**Pizza Sales Analysis Project**

**1. Project Overview**

The Pizza Sales Analysis project aims to provide insights into order trends, revenue generation, and customer preferences. Using SQL queries, we analyze key performance metrics, including total orders, revenue, most popular pizza sizes, and category-wise sales distribution. The database consists of multiple tables such as orders, order\_details, pizza, and pizza\_type.

**2. Database Schema & Structure**

The dataset consists of the following tables:

* **Orders**: Contains details of customer orders, including order ID, order date, and order time.
* **Order\_Details**: Stores information about individual pizzas within an order, including quantity and associated pizza ID.
* **Pizza**: Holds data about different pizzas, including price and size.
* **Pizza\_Type**: Provides additional categorization, such as the type and name of pizzas.

**SQL Queries Used for Analysis**

**1. Total Number of Orders Placed**

SELECT COUNT(order\_id) AS Total\_orders FROM orders;

This query calculates the total number of orders placed.

**2. Total Revenue from Pizza Sales**

SELECT ROUND(SUM(order\_details.quantity \* pizza.price), 2) AS Total\_revenue

FROM order\_details

JOIN pizza ON order\_details.pizza\_id = pizza.pizza\_id;

This query computes the total revenue generated by multiplying the quantity of each pizza sold by its price.

**3. Highest-Priced Pizza**

SELECT pizza\_type.name, pizza.price

FROM pizza\_type

JOIN pizza ON pizza\_type.pizza\_type\_id = pizza.pizza\_type\_id

ORDER BY pizza.price DESC;

This query retrieves the most expensive pizza based on its price.

**4. Most Ordered Pizza Size**

SELECT pizza\_size, COUNT(order\_details.order\_details\_id) AS order\_count

FROM pizza

JOIN order\_details ON pizza.pizza\_id = order\_details.pizza\_id

GROUP BY pizza\_size

ORDER BY order\_count DESC;

This query determines the most frequently ordered pizza size.

**5. Top Ordered Pizzas by Quantity**

SELECT pizza\_type.name, SUM(order\_details.quantity) AS quantity

FROM pizza\_type

JOIN pizza ON pizza\_type.pizza\_type\_id = pizza.pizza\_type\_id

JOIN order\_details ON order\_details.pizza\_id = pizza.pizza\_id

GROUP BY pizza\_type.name

ORDER BY quantity DESC;

This query lists the top-ordered pizzas by total quantity sold.

**6. Total Quantity of Each Pizza Category Ordered**

SELECT pizza\_type.category, SUM(order\_details.quantity) AS quantity

FROM pizza\_type

JOIN pizza ON pizza\_type.pizza\_type\_id = pizza.pizza\_type\_id

JOIN order\_details ON order\_details.pizza\_id = pizza.pizza\_id

GROUP BY pizza\_type.category

ORDER BY quantity DESC;

This query helps understand which category of pizzas is the most popular among customers.

**7. Category-Wise Distribution of Pizzas**

SELECT category, COUNT(name)

FROM pizza\_type

GROUP BY category;

This query provides a count of different pizza types within each category.

**8. Average Number of Pizzas Ordered Per Day**

SELECT ROUND(AVG(quantity), 0) AS average\_per\_day

FROM (

SELECT orders.order\_date, SUM(order\_details.quantity) AS quantity

FROM orders

JOIN order\_details ON orders.order\_id = order\_details.order\_id

GROUP BY orders.order\_date

);

This query calculates the average number of pizzas ordered daily.

**9. Top Pizza Types by Revenue**

SELECT pizza\_type.name, SUM(order\_details.quantity \* pizza.price) AS revenue

FROM pizza\_type

JOIN pizza ON pizza.pizza\_type\_id = pizza\_type.pizza\_type\_id

JOIN order\_details ON order\_details.pizza\_id = pizza.pizza\_id

GROUP BY pizza\_type.name

ORDER BY revenue DESC;

This query identifies the highest revenue-generating pizza types.

**10. Percentage Contribution of Each Pizza Type to Total Revenue**

SELECT pizza\_type.category, ROUND((SUM(order\_details.quantity \* pizza.price) / (

SELECT SUM(order\_details.quantity \* pizza.price)

FROM order\_details

JOIN pizza ON order\_details.pizza\_id = pizza.pizza\_id)) \* 100, 2) AS revenue\_percentage

FROM pizza\_type

JOIN pizza ON pizza\_type.pizza\_type\_id = pizza.pizza\_type\_id

JOIN order\_details ON order\_details.pizza\_id = pizza.pizza\_id

GROUP BY pizza\_type.category

ORDER BY revenue\_percentage DESC;

This query calculates the revenue share of each pizza category.

**3. Insights & Conclusion**

* The total number of orders placed provides a clear picture of the business scale.
* Revenue analysis helps identify high-performing pizzas and the overall financial impact.
* Understanding the most ordered pizza sizes and types aids in inventory and pricing strategies.
* Category-wise distribution and revenue contributions offer insights into customer preferences.
* The average number of pizzas ordered daily helps forecast demand and manage stock levels.

Future enhancements could involve integrating a Power BI dashboard to visualize these insights dynamically and including customer segmentation for targeted marketing strategies.