PIZZAHUT PROJECT - SQL

Analyzing Sales and Operations with SQL Queries

About Project

Project Overview

The SQL project focuses on analyzing Pizza Hut's data to gain insights into sales and operations. Utilizing a variety of SQL queries, the project aims to identify key business metrics and trends. The data includes customer details, orders, order details, product information, and employee records.

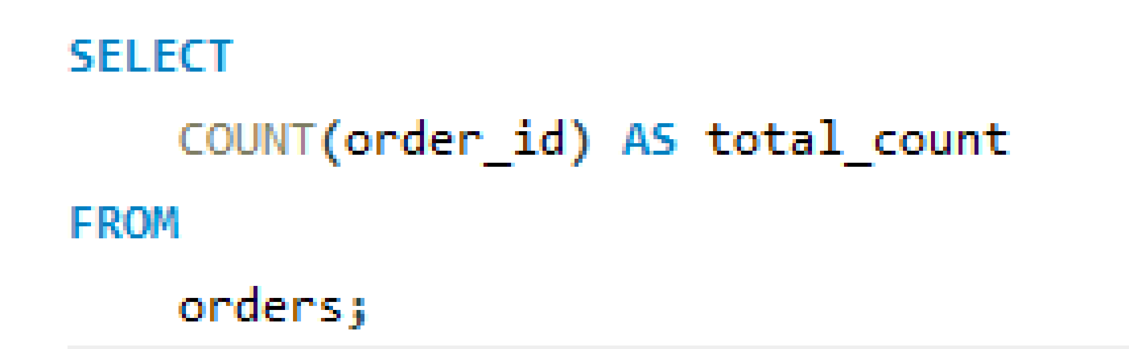
Objectives

1.**Customer Segmentation:** Identify top customers based on the number of orders placed.
2.**Sales Analysis:** Calculate total sales per product.
3.**Monthly Revenue:** Determine the total revenue generated each month.
4.**Employee Performance:** Evaluate employee performance based on the number of order handled.
5.**Popular Products:** Identify the most popular products based on sales quantity.
6.**Revenue by Customer Region:** Analyze revenue distribution across different customer regions.

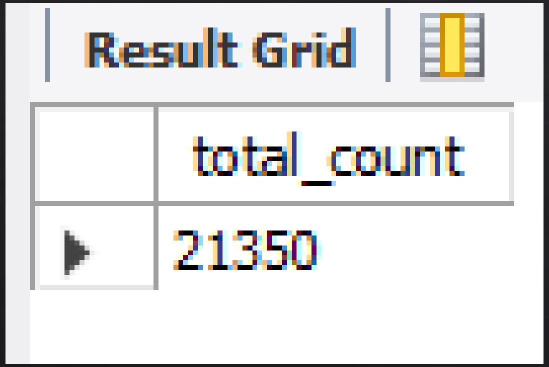
QUERIES SOLVED

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.

Retrieve the total number of orders placed.

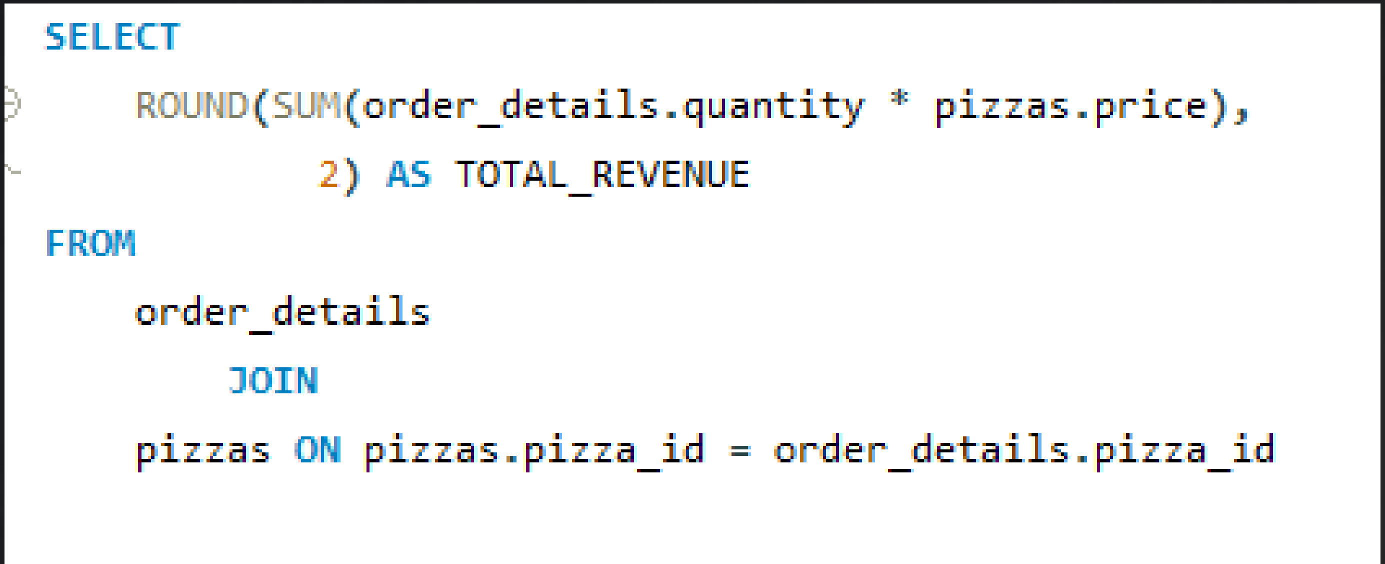


```
SELECT
    COUNT(order_id) AS total_count
FROM
    orders;
```

