**Pizza Sales Data Analysis Project Documentation**

1. **Introduction**:

**Objective**: Analyse pizza sales data to gain insights into business performance.

**Metrics**: Total Revenue, Average Order Value, Total Pizzas Sold, Total Orders, Average Pizzas Per Order.

2. **Data Importation to MySQL**:

* Created a MySQL database.
* Imported data from an Excel sheet to MySQL.
* Ensured seamless integration for data processing.

3. **SQL Queries**:

Developed SQL queries for key metrics calculation.

SQL Queries:

**A. KPI’s**

**1. Total Revenue:**

SELECT SUM(total\_price) AS Total\_Revenue FROM pizza\_sales;

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**2. Average Order Value**

SELECT (SUM(total\_price) / COUNT(DISTINCT order\_id)) AS Avg\_order\_Value FROM pizza\_sales

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**3. Total Pizzas Sold**

SELECT SUM(quantity) AS Total\_pizza\_sold FROM pizza\_sales

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**4. Total Orders**

SELECT COUNT(DISTINCT order\_id) AS Total\_Orders FROM pizza\_sales

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**5. Average Pizzas 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

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**B. 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)

***Output:***

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**C. Monthly Trend for 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)***Output***

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**D. % 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

***Output***

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**E. % 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

***Output***

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**F. Total Pizzas 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

***Output***

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**G. Top 5 Pizzas 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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**H. Bottom 5 Pizzas by Revenue**

SELECT Top 5 pizza\_name, SUM(total\_price) AS Total\_Revenue

FROM pizza\_sales

GROUP BY pizza\_name

ORDER BY Total\_Revenue ASC

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**I. Top 5 Pizzas by Quantity**

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

FROM pizza\_sales

GROUP BY pizza\_name

ORDER BY Total\_Pizza\_Sold DESC

***Output***

**A screenshot of a menu

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**J. Bottom 5 Pizzas by Quantity**

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

FROM pizza\_sales

GROUP BY pizza\_name

ORDER BY Total\_Pizza\_Sold ASC

***Output***

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**K. Top 5 Pizzas 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

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**L. Borrom 5 Pizzas 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

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4. **Power BI Integration**:

Connected MySQL server with Power BI for efficient data analysis.

5. **Data Cleaning and Processing:**

* + Used Power Query tools for data cleaning.
  + Created custom columns and conditional columns based on problem statement requirements.

6. **Data Visualization**:

Created Various Charts:

Daily Trend for Total Orders: Bar chart displaying daily order trend.

Monthly Trend for Total Orders: Line chart illustrating hourly trends.

Percentage of Sales by Pizza Category: Pie chart showing sales distribution.

Percentage of Sales by Pizza Size: Pie chart representing size preferences.

Total Pizza Sold by Pizza Category: Funnel chart comparing category sales.

Top 5 Best Sellers: Bar chart highlighting best sellers.

Bottom 5 Worst Sellers: Bar chart showcasing least popular pizzas.

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7. **Conclusion**:

The analysis provides valuable insights into sales trends and popular pizza options. Enables data-driven decision-making for business optimization.