Pizza Sales Data Analysis Project

Pizza Sales Data Analysis Project – Summary

Pizza Sales Data Analysis Project – Summary

This project focuses on analyzing pizza sales data using **SQL queries** to uncover important insights about customer behavior, order patterns, and revenue performance. Multiple SQL operations such as **aggregation**, **joins**, **grouping**, and **ordering** were used to extract valuable business insights from the dataset, which includes tables like `orders`, `order_details`, `pizzas`, and `pizza_types`.

Total Orders

The total number of orders placed was calculated using the `COUNT()` function on the `orders` table, giving a clear picture of total sales volume.

```
# q - 1
#(Retrieve the total number of orders placed.)

select count(order_id) as total_orders from orders;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	total_orders
▶	21350

Total Revenue Generated

By joining the `order_details` and `pizzas` tables, the project computed the total revenue using the formula: `SUM(order_details.quantity * pizzas.price)`.
This helped determine the **overall sales performance**.

```
# q - 2
# calculate the total revenue generated from pizza sales.alter

SELECT
    ROUND(SUM(order_details.quantity * pizzas.price),
            2) AS total_sales
FROM
    order_details
        JOIN
    pizzas ON pizzas.pizza_id = order_details.pizza_id
```

Result Grid

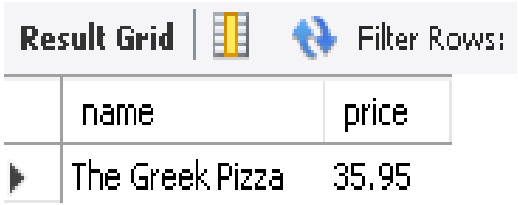
	total_sales
▶	817860.05

Highest-Priced Pizza

A join between `pizza_types` and `pizzas` revealed the **most expensive pizza**, identifying premium menu items that contribute to higher revenue.

```
# Q - 3
# Identify the highest-priced pizza.

SELECT
    pizza_types.name, pizzas.price
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
ORDER BY pizzas.price DESC
LIMIT 1;
```



	name	price
▶	The Greek Pizza	35.95

Most Common Pizza and Sizes Ordered

Queries grouped by `quantity` and `size` highlighted the **most frequently ordered pizza sizes** and quantities preferred by customers.

```sql
# Q - 4
# Identify the most common pizza ordered.

SELECT
    quantity, COUNT(order_details_id)
FROM
    order_details
GROUP BY quantity;
```

quantity	COUNT(order_details_id)
1	47693
2	903
3	21
4	3

```sql
SELECT
    pizzas.size,
    COUNT(order_details.order_details_id) AS order_count
FROM
    pizzas
        JOIN
    order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY pizzas.size
ORDER BY order_count DESC;
```

size	order_count
L	18526
M	15385
S	14137
XL	544
XXL	28

1. **Top 5 Most Ordered Pizzas**
   By summing the quantity for each pizza type and sorting in descending order, the top 5 most popular pizzas were identified.

2. **Total Quantity per Category**
   Aggregating data by `category` showed which pizza categories (e.g., Veggie, Chicken, Classic) had the highest sales volume.

3. **Order Distribution by Hour**
   Using the `HOUR()` function, the project analyzed **order patterns throughout the day**, revealing **peak ordering hours** for operational insights.

4. **Pizza Category Distribution**
   Grouping by `category` provided a clear view of the **menu composition** and the variety of pizzas offered.

5. **Average Pizzas Ordered per Day**
   By grouping by `order_date` and calculating the average quantity, the project identified **daily order trends**.

6. **Top 3 Pizzas by Revenue**
   A final query combining `pizza_types`, `pizzas`, and `order_details` determined which pizzas generated

Conclusion

This SQL-based analysis provided a comprehensive understanding of pizza sales trends. It identified:

- The most popular pizza types and sizes
- The peak hours and days for orders
- The highest revenue-generating items
- The contribution of each category to total sales

Such insights can help a pizza business improve **menu strategy**, **pricing decisions**, and **marketing campaigns** to maximize customer satisfaction and profitability.