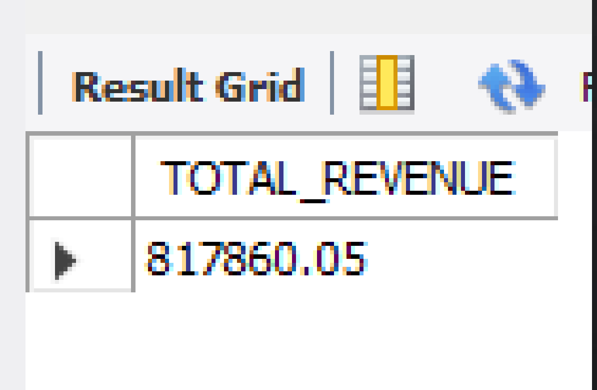


total_count
21350

Calculate the total revenue generated from pizza sales.

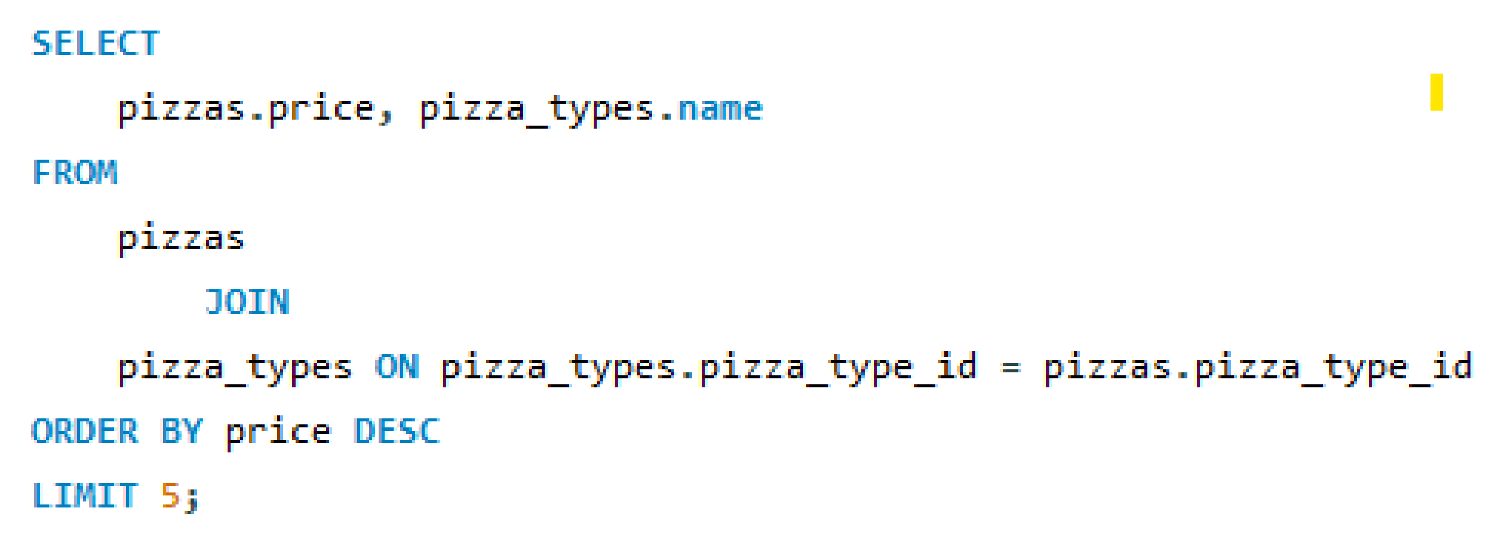


```
SELECT
    ROUND(SUM(order_details.quantity * pizzas.price),
            2) AS TOTAL_REVENUE
FROM
    order_details
        JOIN
    pizzas ON pizzas.pizza_id = order_details.pizza_id
```

