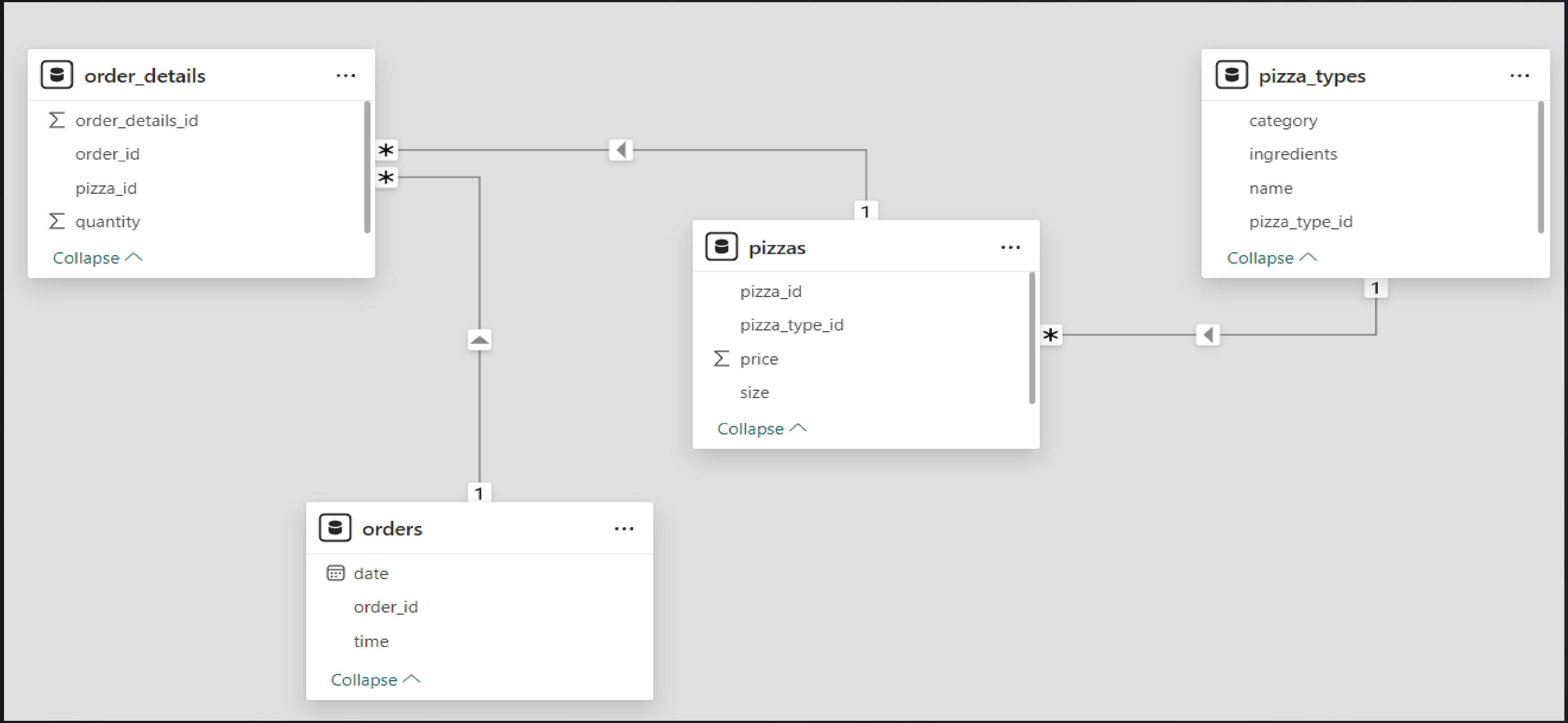
PIZZA SALES ANALYSIS USING MYSQL

Sahil Honyalkar

INTRODUCTION

Hello! My name is Sahil Sambhaji Honyalkar and in the highly competitive food and beverage industry, understanding sales patterns is crucial for making informed business decisions. This project focuses on analyzing pizza sales data using various SQL queries, providing valuable insights that can help improve operations, optimize inventory, and enhance customer satisfaction. By leveraging SQL queries, we will explore various dimensions of sales, such as popular pizza types, peak sales periods, customer preferences, and more. The insights gained will support data-driven decisions to boost sales and operational efficiency.

SCHEMA



order_details

- order_details_id
- order_id
- pizza_id
- quantity

Collapse

pizza_types

- category
- ingredients
- name
- pizza_type_id

Collapse

pizzas

- pizza_id
- pizza_type_id
- price
- size

Collapse

orders

- date
- order_id
- time

Collapse

LIST OF CONTENTS

Basic Questions

- Retrieve the total number of orders placed.
- Calculate the total revenue generated from pizza sales.
- Identify the highest-priced pizza.
- Identify the most common pizza size ordered.
- List the top 5 most ordered pizza types along with their quantities.

Intermediate Questions

- Join the necessary tables to find the total quantity of each pizza category ordered.
- Determine the distribution of orders by hour of the day.
- Join relevant tables to find the category-wise distribution of pizzas.
- Group the orders by date and calculate the average number of pizzas ordered per day.
- Determine the top 3 most ordered pizza types based on revenue.

Advanced Questions

- Calculate the percentage contribution of each pizza type to total revenue.
- Analyze the cumulative revenue generated over time.
- Determine the top 3 most ordered pizza types based on revenue for each pizza category.

BASIC QUESTIONS

- Retrieve the total number of orders placed.
- Calculate the total revenue generated from pizza sales.
- Identify the highest-priced pizza.
- Identify the most common pizza size ordered.
- List the top 5 most ordered pizza types along with their quantities.

