

# PIZZA



# SALES



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## SQL PROJECT

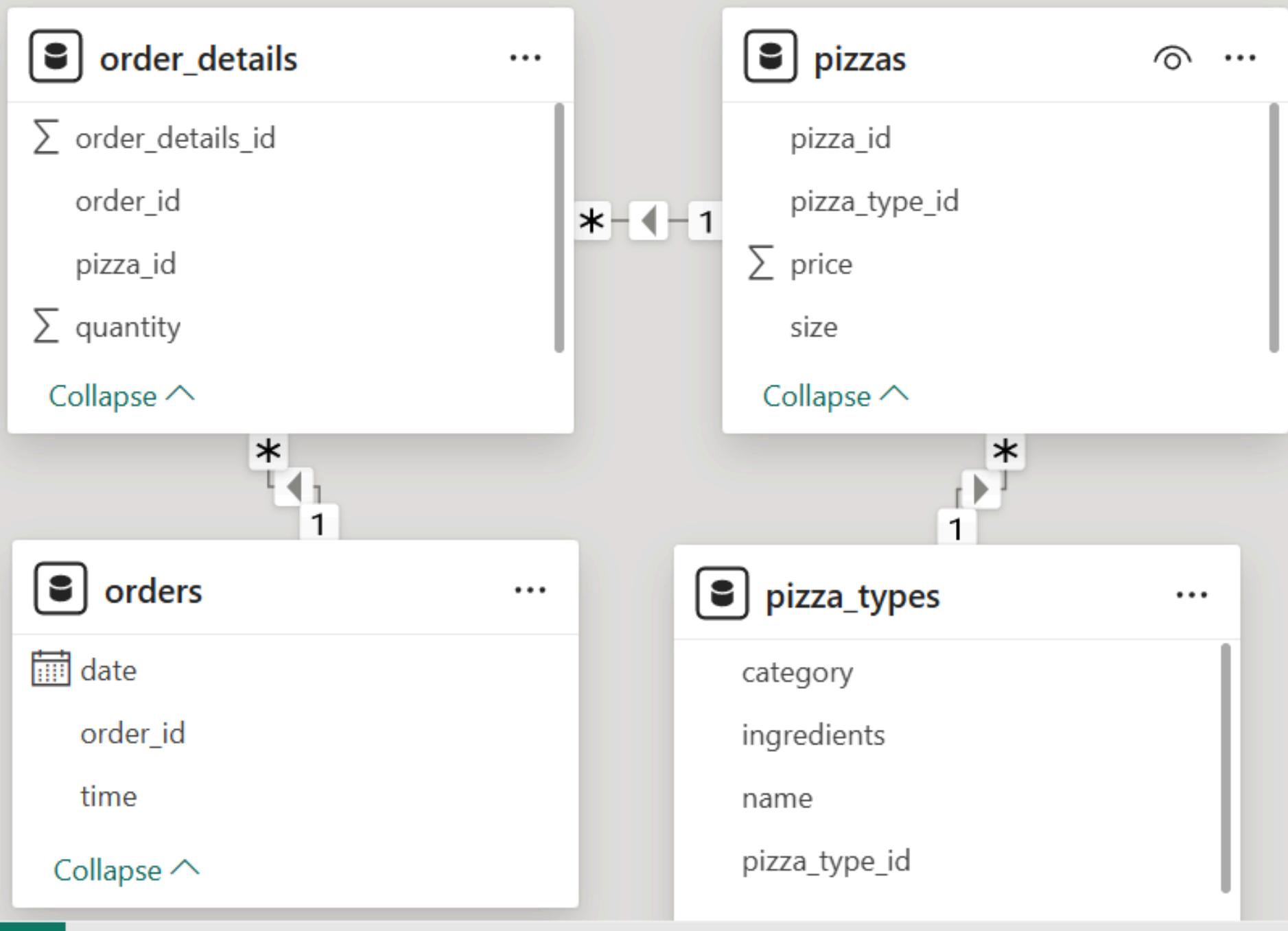


## OVERVIEW

**THIS PROJECT ANALYZES PIZZA SALES DATA USING SQL TO EXTRACT MEANINGFUL INSIGHTS. THE DATASET INCLUDES ORDERS, ORDER DETAILS, PIZZAS, AND PIZZA TYPES TABLES, ALLOWING FOR IN-DEPTH EXPLORATION OF REVENUE, ORDER TRENDS, AND CUSTOMER PREFERENCES.**

**USING SQL, WE PERFORM DATA AGGREGATION, RANKING, WINDOW FUNCTIONS, AND REVENUE ANALYSIS TO ANSWER KEY BUSINESS QUESTIONS.**

# TABLES RELATIONSHIP IN POWER BI



-- Retrieve the total number of orders placed.