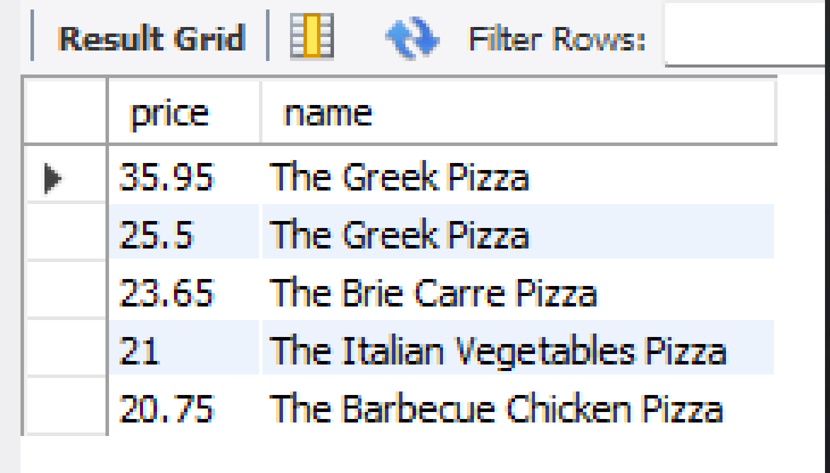


	TOTAL_REVENUE
▶	817860.05

Identify the highest-priced pizza.

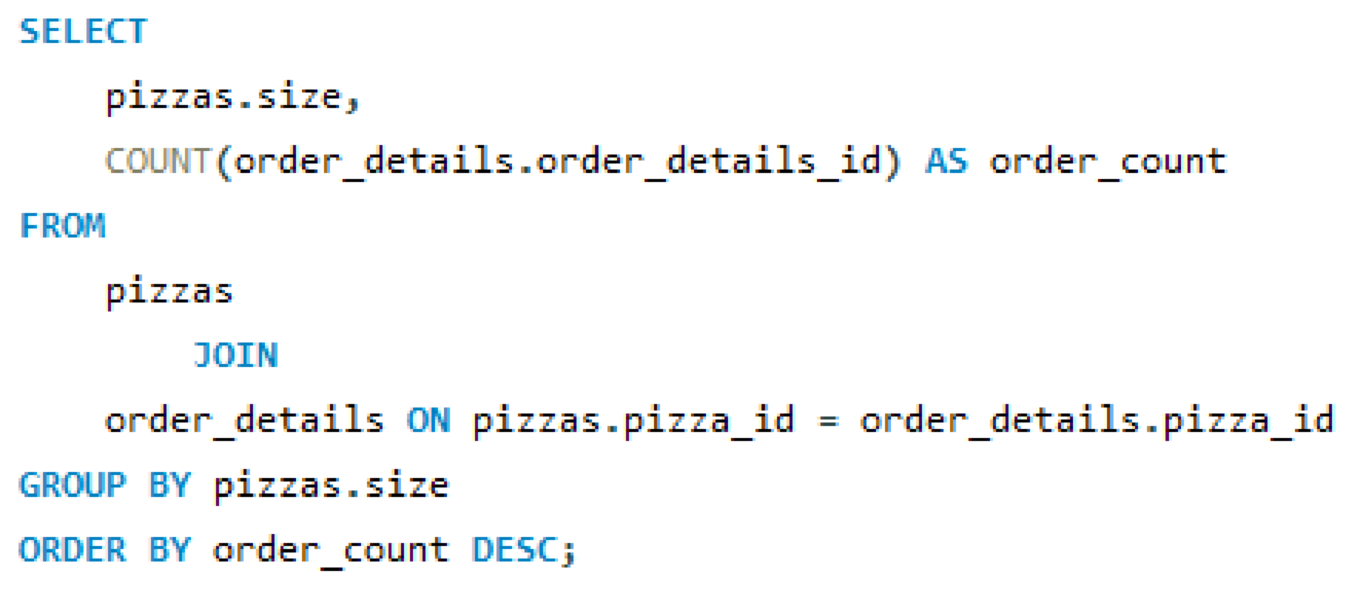


```
SELECT
    pizzas.price, pizza_types.name
FROM
    pizzas
        JOIN
    pizza_types ON pizza_types.pizza_type_id = pizzas.pizza_type_id
ORDER BY price DESC
LIMIT 5;
```