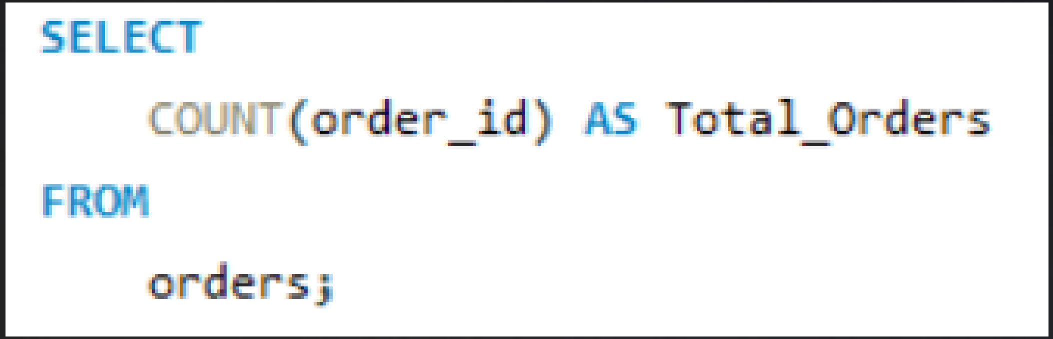
Intermediate Questions

- Join the necessary tables to find the total quantity of each pizza category ordered.
- Determine the distribution of orders by hour of the day.
- Join relevant tables to find the category-wise distribution of pizzas.
- Group the orders by date and calculate the average number of pizzas ordered per day.
- Determine the top 3 most ordered pizza types based on revenue.

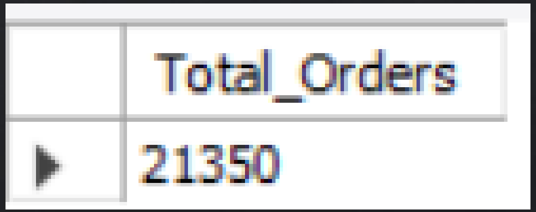
Advanced Questions

- Calculate the percentage contribution of each pizza type to total revenue.
- Analyze the cumulative revenue generated over time.
- Determine the top 3 most ordered pizza types based on revenue for each pizza category.

Retrieve the total number of orders placed.

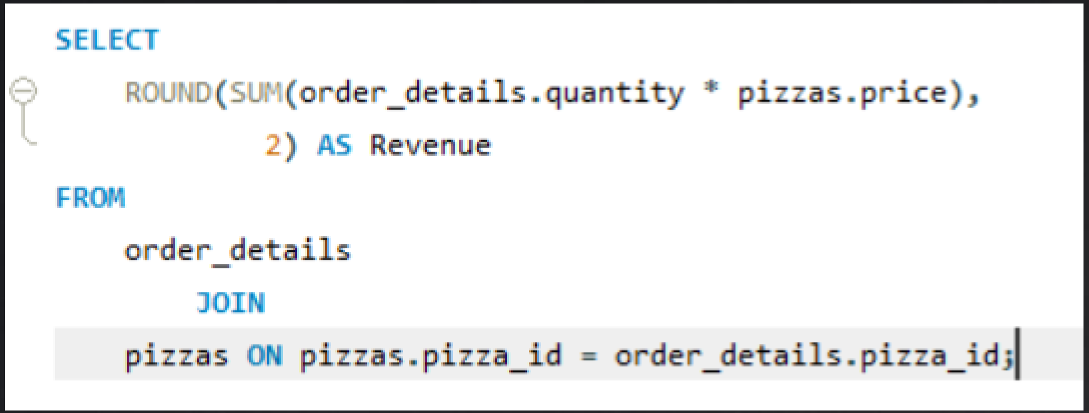


```
SELECT
    COUNT(order_id) AS Total_Orders
FROM
    orders;
```

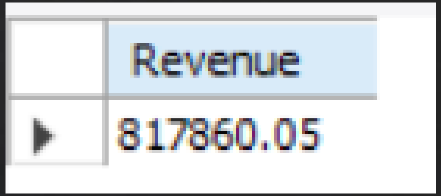


```
   Total_Orders
▶  21350
```

Calculate the total revenue generated from pizza sales.

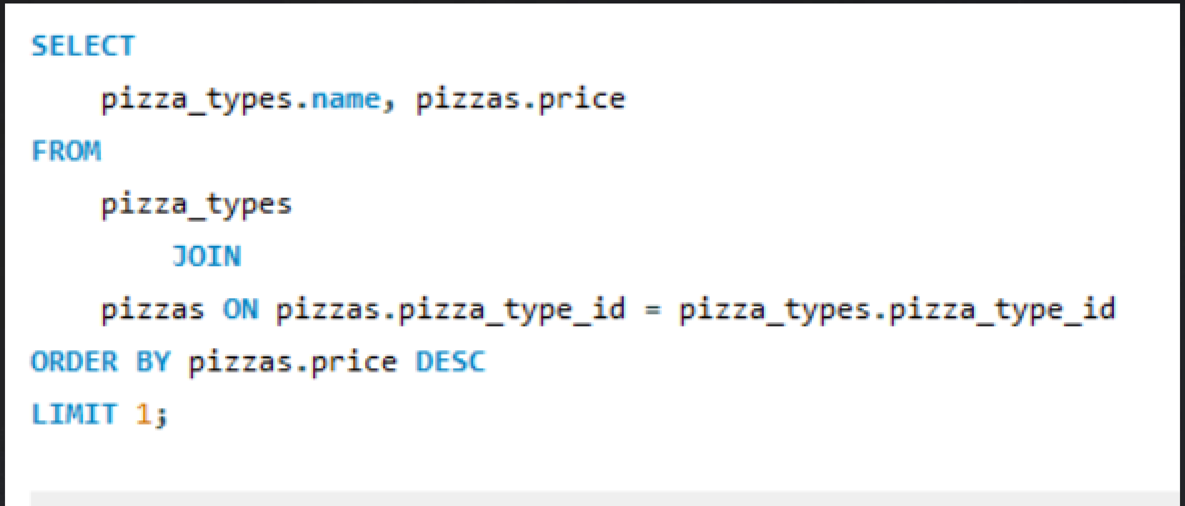


```
SELECT
    ROUND(SUM(order_details.quantity * pizzas.price),
            2) AS Revenue
FROM
    order_details
        JOIN
    pizzas ON pizzas.pizza_id = order_details.pizza_id;
```

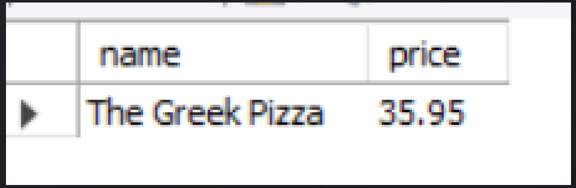


Revenue
817860.05

Identify the highest-priced pizza.

