Pizza Sales Analysis using SQL Queries

"Hello, I’m Satve Pukhraj. In this project, I have applied my knowledge of SQL queries to analyze and solve a problem related to pizza sales."

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

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

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

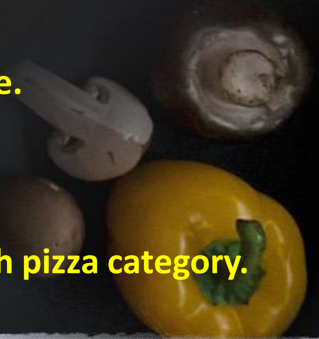
9) Group the orders by date and calculate the average number of pizzas ordered per day.

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

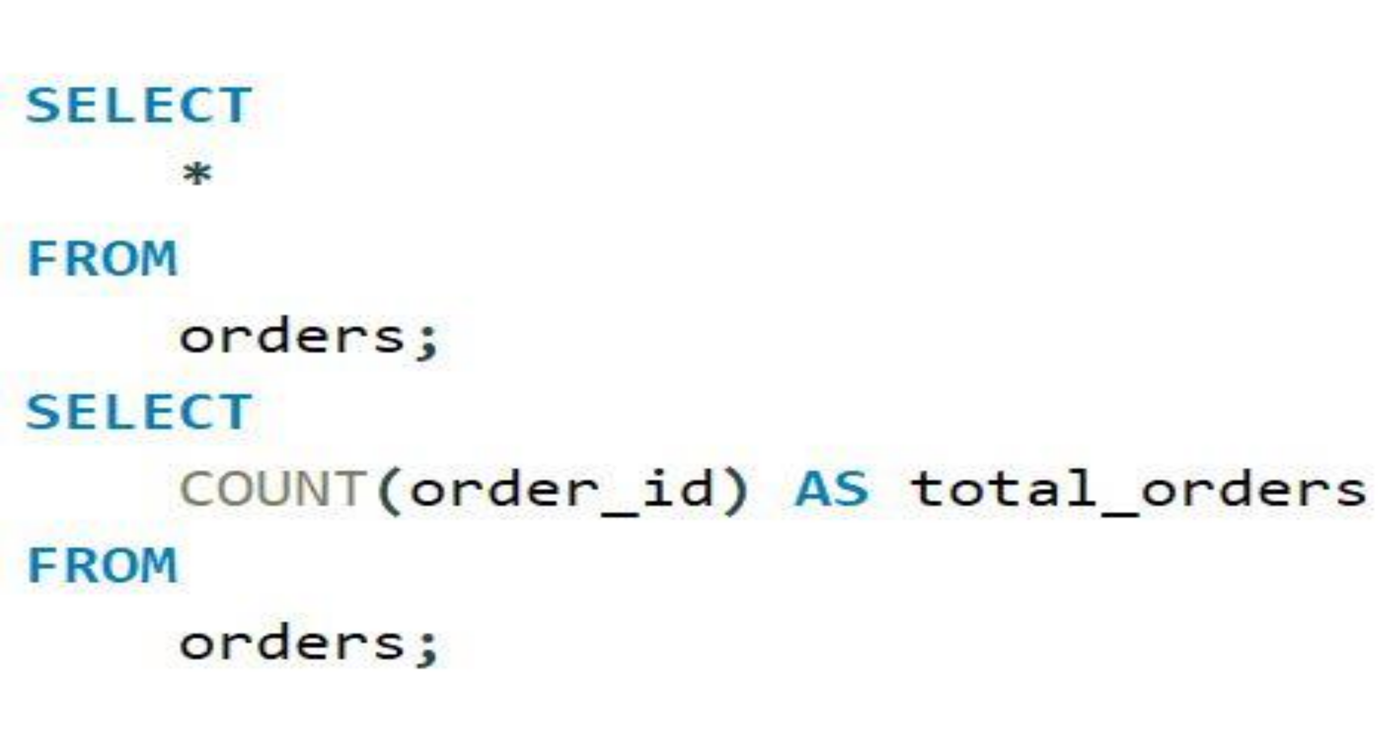
11) Calculate the percentage contribution of each pizza type to total revenue.

12) Analyze the cumulative revenue generated over time.

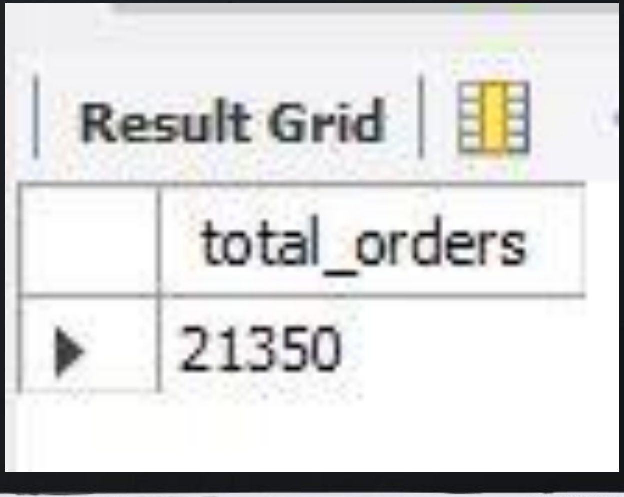
13) Determine the top 3 most ordered pizza types based on revenue for each pizza category.



01 Retrieve the total number of orders placed.

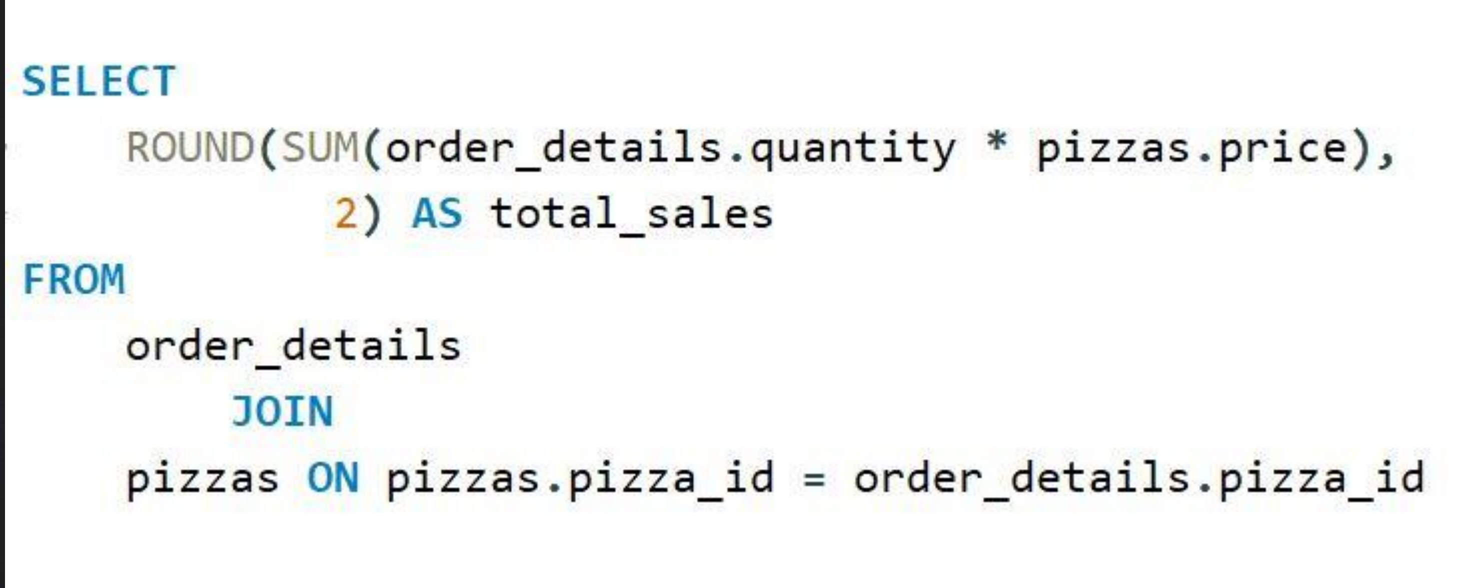


```
SELECT
    *
FROM
    orders;
SELECT
    COUNT(order_id) AS total_orders
FROM
    orders;
```

