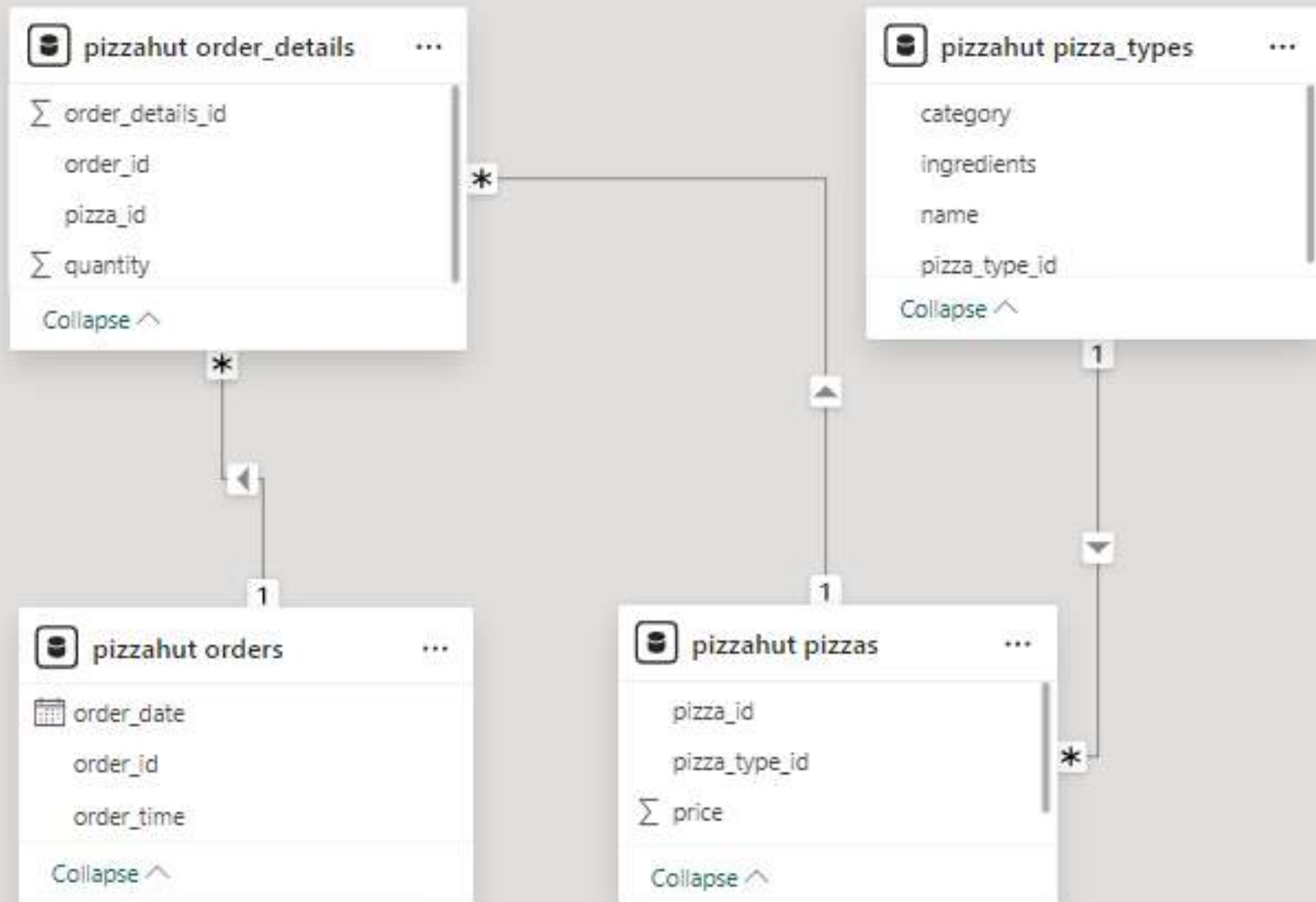# PIZZA SALES ANALYSIS

Hello !!