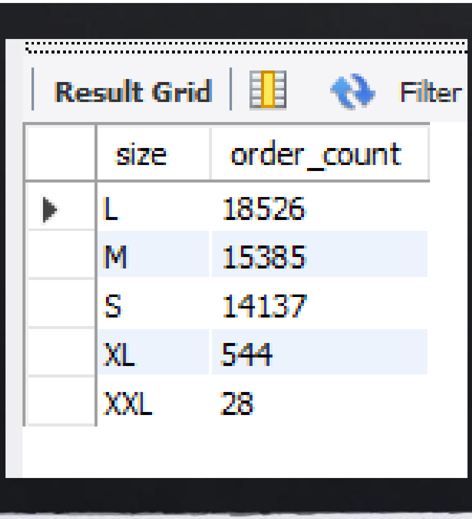


price	name
35.95	The Greek Pizza
25.5	The Greek Pizza
23.65	The Brie Carre Pizza
21	The Italian Vegetables Pizza
20.75	The Barbecue Chicken Pizza

Identify the most common pizza size ordered.

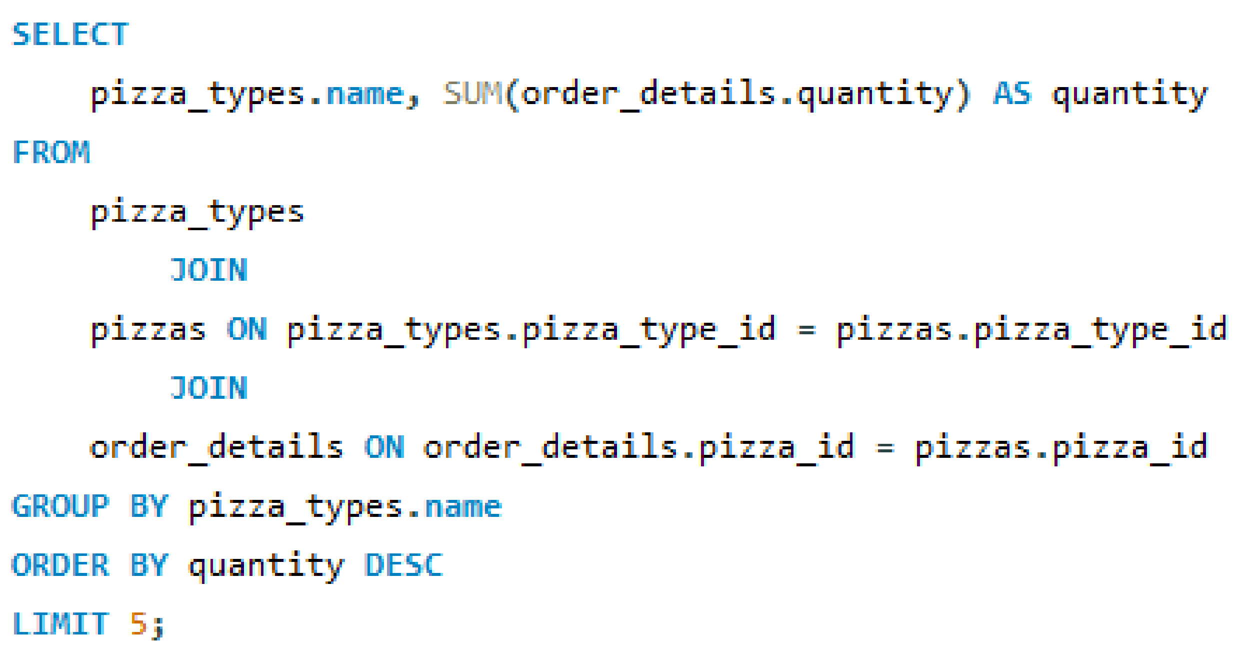


```sql
SELECT
    pizzas.size,
    COUNT(order_details.order_details_id) AS order_count
FROM
    pizzas
        JOIN
    order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY pizzas.size
ORDER BY order_count DESC;
```

