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PIZZA SALES REPORT

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AGENDA

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INTRODUCTION

I'm Fayyas KP, a Data Analyst skilled in SQL and data visualization. In this project, I utilized SQL queries to answer key questions related to pizza sales, uncovering trends, customer preferences, and sales patterns. This analysis provides insights that can support data-driven decisions, optimize inventory, and enhance business performance.

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PROBLEM STATEMENT

The project aims to answer essential business questions about pizza sales, such as identifying top-selling pizzas, understanding customer preferences, and evaluating order patterns. These insights empower stakeholders to make data-driven choices to boost sales and refine marketing strategies

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SQL CONCEPTS APPLIED

JOINS

Extensively used to integrate data across multiple tables, enabling thorough analysis of customer orders and sales trends.

AGGREGATION

Functions like COUNT, SUM, and AVG support tasks such as identifying top-performing pizzas, customer frequency, and sales metrics.

SUBQUERIES

Subqueries are used to answer more complex questions, such as identifying peak sales times or analyzing customer demographics.

COMMON TABLE EXPRESSIONS (CTES)

CTEs help simplify complex queries, improving readability and enabling streamlined analysis across different sales dimensions.

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SUMMARIZED INSIGHTS

Top-Selling Pizzas:

Identified the most popular pizza types to guide inventory and marketing strategies

Customer Preferences:

Analyzed order frequency and pizza preferences, helping target customer needs and loyalty efforts.

Sales Trends:

Investigated peak order times, supporting scheduling and operational efficiency.

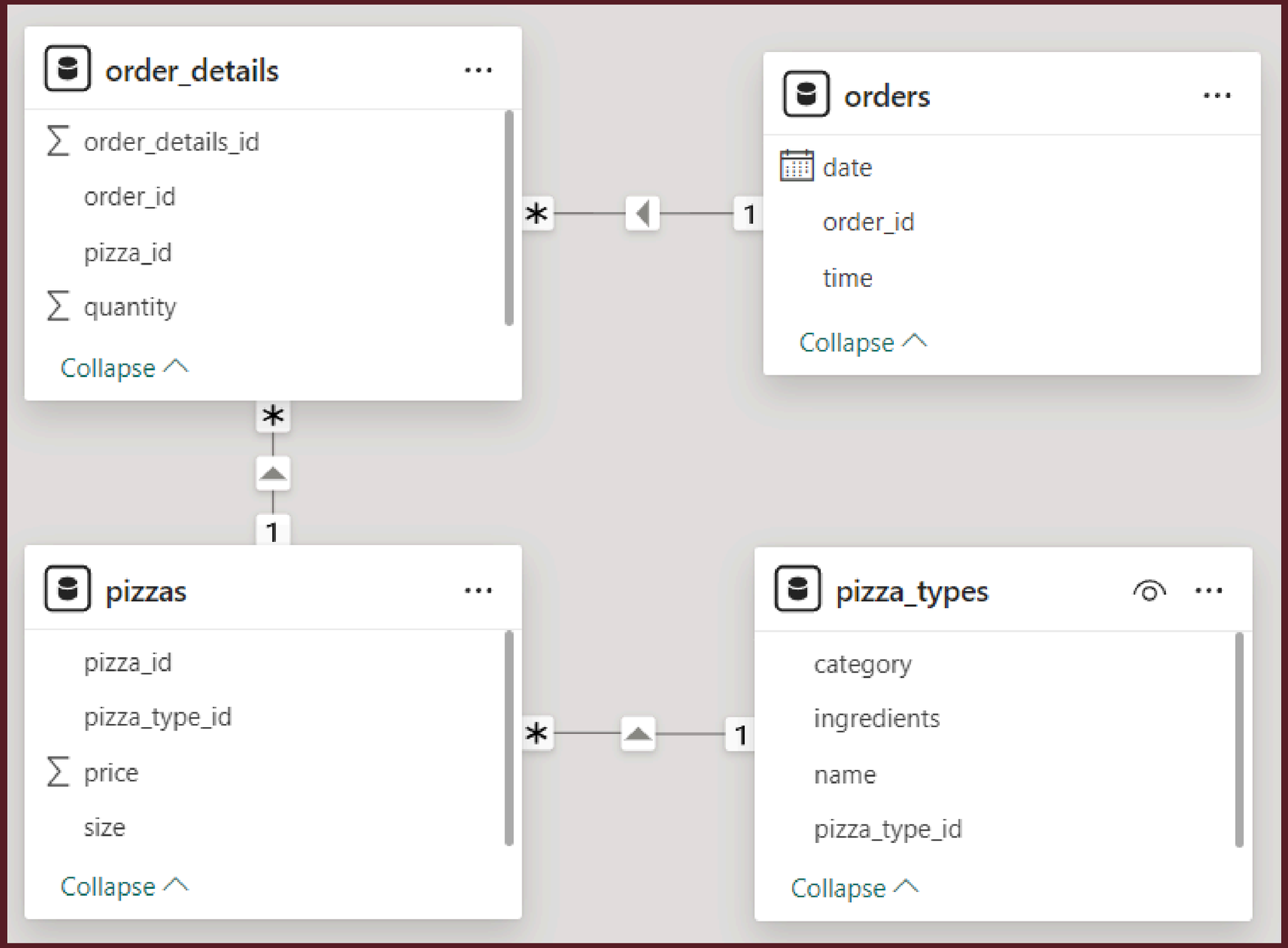
Inventory Optimization:

Provided insights on ingredient demand based on pizza popularity, assisting in inventory planning.

Revenue Patterns:

Highlighted high-value orders and top revenue-generating customers for focused engagement strategies.

SCHEMA DIAGRAM



1. RETRIEVE THE TOTAL NUMBER OF ORDERS PLACED.

```
SELECT
    COUNT(order_id) AS total_orders
FROM
    orders;
```

Result Grid

	total_orders
▶	21350

2. CALCULATE THE TOTAL REVENUE GENERATED FROM PIZZA SALES.

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

Result Grid

	total_sales
▶	817860.05

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;
```

Result Grid | Filter Rows:

name	price
The Greek Pizza	35.95

4. IDENTIFY THE MOST COMMON PIZZA SIZE ORDERED.

```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;
```

Result Grid | Filter R

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

5. LIST THE TOP 5 MOST ORDERED PIZZA TYPES ALONG WITH THEIR QUANTITIES.

```
SELECT
    pizza_types.name, SUM(order_details.quantity) AS quantity
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY pizza_types.name
ORDER BY quantity DESC
LIMIT 5;
```

Result Grid | Filter Rows:

name	quantity
The Classic Deluxe Pizza	2453
The Barbecue Chicken Pizza	2432
The Hawaiian Pizza	2422
The Pepperoni Pizza	2418
The Thai Chicken Pizza	2371

6. JOIN THE NECESSARY TABLES TO FIND THE TOTAL QUANTITY OF EACH PIZZA CATEGORY ORDERED.

```sql
SELECT
    pizza_types.category,
    SUM(order_details.quantity) AS quantity
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.category
ORDER BY quantity DESC;
```

Result Grid | Filter

category	quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

7. DETERMINE THE DISTRIBUTION OF ORDERS BY HOUR OF THE DAY.

```sql
SELECT
    HOUR(order_time) AS hour, COUNT(order_id) AS order_count
FROM
    orders
GROUP BY HOUR(order_time);
```

Result Grid | Filter

hour	order_count
11	1231
12	2520
13	2455
14	1472
15	1468
16	1920
17	2336
18	2399
19	2009
20	1642
21	1198
22	663
23	28
10	8
9	1

8. JOIN RELEVANT TABLES TO FIND THE CATEGORY-WISE DISTRIBUTION OF PIZZAS.

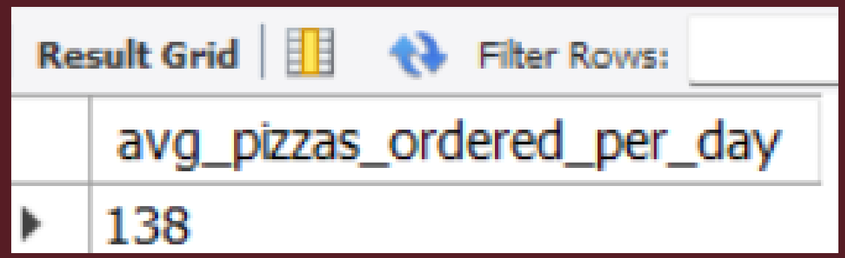
```
SELECT
    category, COUNT(name)
FROM
    pizza_types
GROUP BY category;
```

Result Grid | Filter Rows:

category	COUNT(name)
Chicken	6
Classic	8
Supreme	9
Veggie	9

9. GROUP THE ORDERS BY DATE AND CALCULATE THE AVERAGE NUMBER OF PIZZAS ORDERED PER DAY.