My name is Minal Bhivgade.

In this project, I have utilized SQL queries to solve questions related to pizza sales.

Data Model

Basic Queries

Retrieve the total number of orders placed.

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

The result shows that there are 21,350 orders placed.

Result Grid

total_orders
21350

Calculate the total revenue generated from pizza sales.

```sql
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;
```

The total revenue generated from pizza sales is 817,860.05.

Result Grid

total_revenue
817860.05

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 F

name	price
The Greek Pizza	35.95

Most Common Pizza Size Ordered: The Greek Pizza (35.95)

Identify the most common pizza size ordered.

```sql
    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

size	order_count
L	18526
M	15385
S	14137

Most Common Pizza Size Ordered: Large (L) with 18,526 orders

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

```sql
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;
```

The most ordered pizza types are The Classic Deluxe Pizza with 2,453 orders, followed by The Barbecue Chicken Pizza at 2,432, The Hawaiian Pizza at 2,422, The Pepperoni Pizza at 2,418, and The Thai Chicken Pizza at 2,371.

name	quantity
The Classic Deluxe Pizza	2453
The Barbecue Chicken Pizza	243 2453
The Hawaiian Pizza	2422
The Pepperoni Pizza	2418
The Thai Chicken Pizza	2371

Intermediate Queries

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 category
ORDER BY quantity DESC;
```

The query results show the total quantities ordered for each pizza category: Classic (14,888), Supreme (11,987), Veggie (11,649), and Chicken (11,050).

Result Grid

category	quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

Determine the distribution of orders by hour of the day.

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

The distribution of orders by hour of the day shows peaks at 12 PM with 2,520 orders and 5 PM with 2,336 orders, reflecting typical mealtime patterns.

Result Grid

hour	order_cout
11	1231
12	2520
13	2455
14	1472
15	1468
16	1920
17	2336

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

```sql
select category,count(name)
from pizza_types
group by category;
```

The distribution shows 6 pizzas in the Chicken category, 8 in Classic, and 9 each in Supreme and Veggie categories.

Result Grid | Filter

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

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

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

The average number of Pizza ordered is 138

Result Grid	
	avg_quantity
▶	138

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

```sql
SELECT
    pizza_types.name,
    ROUND(SUM(order_details.quantity * pizzas.price),
        2) AS total_revenue
FROM
    order_details
        JOIN
    pizzas 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 total_revenue DESC
LIMIT 3;
```

The top 3 most ordered pizza types based on revenue are The Thai Chicken Pizza (43,434.25), The Barbecue Chicken Pizza (42,768), and The California Chicken Pizza (41,409.5).

Result Grid | Filter Rows:

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

Advanced Queries

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

```sql
SELECT
    pizza_types.category,
    ROUND(SUM(order_details.quantity * pizzas.price) / (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) * 100,
            2) 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
ORDER BY revenue DESC;
```

The percentage contribution of each pizza category to total revenue shows Classic at 26.91%, Supreme at 25.46%, Chicken at 23.96%, and Veggie at 23.68%

Result Grid | Filte

category	revenue
Classic	26.91
Supreme	25.46
Chicken	23.96
Veggie	23.68

Analyze the cumulative revenue generated over time.

```sql
select order_date,
sum(revenue) over(order by order_date) as cum_revenue
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;
```

The cumulative revenue generated over time shows a progression from 2,713.85 on 2015-01-01 to 19,399.05 on 2015-01-08.

Result Grid | Filter Rows:

order_date	cum_revenue
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

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 ;
```

highlighting popular choices like The Thai Chicken Pizza and The Classic Deluxe Pizza across different categories.

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
The Italian Supreme Pizza	33476.75
The Sicilian Pizza	30940.5
The Four Cheese Pizza	32265.70000000065
The Mexicana Pizza	26780.75
The Five Cheese Pizza	26066.5