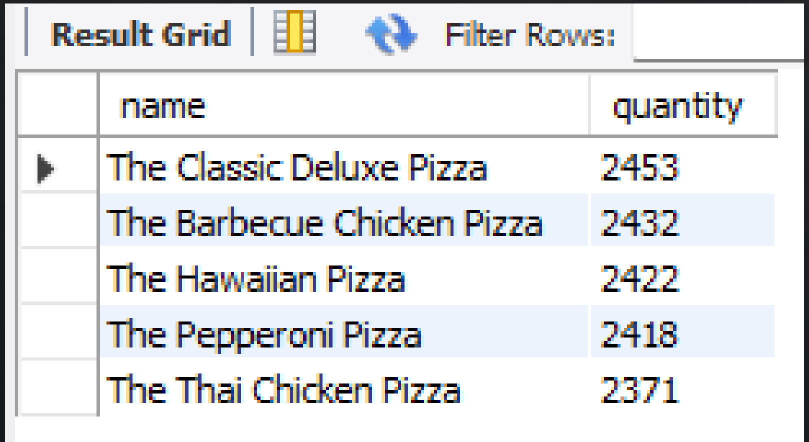


size	order_count
L	18526
M	15385
S	14137
XL	544
XXL	28

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

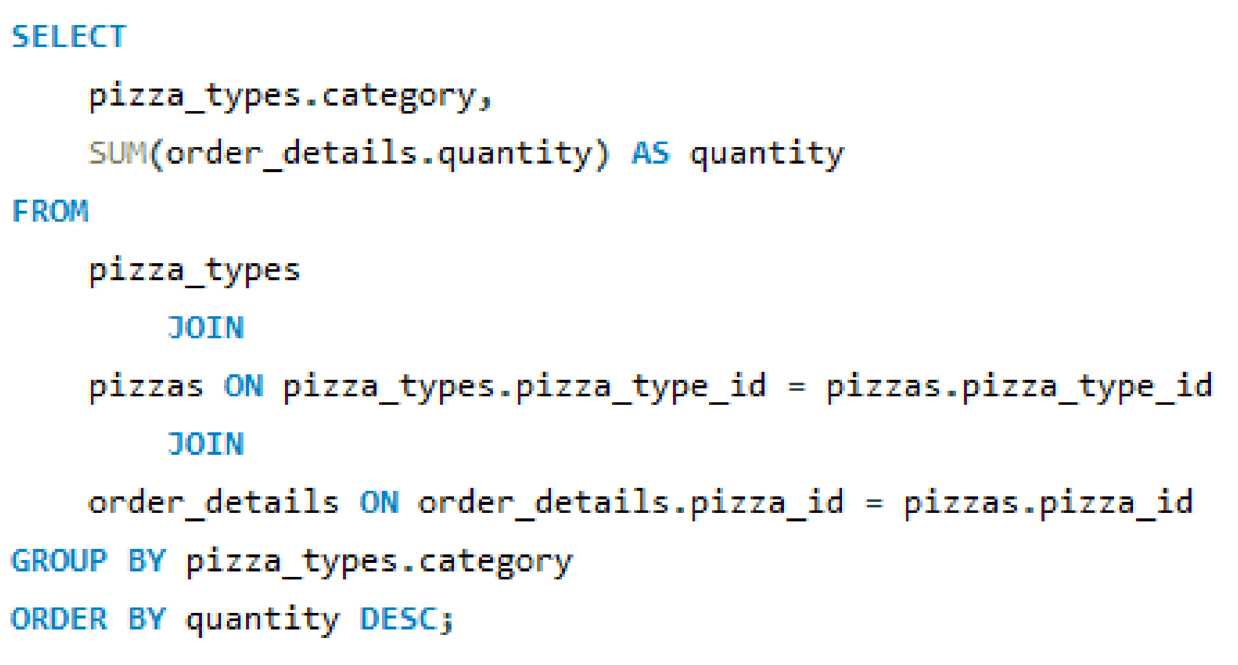


```sql
SELECT
    pizza_types.name, SUM(order_details.quantity) AS quantity
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.name
ORDER BY quantity DESC
LIMIT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

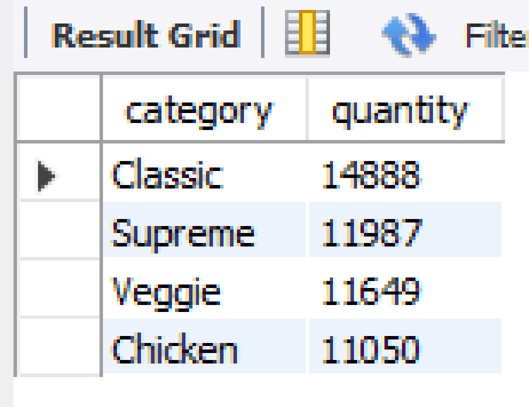


name	quantity
The Classic Deluxe Pizza	2453
The Barbecue Chicken Pizza	2432
The Hawaiian Pizza	2422
The Pepperoni Pizza	2418
The Thai Chicken Pizza	2371

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

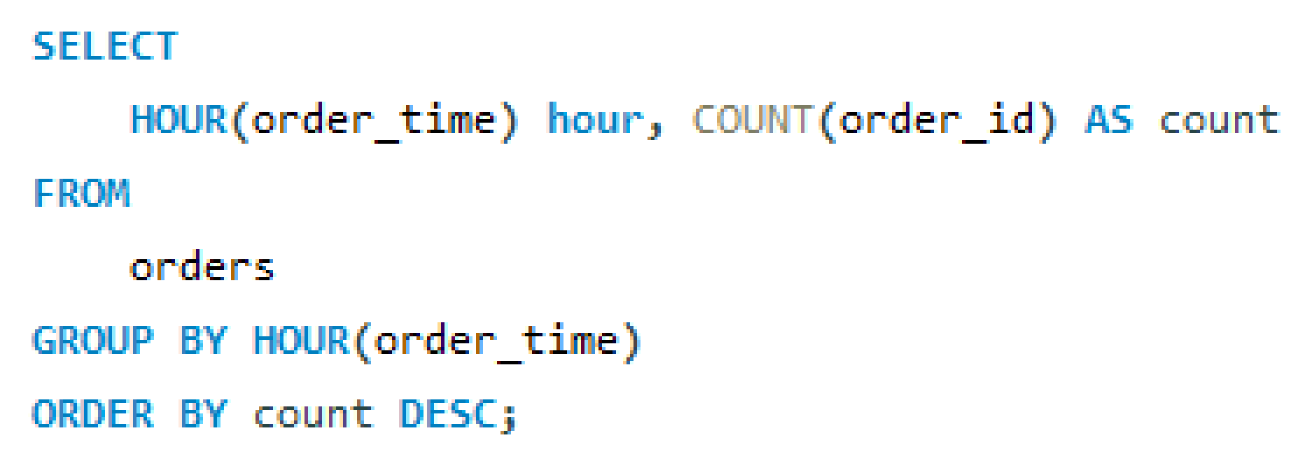