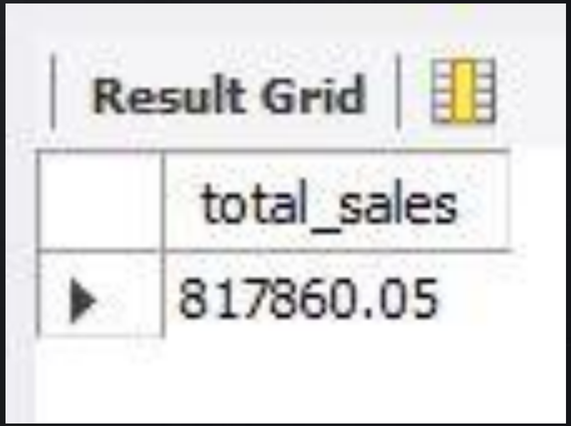


```
   total_orders
▶  21350
```

02 Calculate the total revenue generated from pizza sales.

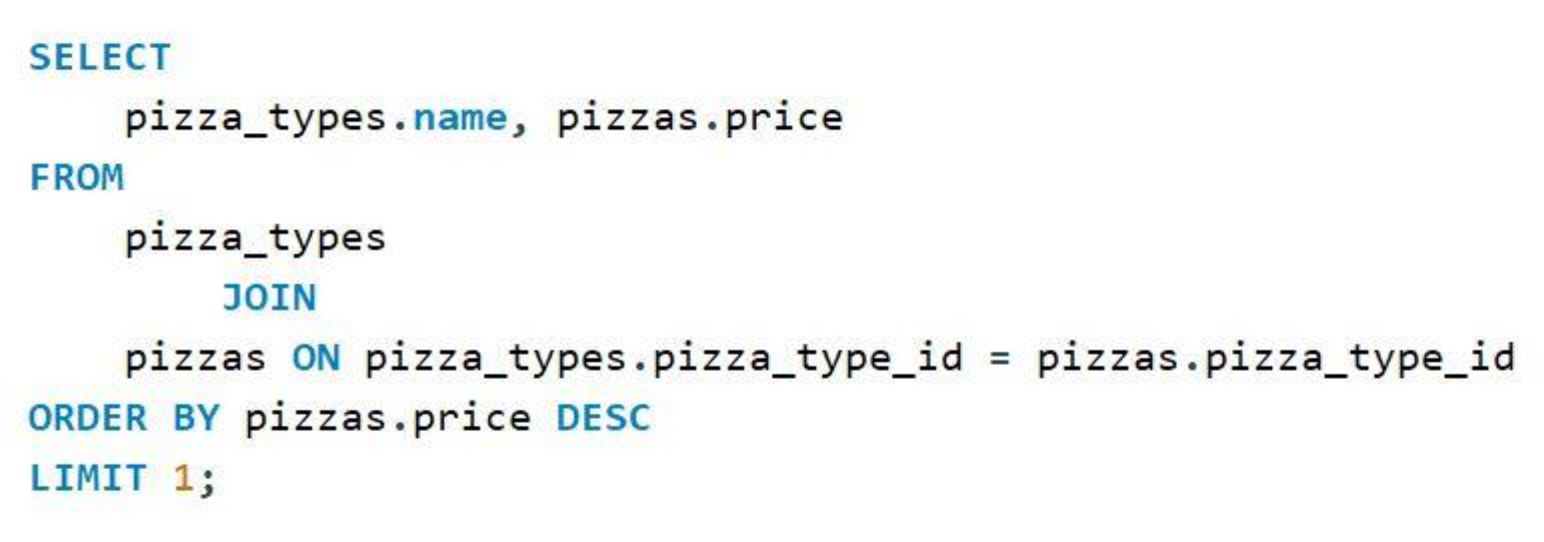


```sql
SELECT
    ROUND(SUM(order_details.quantity * pizzas.price),
            2) AS total_sales
FROM
    order_details
        JOIN
    pizzas ON pizzas.pizza_id = order_details.pizza_id
```

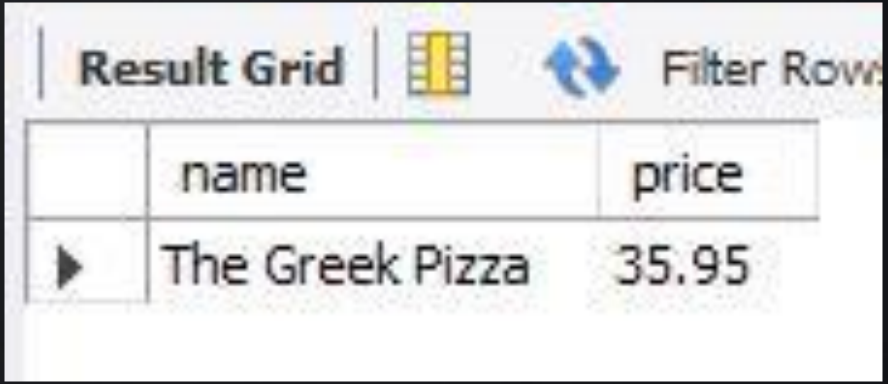


```
total_sales
817860.05
```

03 Identify the highest-priced pizza.

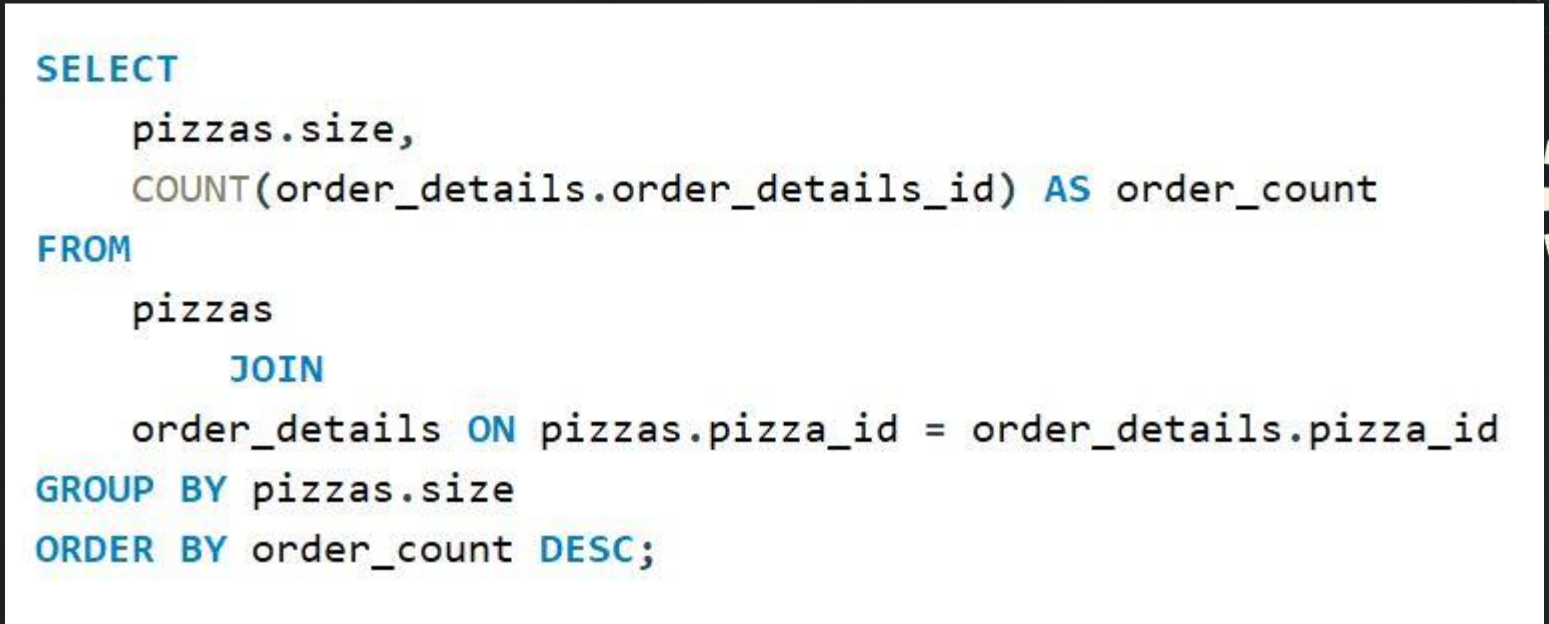


```
SELECT
    pizza_types.name, pizzas.price
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
ORDER BY pizzas.price DESC
LIMIT 1;
```