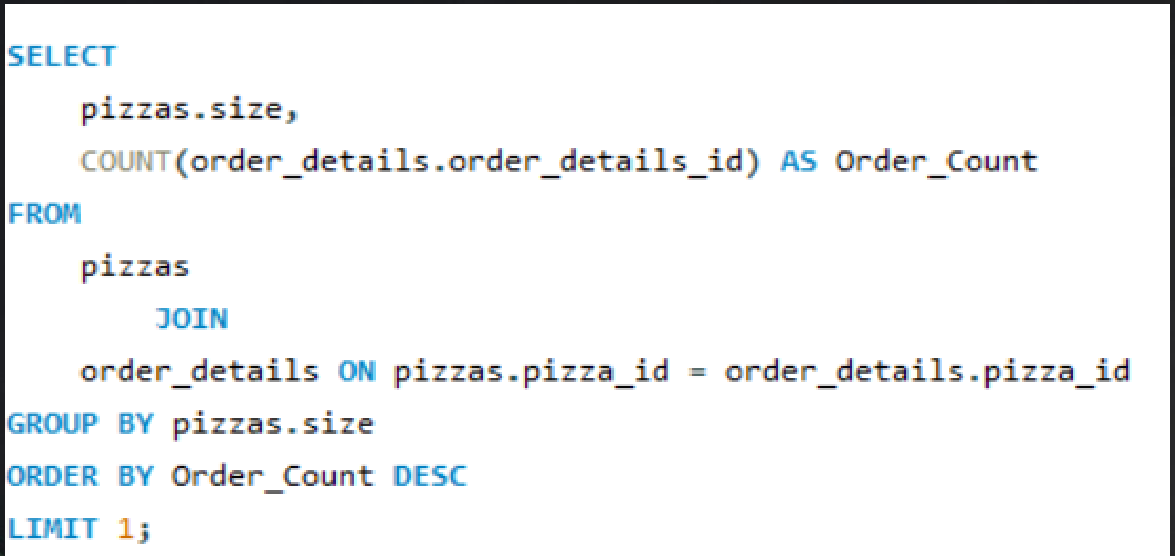


```
SELECT
    pizza_types.name, pizzas.price
FROM
    pizza_types
        JOIN
    pizzas ON pizzas.pizza_type_id = pizza_types.pizza_type_id
ORDER BY pizzas.price DESC
LIMIT 1;
```

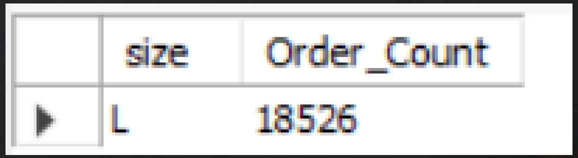


name	price
The Greek Pizza	35.95

Identify the most common pizza size ordered.

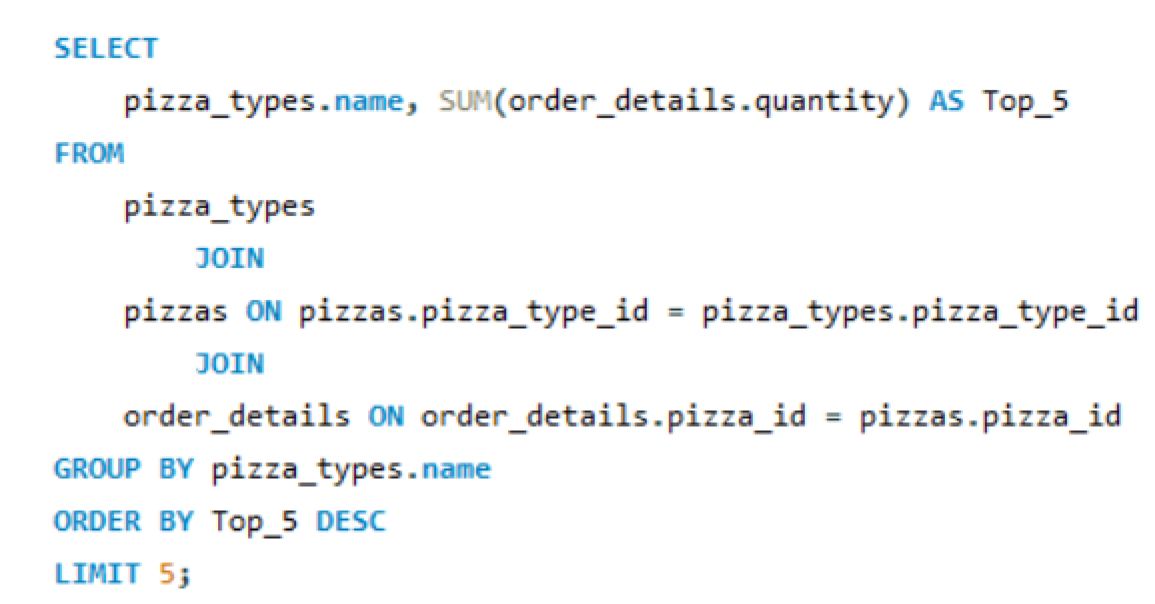


```
SELECT
    pizzas.size,
    COUNT(order_details.order_details_id) AS Order_Count
FROM
    pizzas
        JOIN
    order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY pizzas.size
ORDER BY Order_Count DESC
LIMIT 1;
```