```
SELECT
    pizza_types.category,
    SUM(order_details.quantity) AS quantity
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.category
ORDER BY quantity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

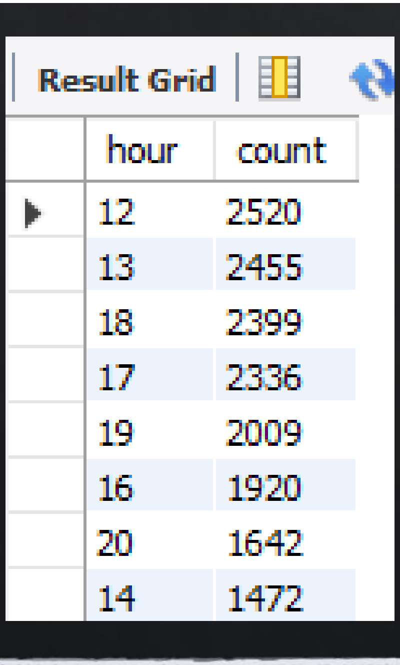


category	quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

Determine the distribution of orders by hour of the day.

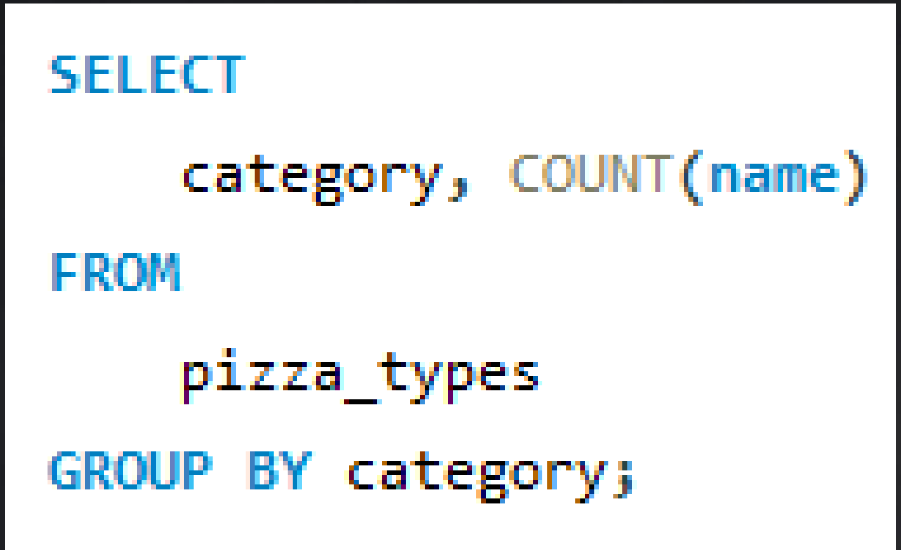


```
SELECT
    HOUR(order_time) hour, COUNT(order_id) AS count
FROM
    orders
GROUP BY HOUR(order_time)
ORDER BY count DESC;
```

