PIZZA SALES ANALYSIS
SQL Project

ANALYZE PIZZA SALES TO IDENTIFY REVENUE TRENDS, TOP-PERFORMING ITEMS, AND CATEGORY-WISE PERFORMANCE.

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INTRODUCTION

This project analyzes a pizza sales dataset to uncover key business insights, including revenue trends, popular pizza types, and customer ordering patterns. Using SQL, we performed complex queries involving aggregation, ranking, and time-series analysis to answer 13 critical business questions.

The dataset consists of four tables:

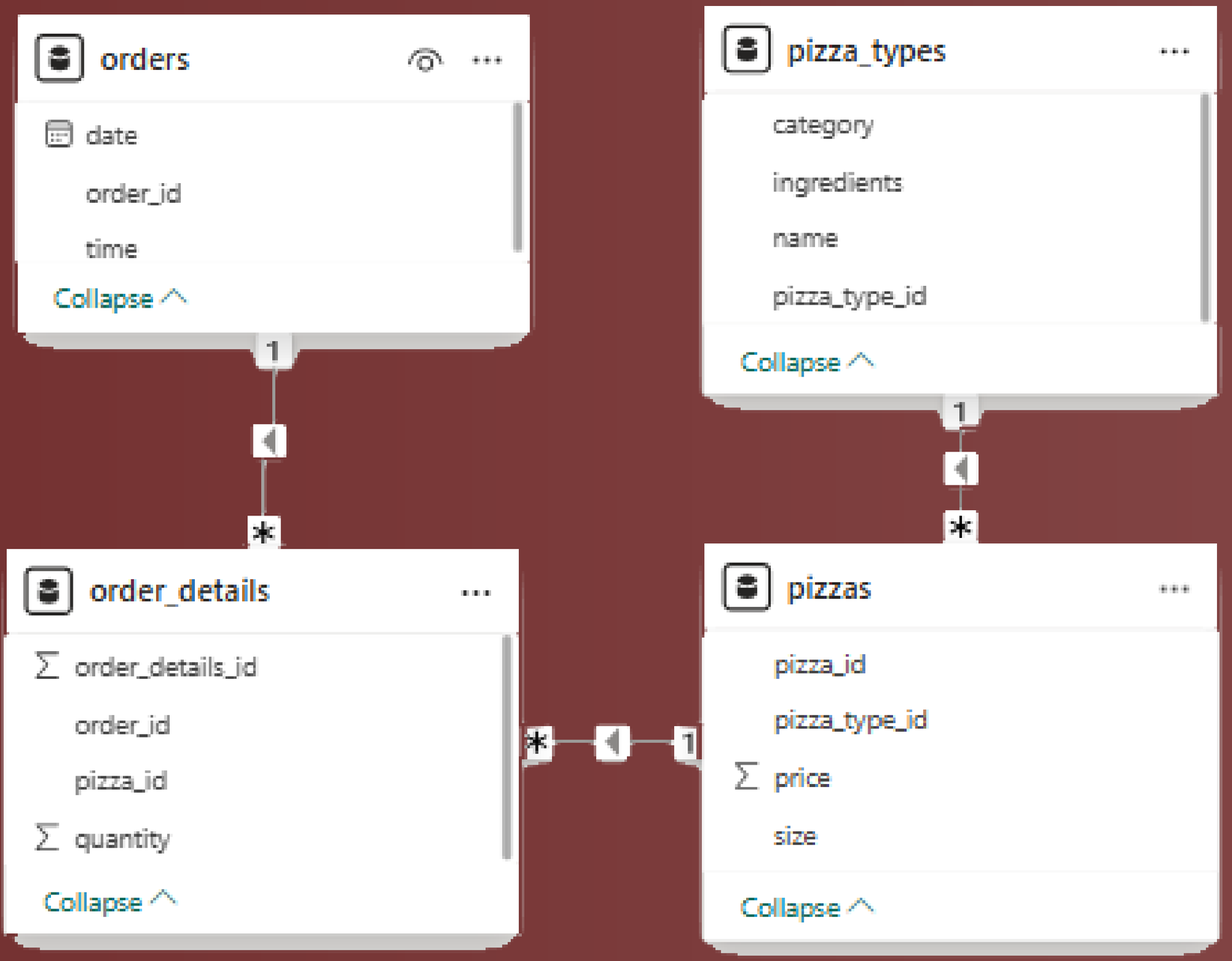
- orders - Order details with timestamps.
- order_details - Item-level breakdown of each order.
- pizzas - Pricing and size information for each pizza.
- pizza_types - Category and name of pizzas offered.

Key objectives of this project include:

- Measuring total sales performance and revenue drivers.
- Identifying top-selling pizzas and size preferences.
- Analyzing customer ordering behavior by date and hour.
- Calculating cumulative revenue growth over time.

This analysis provides actionable insights that can help optimize menu offerings, improve marketing strategies, and increase overall profitability.