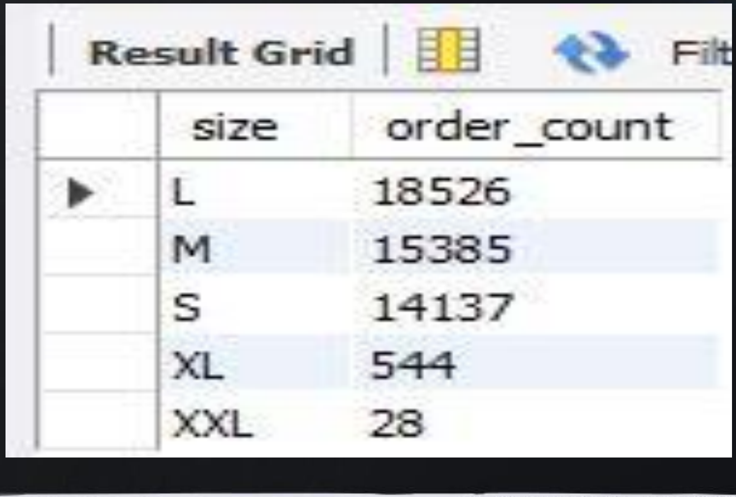


name	price
The Greek Pizza	35.95

04 Identify the most common pizza size ordered.

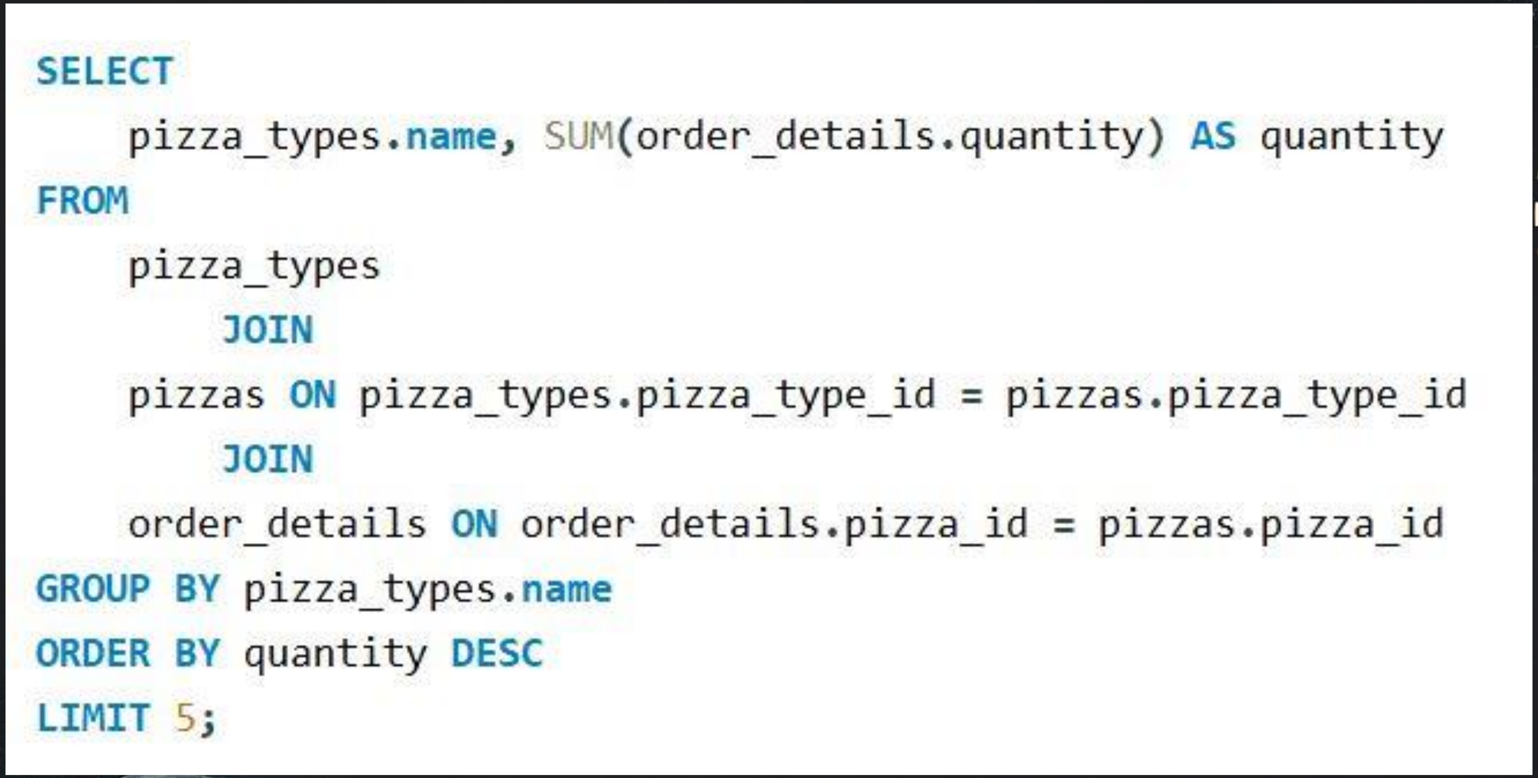


```
SELECT
    pizzas.size,
    COUNT(order_details.order_details_id) AS order_count
FROM
    pizzas
        JOIN
    order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY pizzas.size
ORDER BY order_count DESC;
```