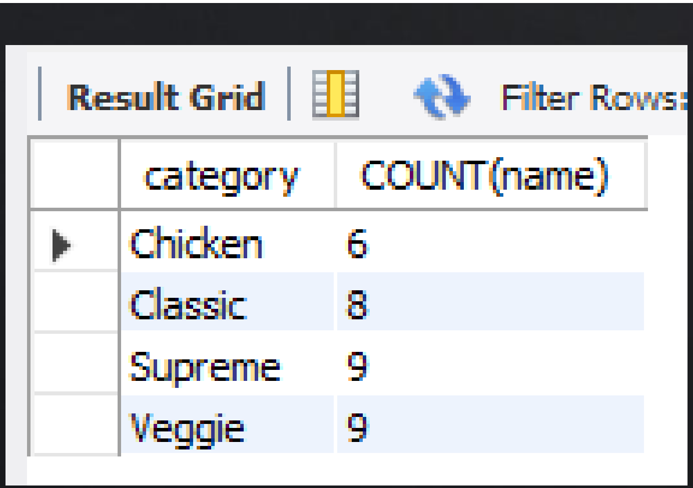


hour	count
12	2520
13	2455
18	2399
17	2336
19	2009
16	1920
20	1642
14	1472

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

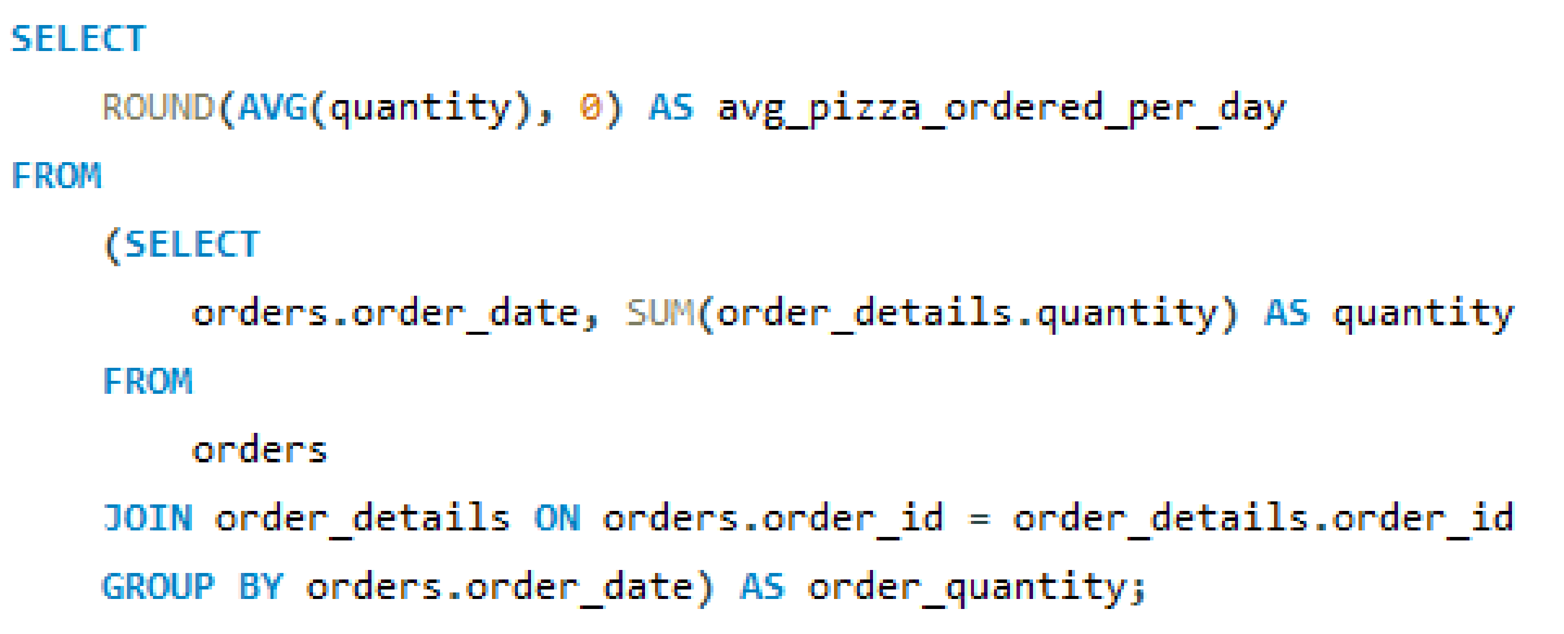


```
SELECT
    category, COUNT(name)
FROM
    pizza_types
GROUP BY category;
```

