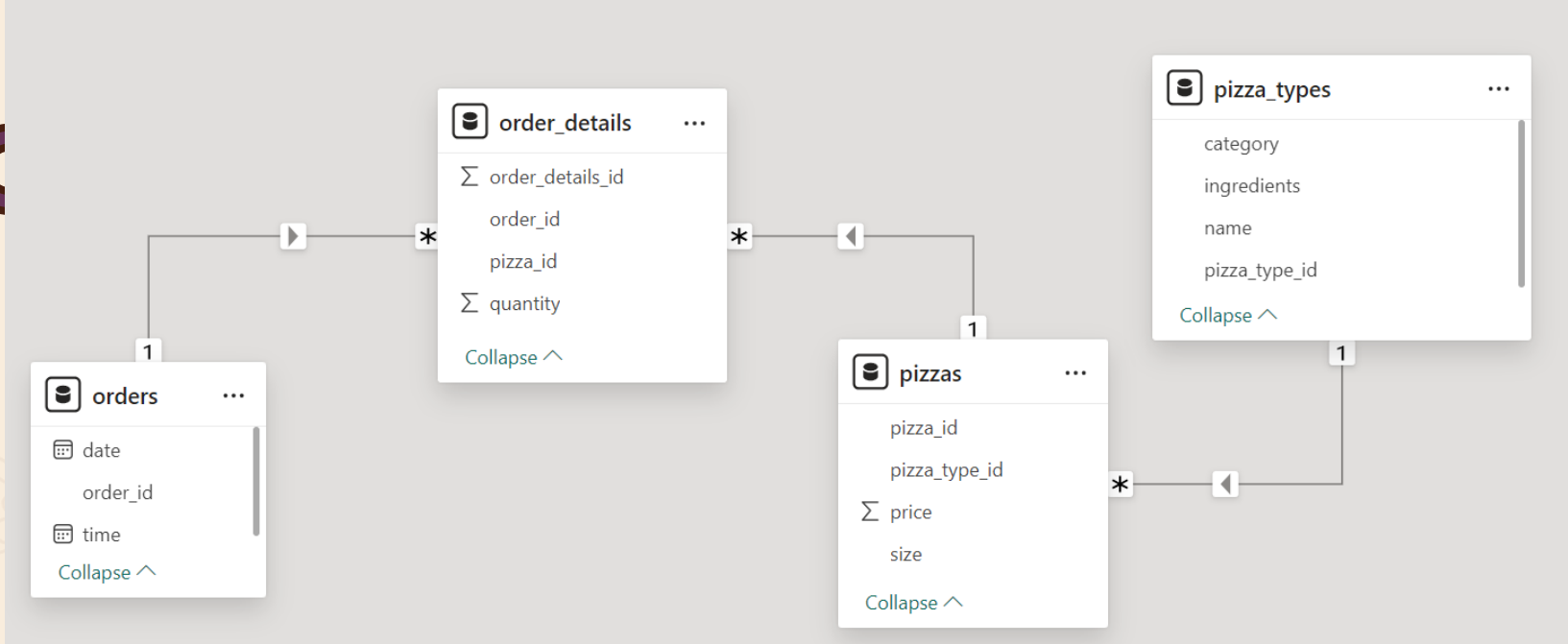
# PIZZA SALES ANALYSIS

USING SQL

# OBJECTIVE

The objective of this Pizza Sales Analysis project is to derive actionable insights from sales data using SQL. This evaluate key metrics like total orders and revenue, identify popular pizza sizes and types, and assess revenue contributions. Analyzing order distribution by time and date will optimize operations, while segmenting sales by categories will refine the product mix. Advanced analysis includes tracking cumulative revenue and identifying top-performing pizzas by revenue within each category. This empowers data-driven decision-making to enhance sales and customer satisfaction.