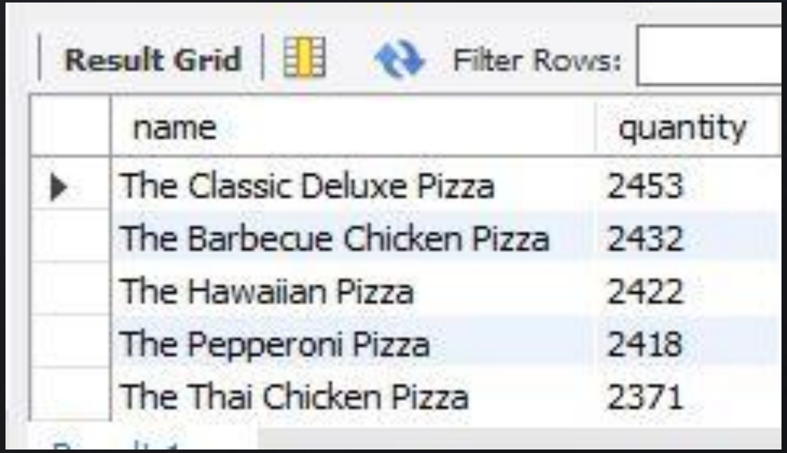


size	order_count
L	18526
M	15385
S	14137
XL	544
XXL	28

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

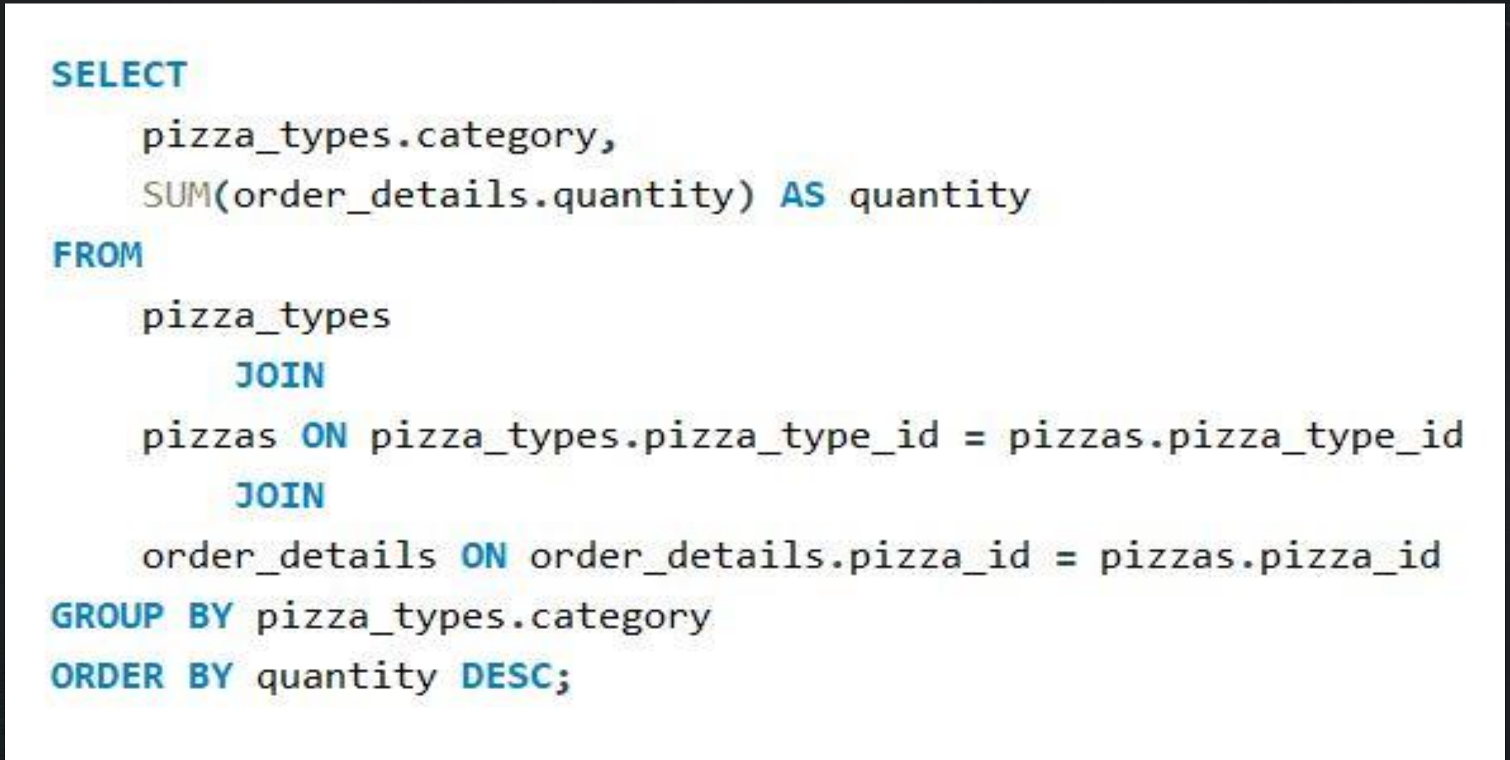


```sql
SELECT
    pizza_types.name, SUM(order_details.quantity) AS quantity
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.name
ORDER BY quantity DESC
LIMIT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

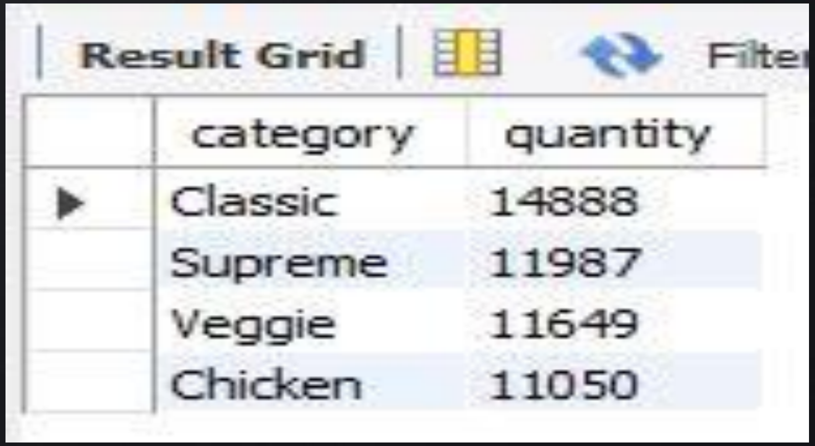


name	quantity
The Classic Deluxe Pizza	2453
The Barbecue Chicken Pizza	2432
The Hawaiian Pizza	2422
The Pepperoni Pizza	2418
The Thai Chicken Pizza	2371

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

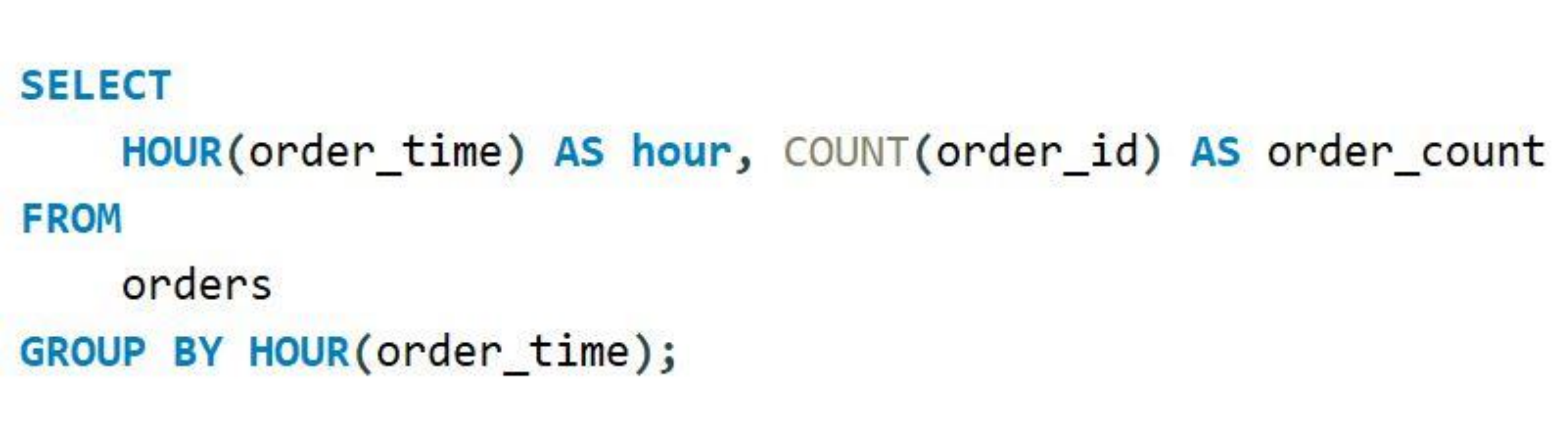


```sql
SELECT
    pizza_types.category,
    SUM(order_details.quantity) AS quantity
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.category
ORDER BY quantity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