DATABASE SCHEMA



QUESTIONS

1. Retrieve the total number of orders placed.
2. Calculate the total revenue generated from pizza sales.
3. Identify the highest-priced pizza.
4. Identify the most common pizza size ordered.
5. List the top 5 most ordered pizza types along with their quantities.
6. Find the total quantity of each pizza category ordered.
7. Determine the distribution of orders by hour of the day.
8. find the category-wise distribution of pizzas.
9. Group the orders by date and calculate the average number of pizzas ordered per day.
10. Determine the top 3 most ordered pizza types based on revenue.
11. Calculate the percentage contribution of each pizza type to total revenue.
12. Analyze the cumulative revenue generated over time.
13. Determine the top 3 most ordered pizza types based on revenue for each pizza category.

$30

1. Retrieve the total number of orders placed.

```sql
SELECT
    COUNT(*) AS total_orders
FROM
    orders;
```

total_orders
21350

2. Calculate the total revenue generated from pizza sales.

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

total_revenue
817860.05

3. Identify the highest-priced pizza.

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

name	price
The Greek Pizza	35.95

4. Identify the most common pizza size ordered.

```sql
SELECT
    p.size, SUM(od.quantity) AS total_quantity
FROM
    pizzas p
        JOIN
    order_details od ON od.pizza_id = p.pizza_id
GROUP BY p.size
ORDER BY total_quantity DESC
LIMIT 1;
```

size	total_quantity
L	18956

5. List the top 5 most ordered pizza types along with their quantities.

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

name	total_order_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
    pt.category, SUM(od.quantity) AS total_quantity
FROM
    pizza_types pt
        JOIN
    pizzas p ON pt.pizza_type_id = p.pizza_type_id
        JOIN
    order_details od ON od.pizza_id = p.pizza_id
GROUP BY pt.category;
```

category	total_quantity
Classic	14888
Veggie	11649
Supreme	11987
Chicken	11050

7. Determine the distribution of orders by hour of the day.

```sql
SELECT
    HOUR(Time) AS hour,
    COUNT(Order_id) AS order_count
FROM
    orders group by hour;
```

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. Find the category-wise distribution of pizzas.

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

category	count
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(total_quantity), 0) AS avg_daily_orders
FROM
    (SELECT
        o.date, SUM(od.quantity) AS total_quantity
    FROM
        orders o
    JOIN order_details od ON o.order_id = od.order_id
    GROUP BY o.date) AS daily_order_quantity;
```

avg_daily_orders
138

10. Determine the top 3 most ordered pizza types based on revenue.

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

name	total_revenue
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.

```
WITH total_revenue_cte AS (
    SELECT SUM(od.quantity * p.price) AS total_revenue FROM order_details od JOIN pizzas
    ON p.pizza_id = od.pizza_id) SELECT pt.category,
ROUND(SUM(od.quantity * p.price) / (SELECT total_revenue
    FROM total_revenue_cte) * 100,2) AS revenue_share
FROM pizza_types pt JOIN
 pizzas p ON pt.pizza_type_id = p.pizza_type_id
        JOIN
    order_details od ON od.pizza_id = p.pizza_id
GROUP BY pt.category;
```

category	revenue_share
Classic	26.91
Veggie	23.68
Supreme	25.46
Chicken	23.96

12. Analyse the cumulative revenue generated over time.

```
SELECT date AS order_date ,
    SUM(daily_revenue) OVER(ORDER BY date) AS cumulative_revenue FROM
     (SELECT o.date, ROUND(SUM(od.quantity * p.price),2) AS daily_revenue
    FROM order_details od JOIN
      pizzas p ON od.pizza_id = p.pizza_id JOIN
      orders o ON o.order_id = od.order_id
GROUP BY o.date) AS daily_total;
```

order_date	cumulative_revenue
2015-01-01	2713.85
2015-01-02	5445.75
2015-01-03	8108.15
2015-01-04	9863.6
2015-01-05	11929.55

13. Determine the top 3 most ordered pizza types based on revenue for each pizza category.

```
SELECT name, revenue
    FROM (SELECT category,name, revenue,
        RANK() OVER(PARTITION BY category ORDER BY revenue DESC)
        AS RANKING
FROM (SELECT pt.category,pt.name,
        SUM(od.quantity*p.price) AS revenue
FROM pizza_types pt
     JOIN pizzas p ON pt.pizza_type_id=p.pizza_type_id
       JOIN order_details od ON od.pizza_id=p.pizza_id
GROUP BY pt.category,pt.name)
     AS total_revenue) AS revenue WHERE Ranking<=3;
```

name	revenue
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5
The Classic Deluxe Pizza	38180.5
The Hawaiian Pizza	32273.25

KEY INSIGHTS & HIGHLIGHTS

Total Revenue

- $817,860.05 generated from pizza sales.

Highest-Priced Pizza

- The Greek Pizza - $35.95

Most Popular Size

- Size L - 18,956 orders

Top 5 Most Ordered Pizzas

- Classic Deluxe Pizza
- Barbecue Chicken Pizza
- Hawaiian Pizza
- Pepperoni Pizza
- Thai Chicken Pizza