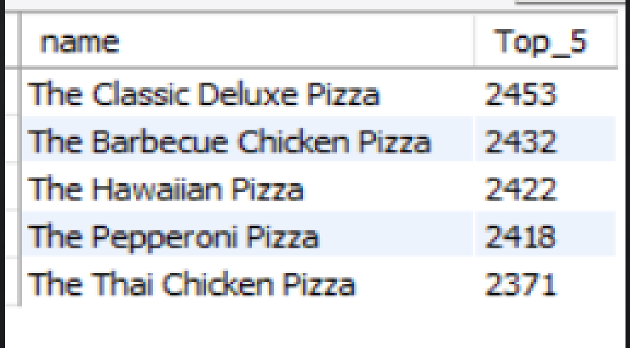


	size	Order_Count
▶	L	18526

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

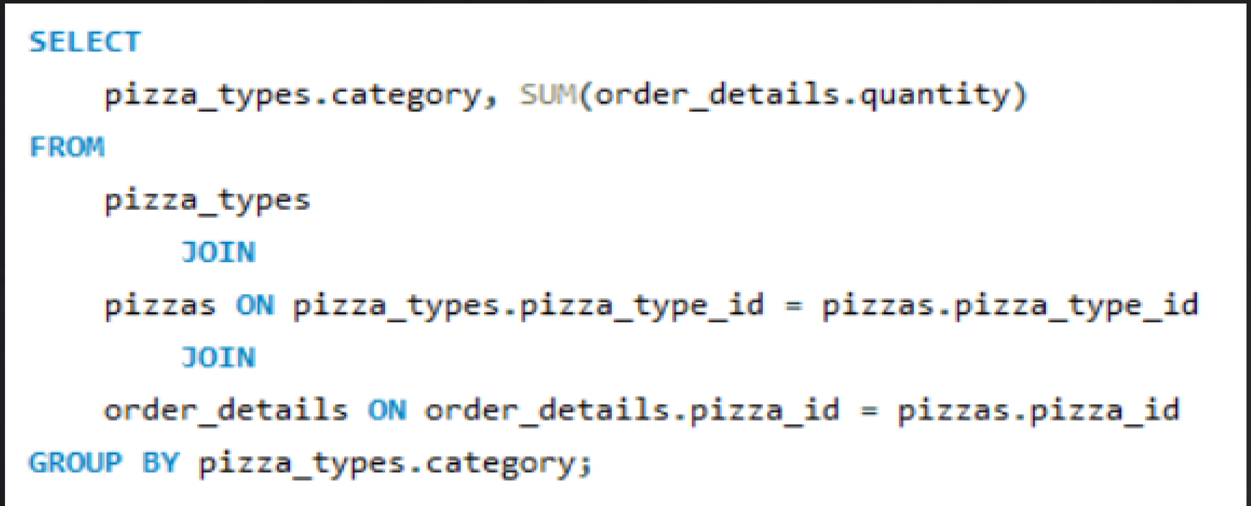


```
SELECT
    pizza_types.name, SUM(order_details.quantity) AS Top_5
FROM
    pizza_types
        JOIN
    pizzas ON pizzas.pizza_type_id = pizza_types.pizza_type_id
        JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.name
ORDER BY Top_5 DESC
LIMIT 5;
```

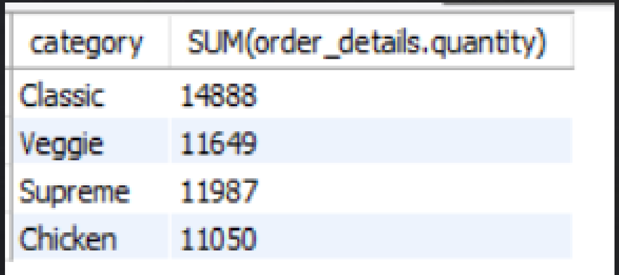


name	Top_5
The Classic Deluxe Pizza	2453
The Barbecue Chicken Pizza	2432
The Hawaiian Pizza	2422
The Pepperoni Pizza	2418
The Thai Chicken Pizza	2371

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

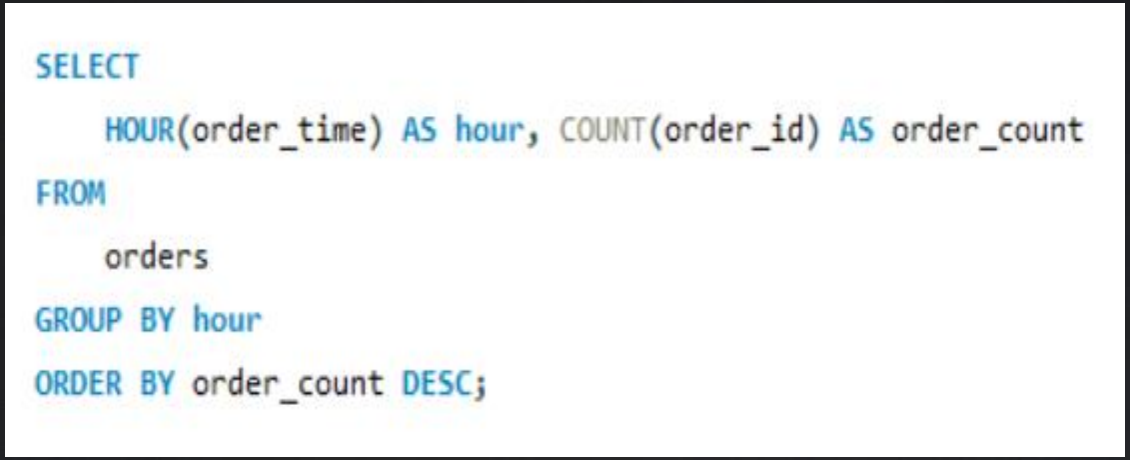


```
SELECT
    pizza_types.category, SUM(order_details.quantity)
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.category;
```