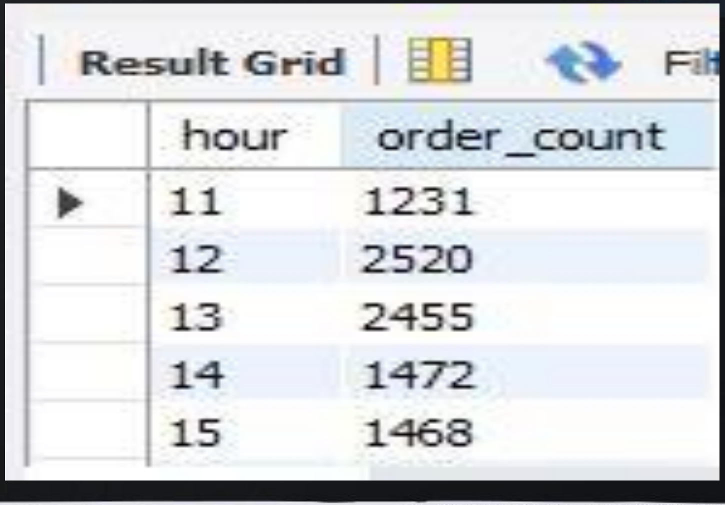


category	quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

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

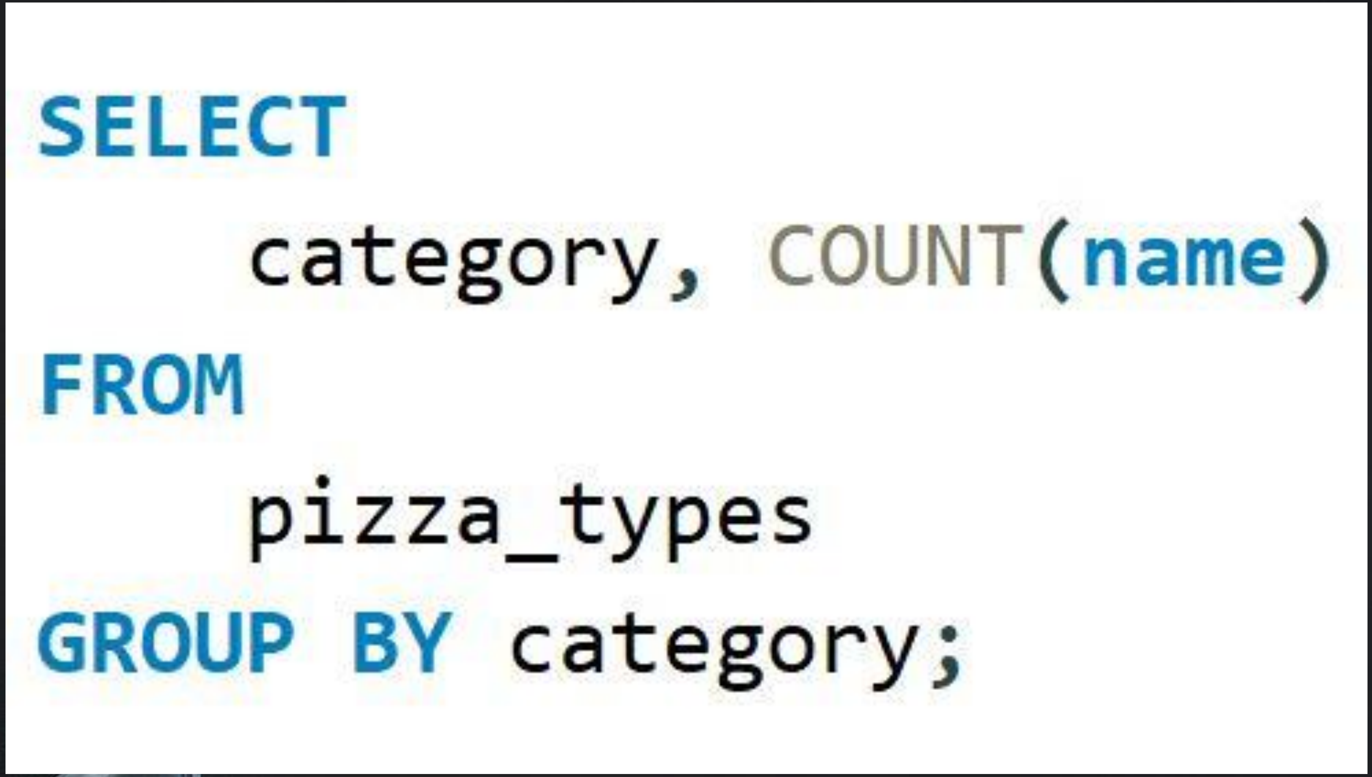


```
SELECT
    HOUR(order_time) AS hour, COUNT(order_id) AS order_count
FROM
    orders
GROUP BY HOUR(order_time);
```

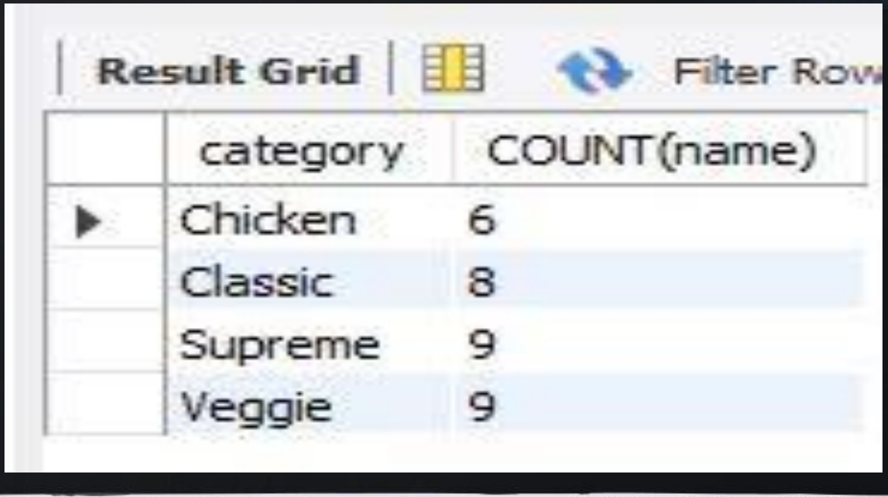


hour	order_count
11	1231
12	2520
13	2455
14	1472
15	1468

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

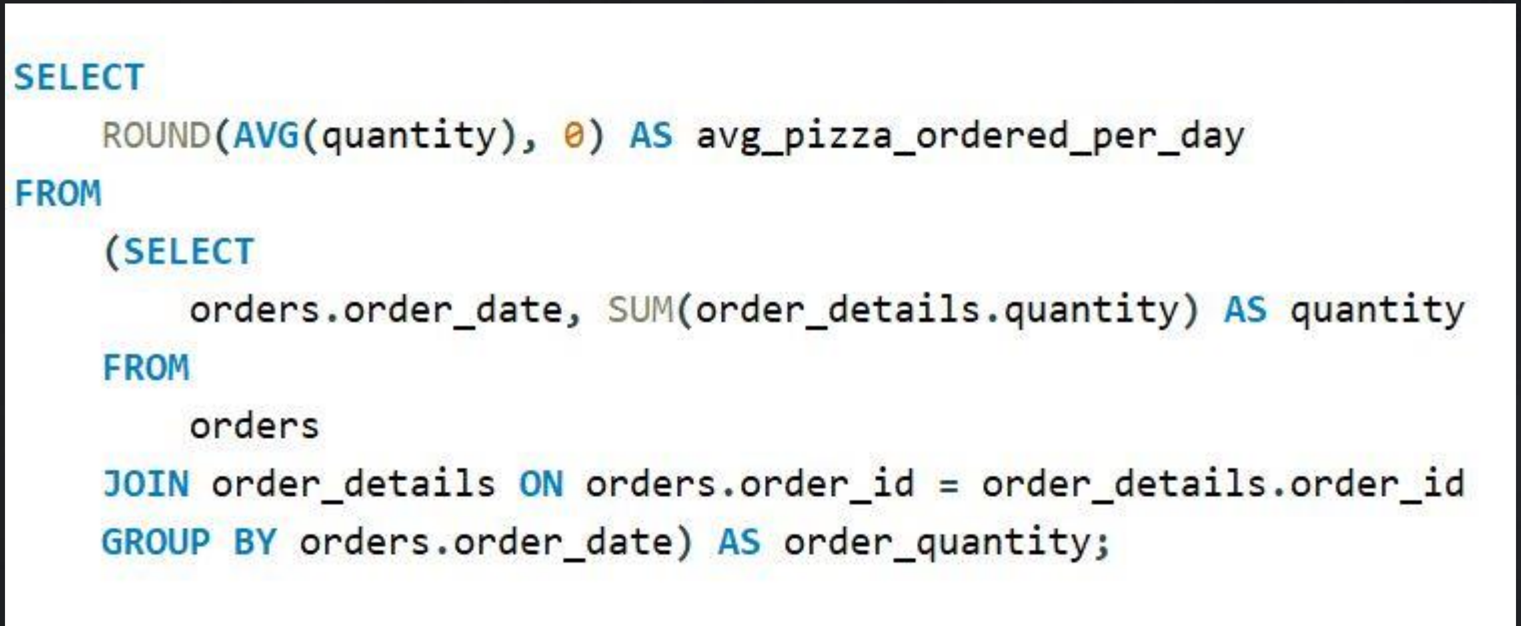


```
SELECT
    category, COUNT(name)
FROM
    pizza_types
GROUP BY category;
```