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

	total_orders
▶	21350

-- Calculate the total revenue generated from pizza sales.

```
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;
```

Result Grid	
	total_revenue
▶	817860.05

-- Identify the highest-priced pizza.

```
SELECT
    p.size AS pizza_size,
    COUNT(od.order_details_id) AS order_count
FROM pizzas p
JOIN order_details od ON p.pizza_id = od.pizza_id
GROUP BY p.size
ORDER BY order_count DESC
LIMIT 1;
```

	name	highest_price
▶	The Greek Pizza	35.95

-- Identify the most common pizza size ordered.

**SELECT**

```
p.size AS pizza_size,  
COUNT(od.order_details_id) AS order_count  
FROM pizzas p  
JOIN order_details od ON p.pizza_id = od.pizza_id  
GROUP BY p.size  
ORDER BY order_count DESC  
LIMIT 1;
```

Result Grid | Filter Rows:

	pizza_size	order_count
▶	L	18526

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

```
SELECT pt.name AS pizza_type,
       SUM(od.quantity) AS 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.name
 ORDER BY quantity DESC
 LIMIT 5;
```

Result Grid | Filter Rows:

	pizza_type	quantity
▶	The Classic Deluxe Pizza	2453
	The Barbecue Chicken Pizza	2432
	The Hawaiian Pizza	2422
	The Pepperoni Pizza	2418
	The Thai Chicken Pizza	2411

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

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

Result Grid | Filter

	hour	order_count
▶	9	1
	10	8
	11	1231
	12	2520
	13	2455
	14	1472
	15	1468
	16	1920

-- Join the necessary tables to find the total quantity of each pizza category ordered.

```
SELECT
    pt.category,
    SUM(od.quantity) AS 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
ORDER BY quantity DESC;
```

Result Grid | Filter |

	category	quantity
▶	Classic	14888
	Supreme	11987
	Veggie	11649
	Chicken	11050

```
-- Join relevant tables to find the category-wise distribution of pizzas.
```

```
SELECT  
    pt.category,  
    COUNT(od.order_id) AS order_count  
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  
ORDER BY order_count DESC;
```

	category	order_count
▶	Classic	14579
	Supreme	11777
	Veggie	11449
	Chicken	10815

```
/*Group the orders by date and calculate the average number  
of pizzas ordered per day. */
```

```
SELECT  
    ROUND(AVG(quantity)) AS avg_pizza_ordered_per_day  
FROM (  
    SELECT  
        o.order_date,  
        SUM(od.quantity) AS quantity  
    FROM orders o  
    JOIN order_details od ON o.order_id = od.order_id  
    GROUP BY o.order_date  
) AS order_quantity;
```

Result Grid	
	avg_pizza_ordered_per_day
▶	138

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

```
SELECT pt.name AS pizza_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.name
 ORDER BY revenue DESC
 LIMIT 3;
```

	pizza_name	revenue
▶	The Thai Chicken Pizza	43434.25
	The Barbecue Chicken Pizza	42768
	The California Chicken Pizza	41409.5

```
-- Calculate the percentage contribution of each pizza type to total revenue.
```

```
SELECT
```

```
    pt.category,  
    ROUND(SUM(od.quantity * p.price) /  
        (SELECT SUM(od.quantity * p.price)  
         FROM order_details od  
         JOIN pizzas p ON p.pizza_id = od.pizza_id) * 100, 2) AS revenue_percentage  
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  
ORDER BY revenue_percentage DESC;
```

Result Grid | Filter Rows:

	category	revenue_percentage
▶	Classic	26.91
	Supreme	25.46
	Chicken	23.96
	Veggie	23.68

-- Analyze the cumulative revenue generated over time.

```
SELECT
    order_date,
    round(SUM(revenue) OVER (ORDER BY order_date),2) AS cum_revenue
FROM
    (
        SELECT
            o.order_date,
            SUM(od.quantity * p.price) AS revenue
        FROM pizzas p
        JOIN order_details od ON od.pizza_id = p.pizza_id
        JOIN orders o ON o.order_id = od.order_id
        GROUP BY o.order_date
    ) AS sales;
```

	order_date	cum_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
	2015-01-06	14358.5
	2015-01-07	16560.7
	2015-01-08	19399.05

/\* Determine the top 3 most ordered pizza types based on revenue for each pizza category.\*/

```
SELECT
    category, name, revenue
FROM (
    SELECT
        category, name, revenue,
        RANK() OVER (PARTITION BY category ORDER BY revenue DESC) AS ranks
    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.name, pt.category
    ) AS a
) AS b
WHERE ranks <= 3;
```

	category	name	revenue
1	Chicken	The Thai Chicken Pizza	43434.25
2	Chicken	The Barbecue Chicken Pizza	42768
3	Chicken	The California Chicken Pizza	41409.5
4	Classic	The Classic Deluxe Pizza	38180.5
5	Classic	The Hawaiian Pizza	32273.25
6	Classic	The Pepperoni Pizza	30161.75
7	Supreme	The Spicy Italian Pizza	34831.25
8	Supreme	The Italian Supreme Pizza	33476.75
9	Supreme	The Sicilian Pizza	30940.5
10	Veggie	The Four Cheese Pizza	32265.70000000065
11	Veggie	The Mexicana Pizza	26780.75
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