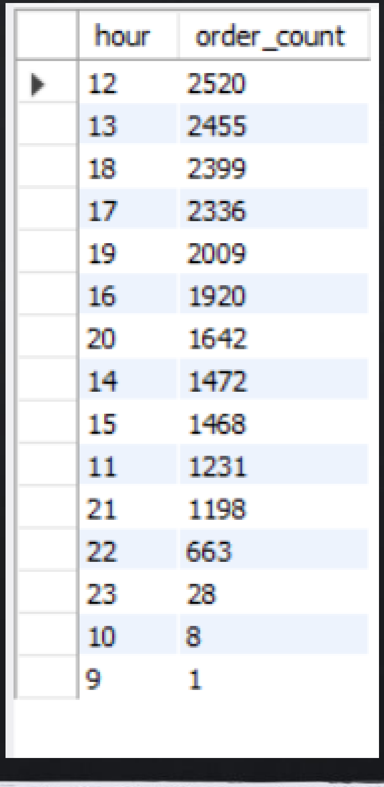


category	SUM(order_details.quantity)
Classic	14888
Veggie	11649
Supreme	11987
Chicken	11050

Determine the distribution of orders by hour of the day.

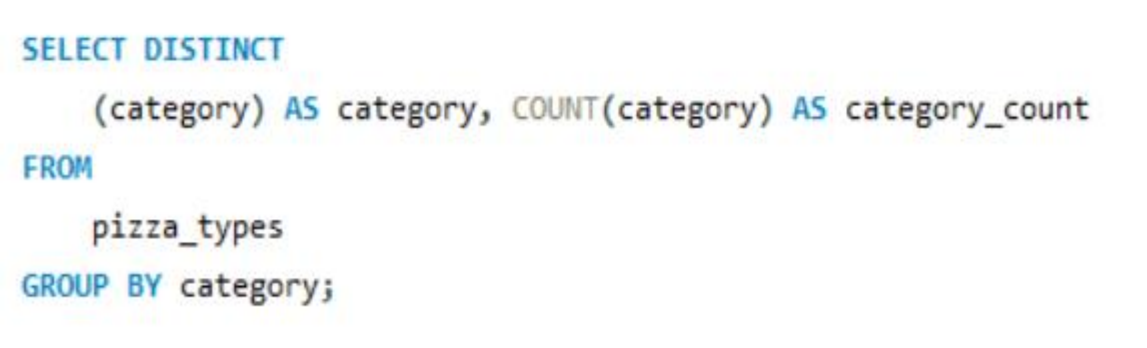


```
SELECT
    HOUR(order_time) AS hour, COUNT(order_id) AS order_count
FROM
    orders
GROUP BY hour
ORDER BY order_count DESC;
```

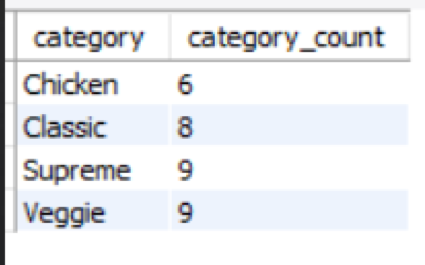


hour	order_count
12	2520
13	2455
18	2399
17	2336
19	2009
16	1920
20	1642
14	1472
15	1468
11	1231
21	1198
22	663
23	28
10	8
9	1

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

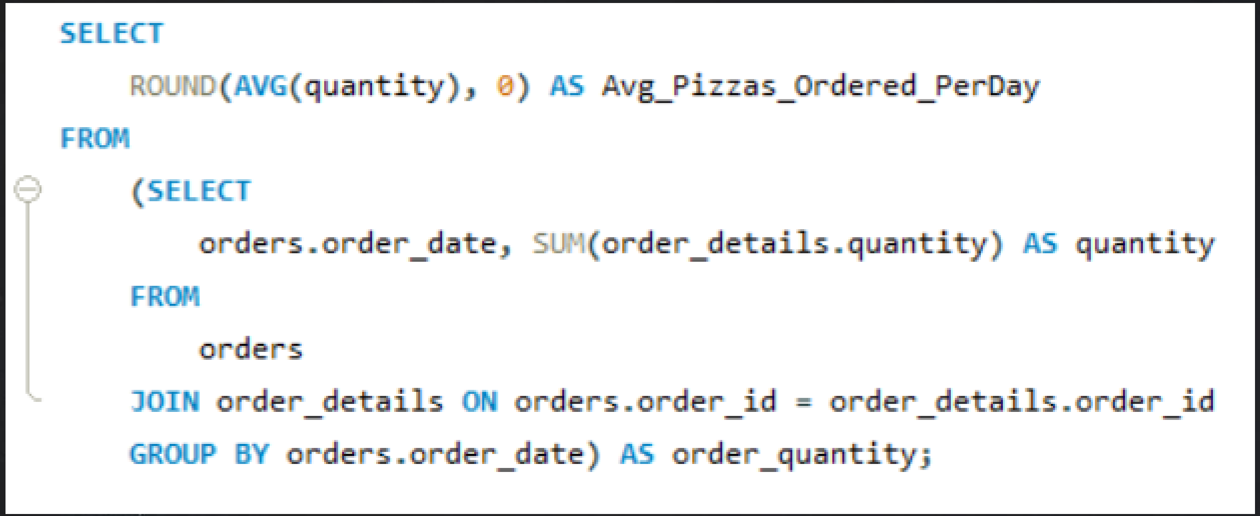


```
SELECT DISTINCT
    (category) AS category, COUNT(category) AS category_count
FROM
    pizza_types
GROUP BY category;
```