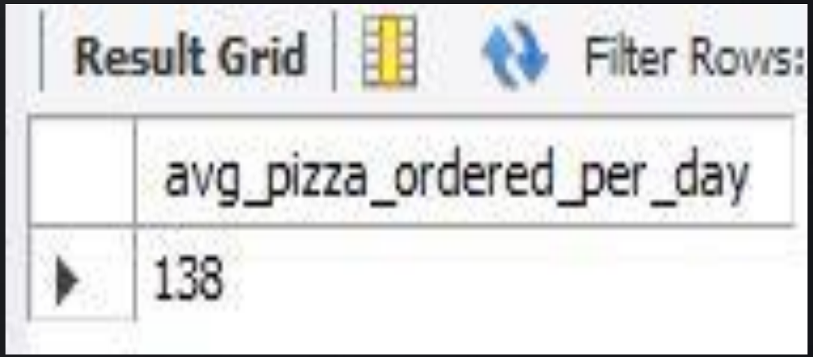


category	COUNT(name)
Chicken	6
Classic	8
Supreme	9
Veggie	9

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

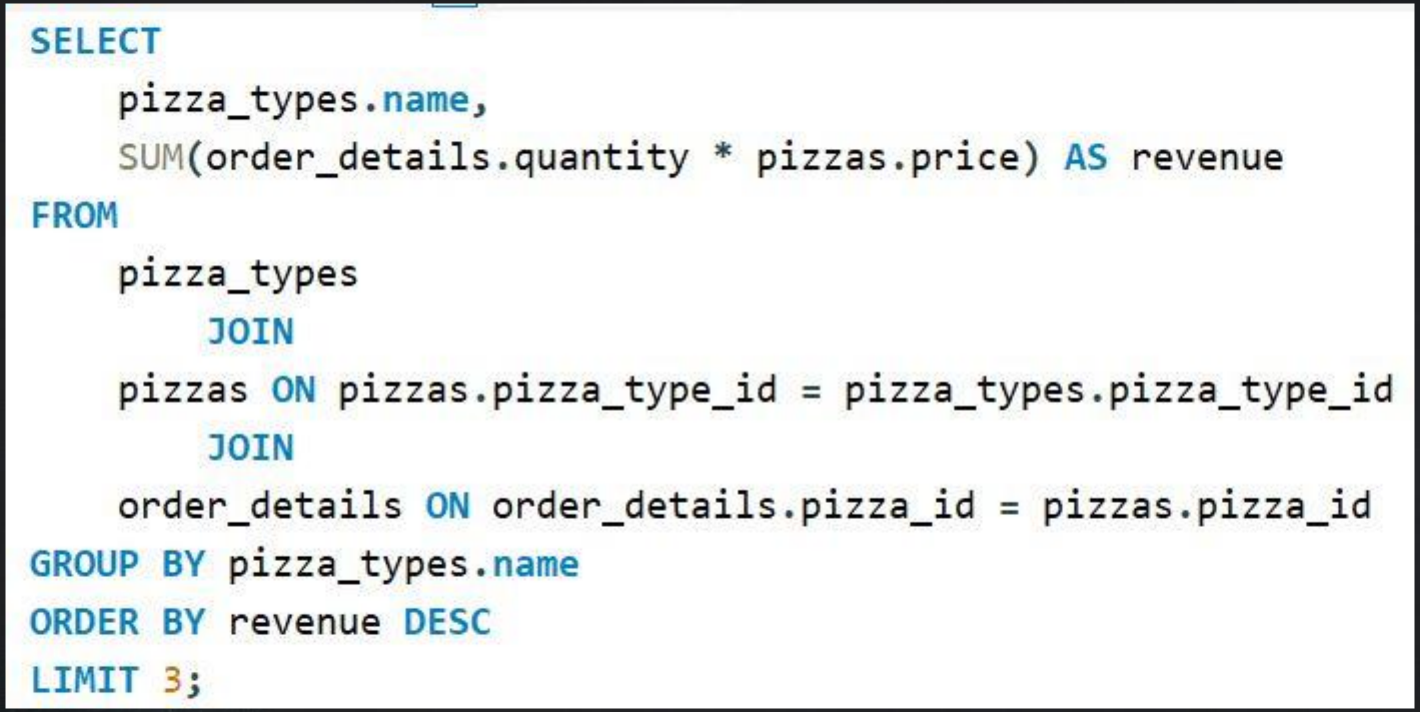


```sql
SELECT
    ROUND(AVG(quantity), 0) AS avg_pizza_ordered_per_day
FROM
    (SELECT
        orders.order_date, SUM(order_details.quantity) AS quantity
    FROM
        orders
    JOIN order_details ON orders.order_id = order_details.order_id
    GROUP BY orders.order_date) AS order_quantity;
```