# DATABASE SCHEMA



# 1. Retrieve the total number of orders placed

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

Result Grid

| | total_orders |
|---|---|
| ▶ | 21350 |

# 2. Calculate the total revenue generated from pizza sales

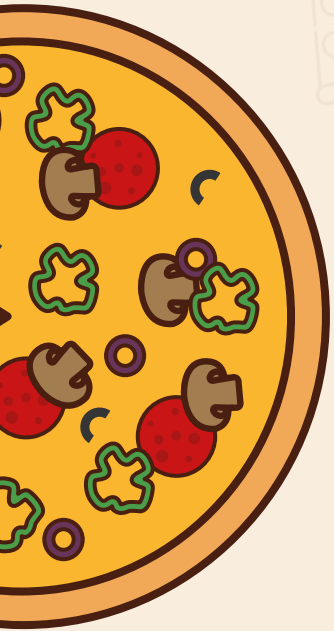
```
SELECT
    ROUND(SUM(order_details.quantity * pizzas.price),
            2) AS total_revenue
FROM
    order_details
        JOIN
    pizzas ON pizzas.pizza_id = order_details.pizza_id;
```

Result Grid

| | total_revenue |
|---|---|
| ▶ | 817860.05 |

# 3. Identify the highest-priced pizza

```sql
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 Row

| | 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 size_count
from pizzas join order_details
on pizzas.pizza_id = order_details.pizza_id
group by pizzas.size
order by size_count desc
limit 1;
```

Result Grid | Filter

| size | size_count |
|---|---|
| L | 18526 |

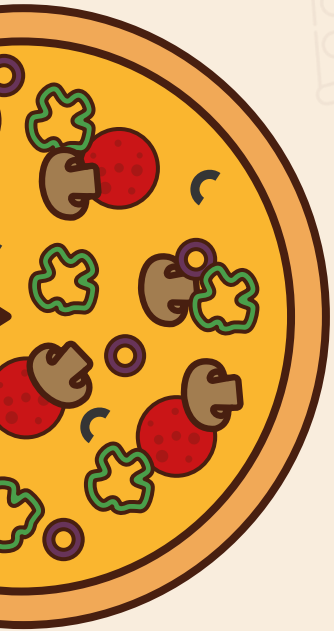
# 5. List the top 5 most ordered pizza types along with their quantities

```
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 order_details.pizza_id = pizzas.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 order_details join pizzas
on order_details.pizza_id = pizzas.pizza_id
join pizza_types
on pizza_types.pizza_type_id = pizzas.pizza_type_id
group by pizza_types.category
order by quantity desc;
```

Result Grid | Filter R

| | category | quantity |
|---|---|---|
| ▶ | Classic | 14888 |
| | Supreme | 11987 |
| | Veggie | 11649 |
| | Chicken | 11050 |

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

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 |

```sql
select  hour(order_time) as hour,
count(order_id) as order_count
from orders
group by hour(order_time);
```

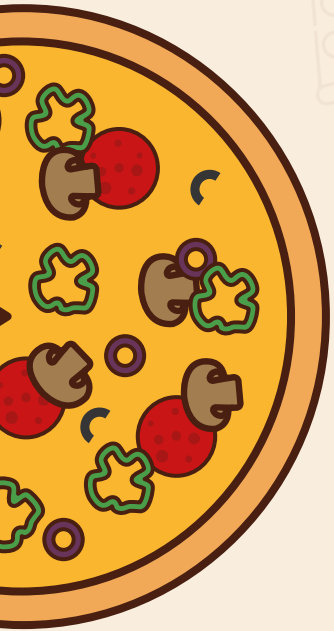
## 8. Join relevant tables to find the category-wise distribution of pizzas

```
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 average_count 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;
```

Result Grid

| | average_count |
|---|---|
| ▶ | 138 |

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

```sql
select pizza_types.name,
sum(pizzas.price * order_details.quantity) as revenue
from pizzas join order_details
on pizzas.pizza_id = order_details.pizza_id
join pizza_types
on pizza_types.pizza_type_id = pizzas.pizza_type_id
group by pizza_types.name
order by revenue desc
limit 3;
```

Result Grid | Filter Rows:

| name | 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

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

Result Grid | Filte

| category | revenue |
|---|---|
| Classic | 26.91 |
| Supreme | 25.46 |
| Chicken | 23.96 |
| Veggie | 23.68 |

# 12. Analyze the cumulative revenue generated over time

```sql
select order_date, sum(revenue) over(order by order_date) as cum_rev
from
(select orders.order_date,
sum(order_details.quantity * pizzas.price) as revenue
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_rev |
|---|---|
| 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 |

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

```sql
select name, revenue from
(select category,name,revenue,
rank() over(partition by category order by revenue desc) as rn
 from
(select pizza_types.category,pizza_types.name,
sum(order_details.quantity * pizzas.price) as revenue
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:

| 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 |
| The Pepperoni Pizza | 30161.75 |
| The Spicy Italian Pizza | 34831.25 |

# THANK YOU