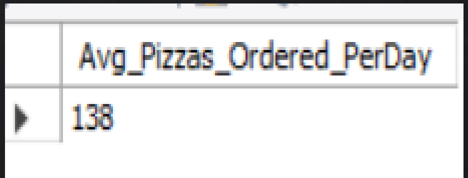


category	category_count
Chicken	6
Classic	8
Supreme	9
Veggie	9

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

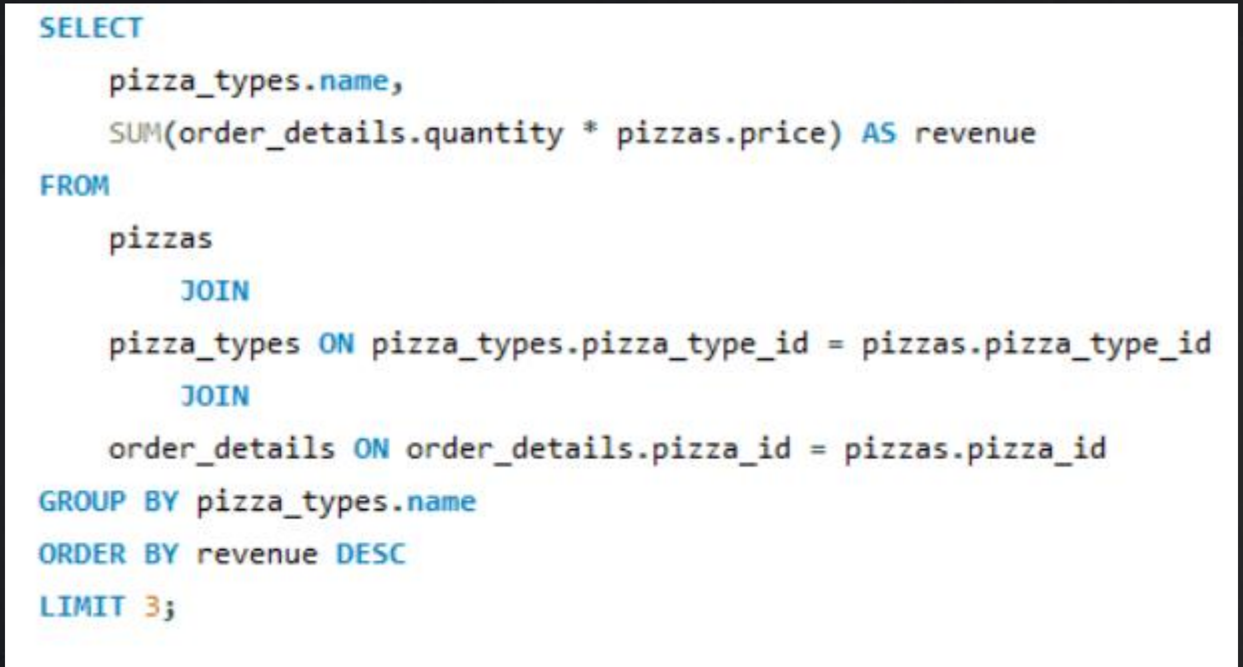


```sql
SELECT
    ROUND(AVG(quantity), 0) AS Avg_Pizzas_Ordered_PerDay
FROM
    (SELECT
        orders.order_date, SUM(order_details.quantity) AS quantity
    FROM
        orders
    JOIN order_details ON orders.order_id = order_details.order_id
    GROUP BY orders.order_date) AS order_quantity;
```