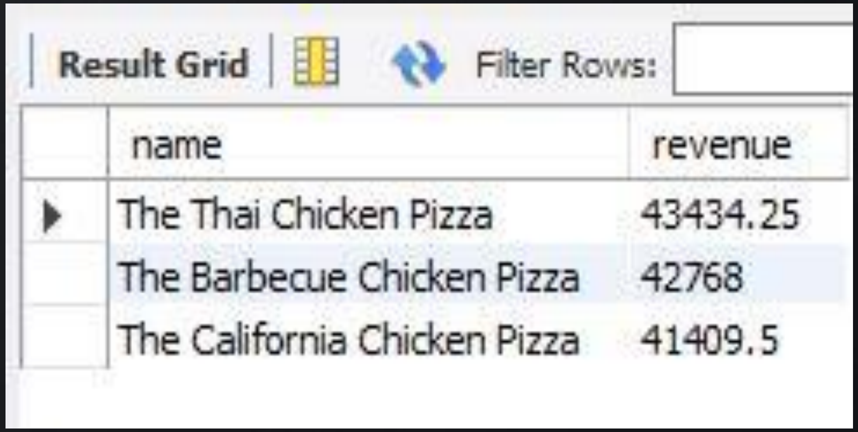


	avg_pizza_ordered_per_day
▶	138

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

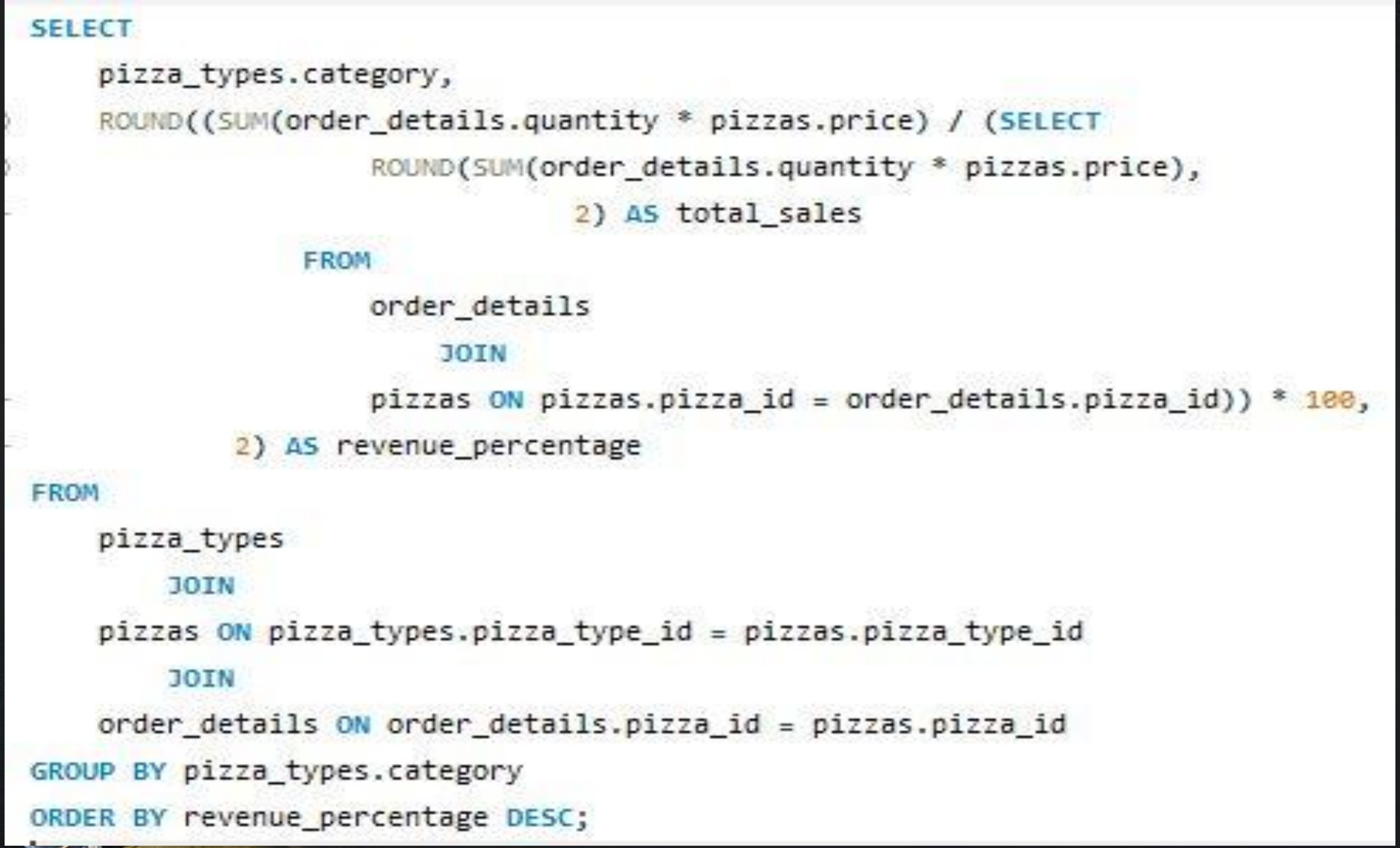


```sql
SELECT
    pizza_types.name,
    SUM(order_details.quantity * pizzas.price) AS revenue
FROM
    pizza_types
        JOIN
    pizzas ON pizzas.pizza_type_id = pizza_types.pizza_type_id
        JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.name
ORDER BY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

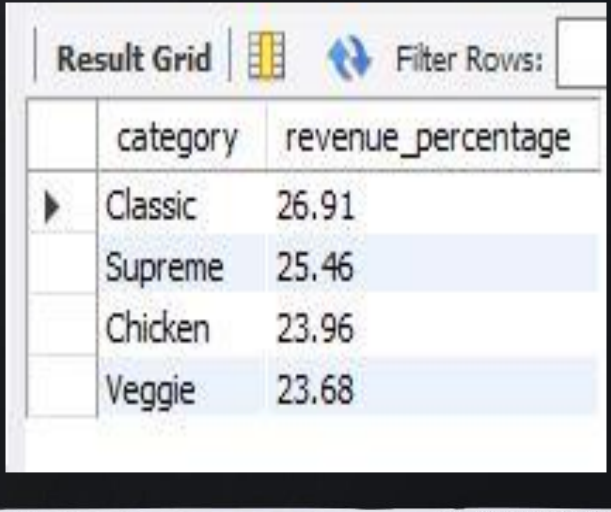


name	revenue
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5

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

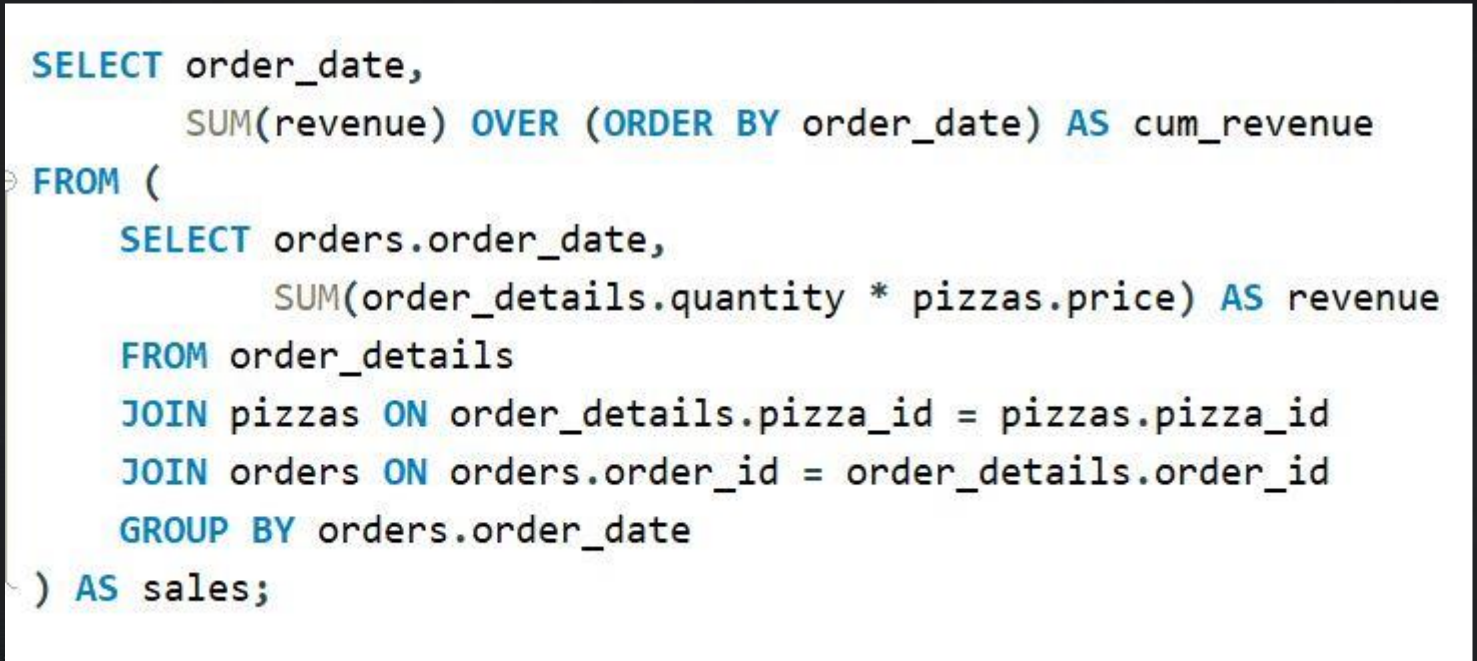