```sql
SELECT
    ROUND(AVG(quantity), 0) AS avg_pizzas_ordered_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) AS order_quantity;
```



10. DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE.

```sql
SELECT
    pizza_types.name,
    SUM(order_details.quantity * pizzas.price) AS revanue
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.name
ORDER BY revanue DESC
LIMIT 3;
```

Result Grid | Filter Rows:

name	revanue
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5

11. CALCULATE THE PERCENTAGE CONTRIBUTION OF EACH PIZZA TYPE TO TOTAL REVENUE.

```
SELECT pizza_types.category,
ROUND(SUM(order_details.quantity * pizzas.price) /
(SELECT ROUND(SUM(order_details.quantity * pizzas.price),2) AS total_sales
FROM order_details JOIN pizzas
ON order_details.pizza_id = pizzas.pizza_id) * 100,2) AS revanue
FROM pizza_types JOIN pizzas
ON pizza_types.pizza_type_id = pizzas.pizza_type_id
JOIN order_details
ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.category;
```

Result Grid | Filter

category	revanue
Classic	26.91
Veggie	23.68
Supreme	25.46
Chicken	23.96

12. ANALYZE THE CUMULATIVE REVENUE GENERATED OVER TIME.

```
SELECT order_date,
SUM(revanue) OVER(ORDER BY order_date) AS cum_revanue
FROM (SELECT orders.order_date, SUM(order_details.quantity * pizzas.price)
AS revanue FROM order_details JOIN pizzas
ON order_details.pizza_id = pizzas.pizza_id
JOIN orders
ON orders.order_id = order_details.order_id
GROUP BY orders.order_date) AS sales;
```

Result Grid | Filter Rows:

order_date	cum_revanue
2015-01-01	2713.8500000000004
2015-01-02	5445.75
2015-01-03	8108.15
2015-01-04	9863.6
2015-01-05	11929.55
2015-01-06	14358.5
2015-01-07	16560.7
2015-01-08	19399.05

13. DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE FOR EACH PIZZA CATEGORY.

```sql
SELECT category, name, revanue
FROM (SELECT category, name, revanue,
RANK() OVER(PARTITION BY category ORDER BY revanue DESC) AS rn
FROM (SELECT pizza_types.category, pizza_types.name,
SUM(order_details.quantity * pizzas.price) AS revanue
FROM pizza_types JOIN pizzas
ON pizza_types.pizza_type_id = pizzas.pizza_type_id
JOIN order_details
ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.category, pizza_types.name) AS a) AS b
WHERE rn <=3;
```

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

category	name	revanue
Chicken	The Thai Chicken Pizza	43434.25
Chicken	The Barbecu	768
Chicken	The California Chicken Pizza	41409.5
Classic	The Classic Deluxe Pizza	38180.5
Classic	The Hawaiian Pizza	32273.25
Classic	The Pepperoni Pizza	30161.75
Supreme	The Spicy Italian Pizza	34831.25
Supreme	The Italian Supreme Pizza	33476.75
Supreme	The Sicilian Pizza	30940.5
Veggie	The Four Cheese Pizza	32265.70000000065
Veggie	The Mexicana Pizza	26780.75
Veggie	The Five Cheese Pizza	26066.5

The Thai Chicken Pizza

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CONCLUSION

The Pizza Sales Database Analysis project demonstrates how SQL can transform raw data into powerful business insights, from customer preferences and top-selling pizzas to peak order times and revenue drivers. This data-centric approach enhances decision-making, supporting stakeholders in boosting sales, improving customer satisfaction, and optimizing operations.

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THANK YOU

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