sales

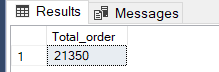


**3.Total pizzas sold:**

select SUM(quantity) as total\_pizza\_sold from pizza\_sales



**4. Total Orders:**



**5.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

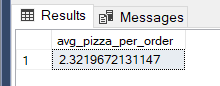
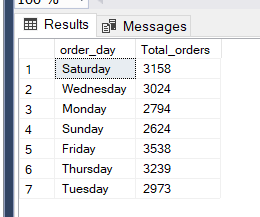


Chart requirements

***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)

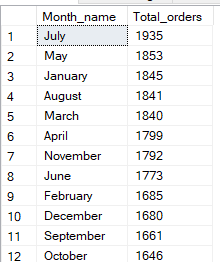


***Monthly Trend for Total Orders:***

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



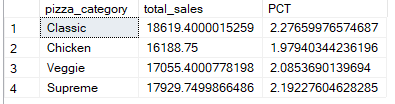
***Percentage of Sales by Pizza Category:***

select pizza\_category, sum(total\_price) as total\_sales, sum(total\_price) \* 100/

(select sum(total\_price) from pizza\_sales) as PCT from pizza\_sales

where month(order\_date)=1

group by pizza\_category



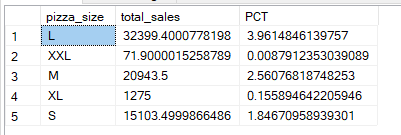
***Percentage of Sales by Pizza Size:***

select pizza\_size, sum(total\_price) as total\_sales, sum(total\_price) \* 100/

(select sum(total\_price) from pizza\_sales) as PCT from pizza\_sales

where month(order\_date)=1

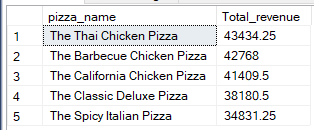
group by pizza\_size



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

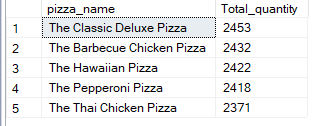
*Top 5 based on REVENUE-*

select top 5 pizza\_name, sum(total\_price) as Total\_revenue from pizza\_sales group by pizza\_name order by Total\_revenue Desc



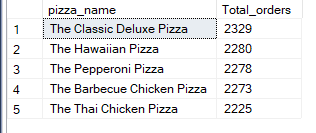
*Top 5- based on - TOTAL QUANTITY-*

select top 5 pizza\_name, sum(Quantity) as Total\_quantity from pizza\_sales group by pizza\_name order by Total\_quantity Desc



*Top 5- based on TOTAL ORDERS-*

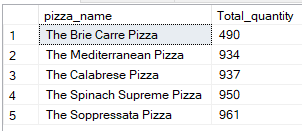
select top 5 pizza\_name, count(distinct order\_id) as Total\_orders from pizza\_sales group by pizza\_name order by total\_orders Desc



***7. Bottom 5 Best Sellers by Revenue, Total Quantity and c***

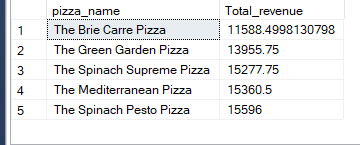
*Bottom 5 based on- Total Quantity*

select top 5 pizza\_name, sum(quantity) as Total\_quantity from pizza\_sales group by pizza\_name order by Total\_quantity asc



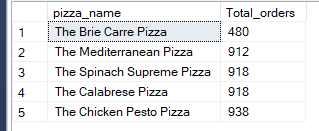
*Bottom 5 based on- Revenue*

select top 5 pizza\_name, sum(total\_price) as Total\_revenue from pizza\_sales group by pizza\_name order by Total\_revenue asc



*Bottom 5 based on-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



**NOTE**

If you want to apply the Month, Quarter, Week filters to the above queries you can use WHERE clause. Follow some of below examples

SELECT DATENAME(DW, order\_date) As order\_day, COUNT (DISTINCT order\_id) AS total\_orders  
FROM pizza\_sales  
WHERE MONTH(order\_date) = 1  
GROUP BY DATENAME (DW, order\_date)

\*Here MONTH(order date) = 1 indicates that the output is for the month of January. MONTH(order date) = 4 indicates output for Month of April.

SELECT DATENAME (DW, order\_date) AS order\_day, COUNT (DISTINCT order\_id) AS total\_orders  
FROM pizza\_sales  
WHERE DATEPART(QUARTER, order\_date)=1

GROUP BY DATENAME (DW, order\_date)

\*Here DATEPART(QUARTER, order\_date) = 1 indicates that the output is for the Quarter 1. MONTH(order\_date) = 3 indicates output for Quarter 3.