```
SELECT
    pizza_types.category,
    ROUND((SUM(order_details.quantity * pizzas.price) / (SELECT
                ROUND(SUM(order_details.quantity * pizzas.price),
                        2) AS total_sales
            FROM
                order_details
                    JOIN
                pizzas ON pizzas.pizza_id = order_details.pizza_id)) * 100,
        2) AS revenue_percentage
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_percentage DESC;
```

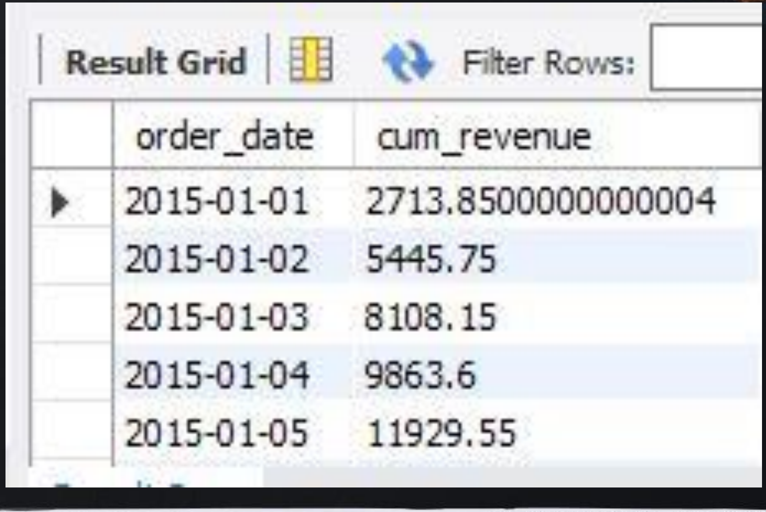


category	revenue_percentage
Classic	26.91
Supreme	25.46
Chicken	23.96
Veggie	23.68

12 Analyze the cumulative revenue generated over time.

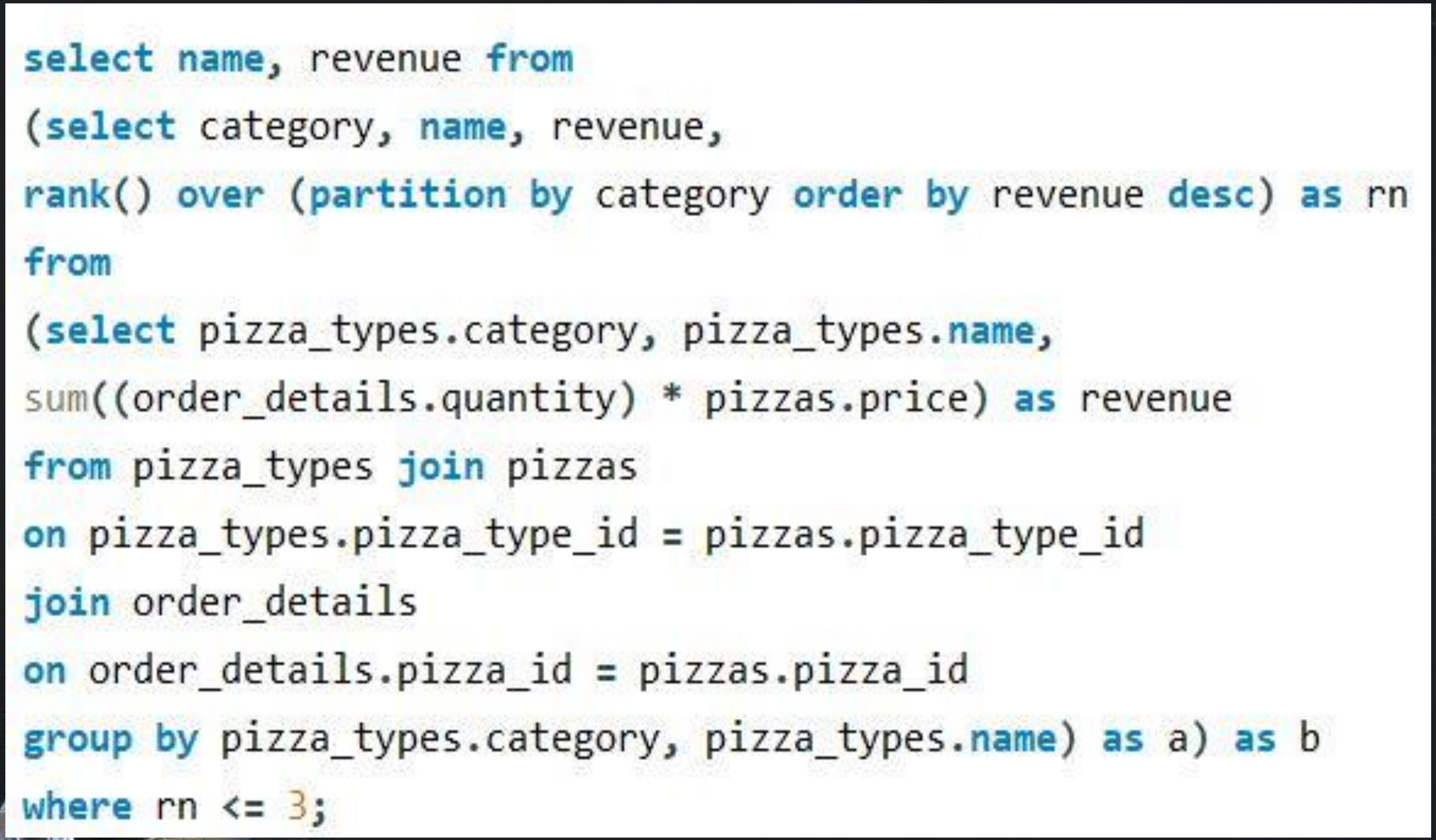


```
SELECT order_date,
       SUM(revenue) OVER (ORDER BY order_date) AS cum_revenue
FROM (
    SELECT orders.order_date,
           SUM(order_details.quantity * pizzas.price) AS revenue
    FROM order_details
    JOIN pizzas ON order_details.pizza_id = pizzas.pizza_id
    JOIN orders ON orders.order_id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

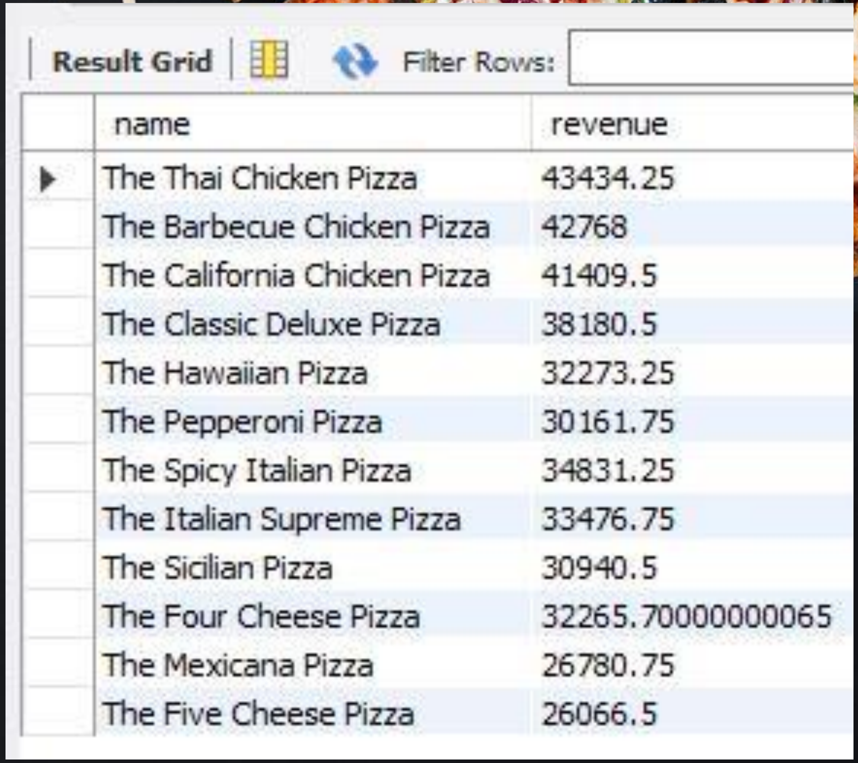


order_date	cum_revenue
2015-01-01	2713.8500000000004
2015-01-02	5445.75
2015-01-03	8108.15
2015-01-04	9863.6
2015-01-05	11929.55

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 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;
```



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

THANK
YOU