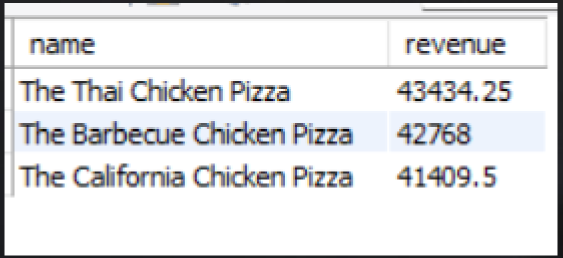


```
Avg_Pizzas_Ordered_PerDay
138
```

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

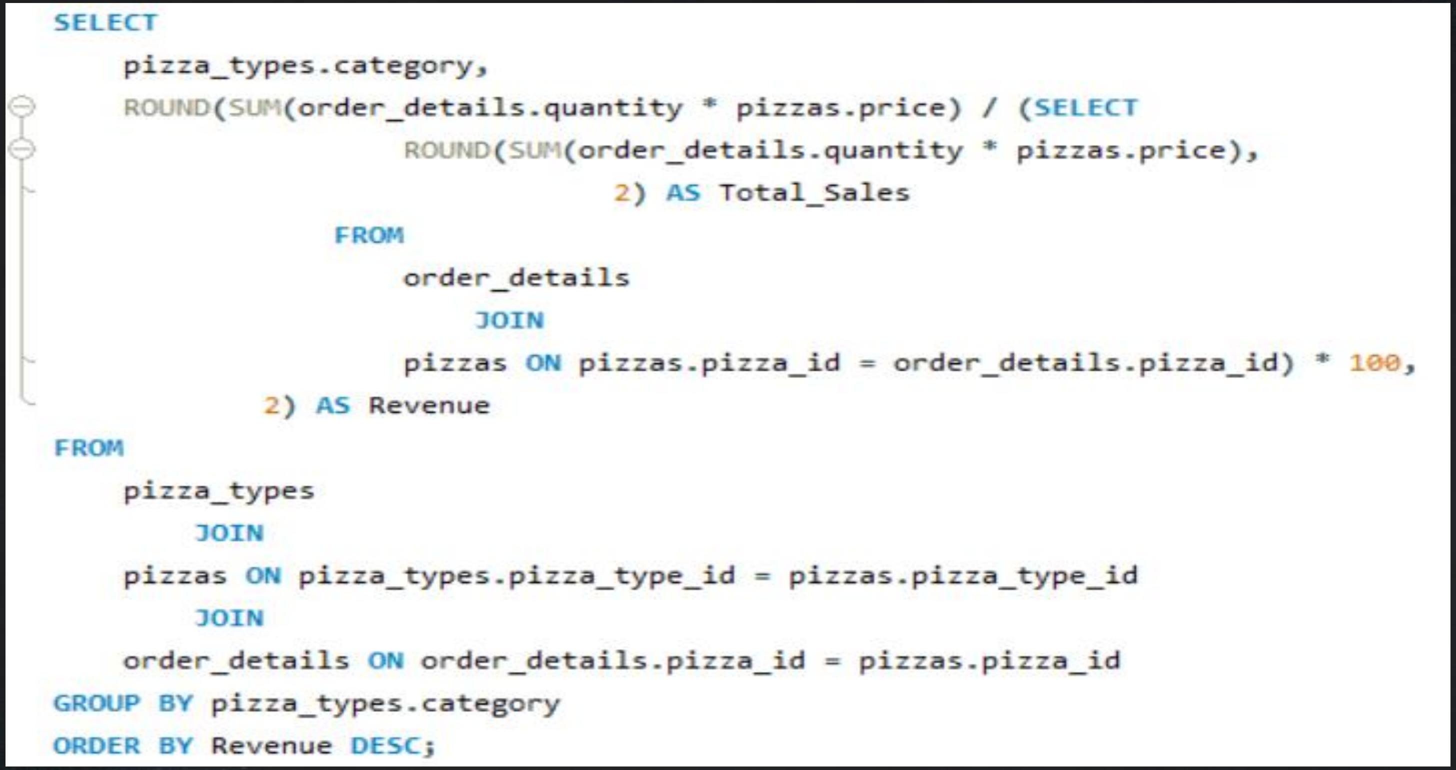


```
SELECT
    pizza_types.name,
    SUM(order_details.quantity * pizzas.price) AS revenue
FROM
    pizzas
        JOIN
    pizza_types ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.name
ORDER BY revenue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

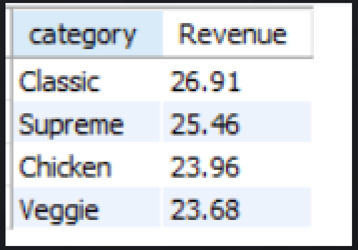


name	revenue
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5

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

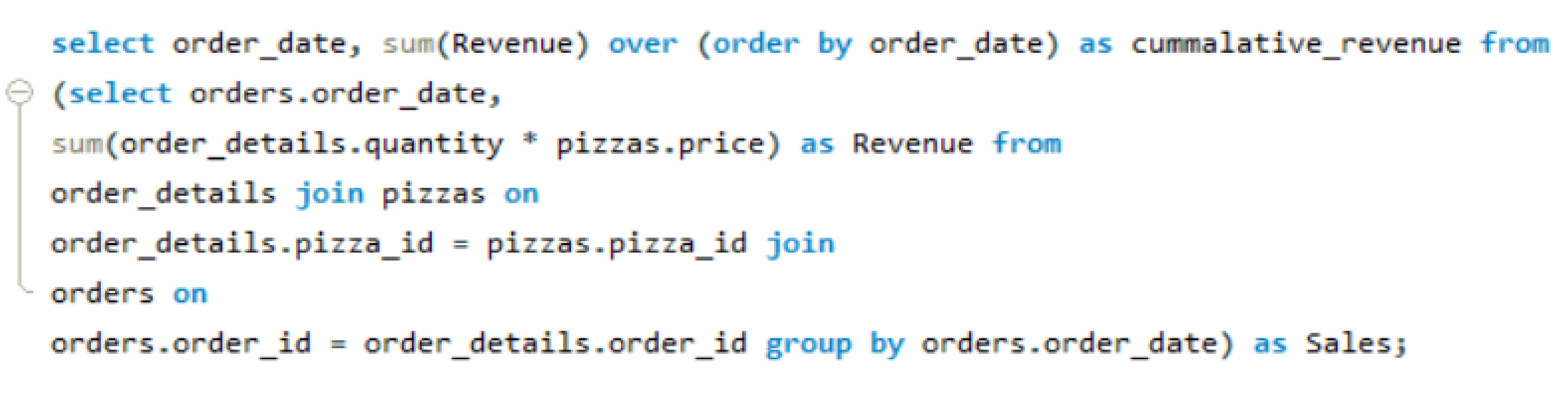


```sql
SELECT
    pizza_types.category,
    ROUND(SUM(order_details.quantity * pizzas.price) / (SELECT
                    ROUND(SUM(order_details.quantity * pizzas.price),
                                2) AS Total_Sales
                FROM
                    order_details
                        JOIN
                    pizzas ON 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;
```

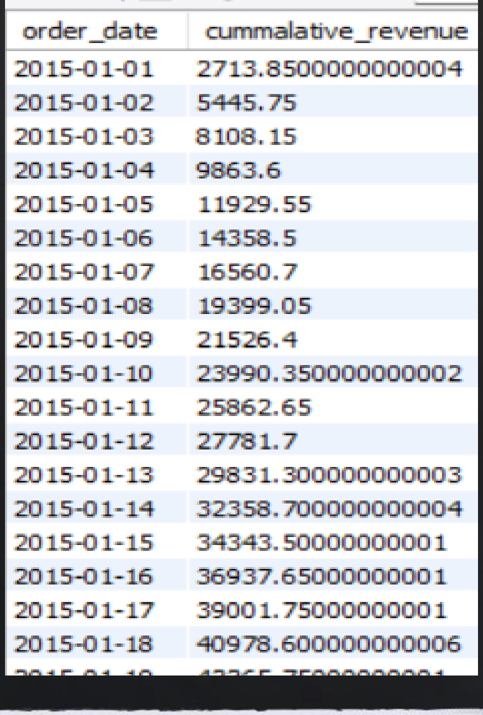


category	Revenue
Classic	26.91
Supreme	25.46
Chicken	23.96
Veggie	23.68

Analyze the cumulative revenue generated over time.

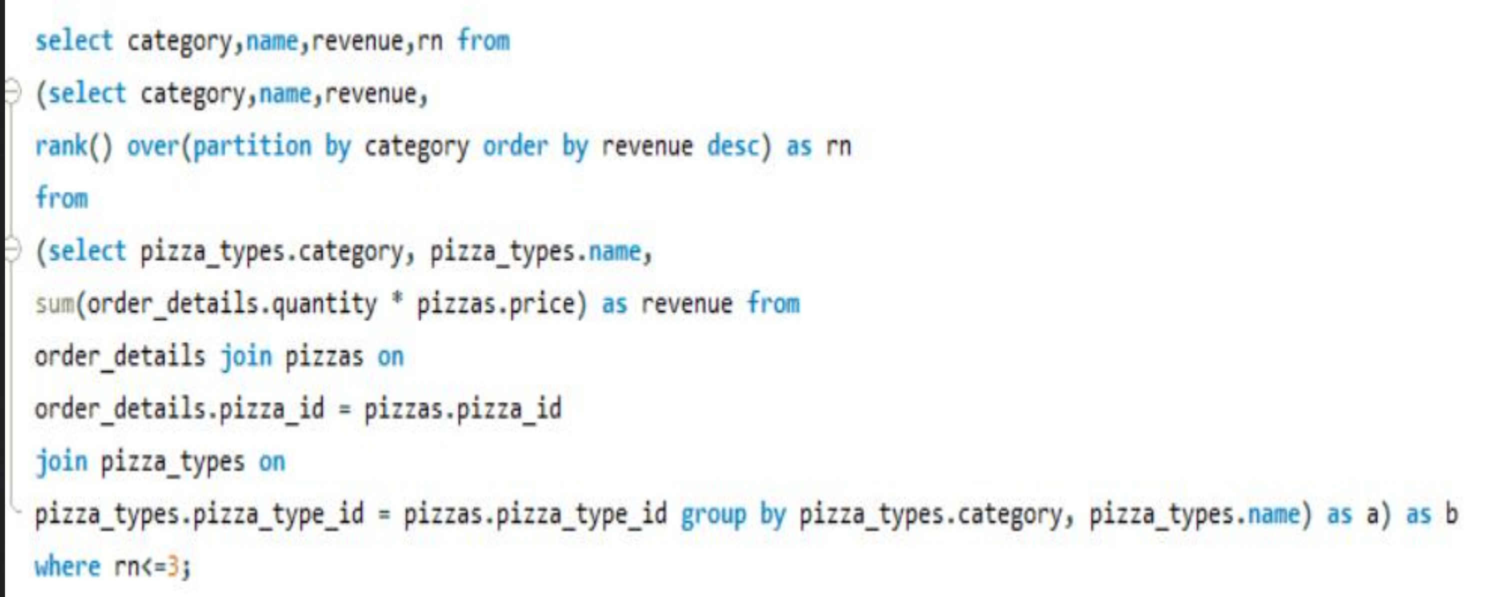


```
select order_date, sum(Revenue) over (order by order_date) as cummalative_revenue from
(select orders.order_date,
sum(order_details.quantity * pizzas.price) as Revenue from
order_details join pizzas on
order_details.pizza_id = pizzas.pizza_id join
orders on
orders.order_id = order_details.order_id group by orders.order_date) as Sales;
```

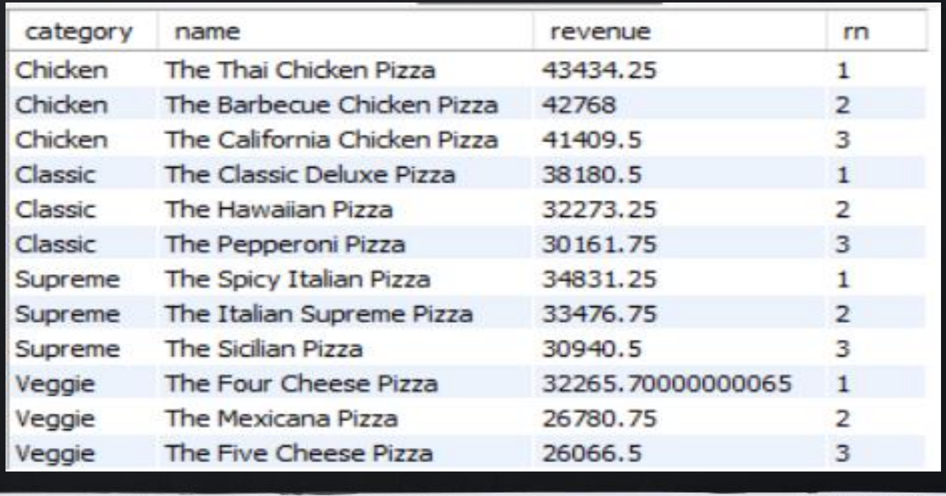


order_date	cummalative_revenue
2015-01-01	2713.8500000000004
2015-01-02	5445.75
2015-01-03	8108.15
2015-01-04	9863.6
2015-01-05	11929.55
2015-01-06	14358.5
2015-01-07	16560.7
2015-01-08	19399.05
2015-01-09	21526.4
2015-01-10	23990.350000000002
2015-01-11	25862.65
2015-01-12	27781.7
2015-01-13	29831.300000000003
2015-01-14	32358.700000000004
2015-01-15	34343.50000000001
2015-01-16	36937.65000000001
2015-01-17	39001.75000000001
2015-01-18	40978.600000000006

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



```
select category,name,revenue,rn 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
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, pizza_types.name) as a) as b
where rn<=3;
```



category	name	revenue	rn
Chicken	The Thai Chicken Pizza	43434.25	1
Chicken	The Barbecue Chicken Pizza	42768	2
Chicken	The California Chicken Pizza	41409.5	3
Classic	The Classic Deluxe Pizza	38180.5	1
Classic	The Hawaiian Pizza	32273.25	2
Classic	The Pepperoni Pizza	30161.75	3
Supreme	The Spicy Italian Pizza	34831.25	1
Supreme	The Italian Supreme Pizza	33476.75	2
Supreme	The Sicilian Pizza	30940.5	3
Veggie	The Four Cheese Pizza	32265.70000000065	1
Veggie	The Mexicana Pizza	26780.75	2
Veggie	The Five Cheese Pizza	26066.5	3

THANK YOU