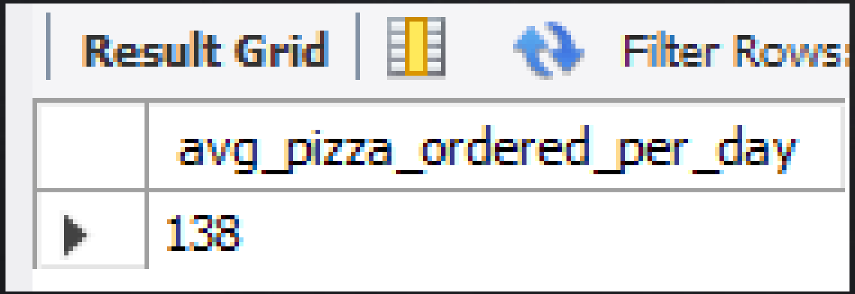


category	COUNT(name)
Chicken	6
Classic	8
Supreme	9
Veggie	9

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

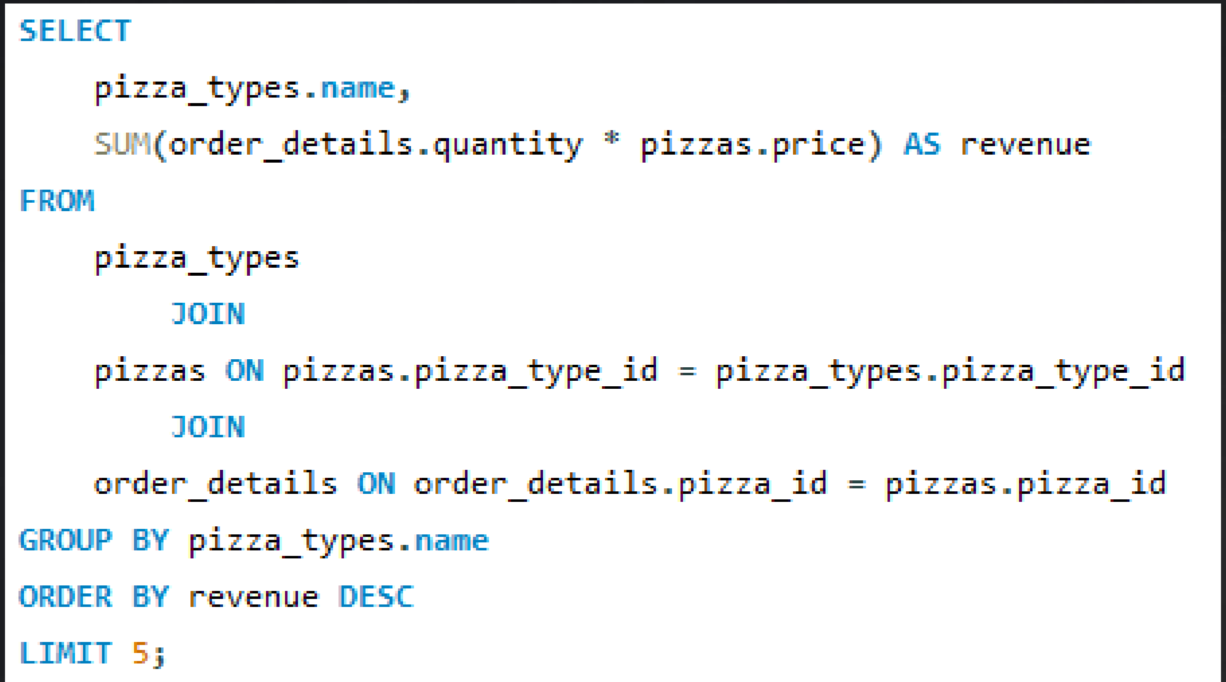


```sql
SELECT
    ROUND(AVG(quantity), 0) AS avg_pizza_ordered_per_day
FROM
    (SELECT
        orders.order_date, SUM(order_details.quantity) AS quantity
    FROM
        orders
    JOIN order_details ON orders.order_id = order_details.order_id
    GROUP BY orders.order_date) AS order_quantity;
```

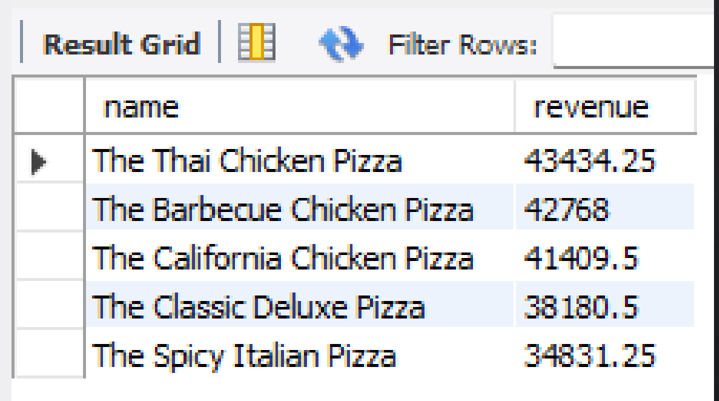


```
avg_pizza_ordered_per_day
138
```

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

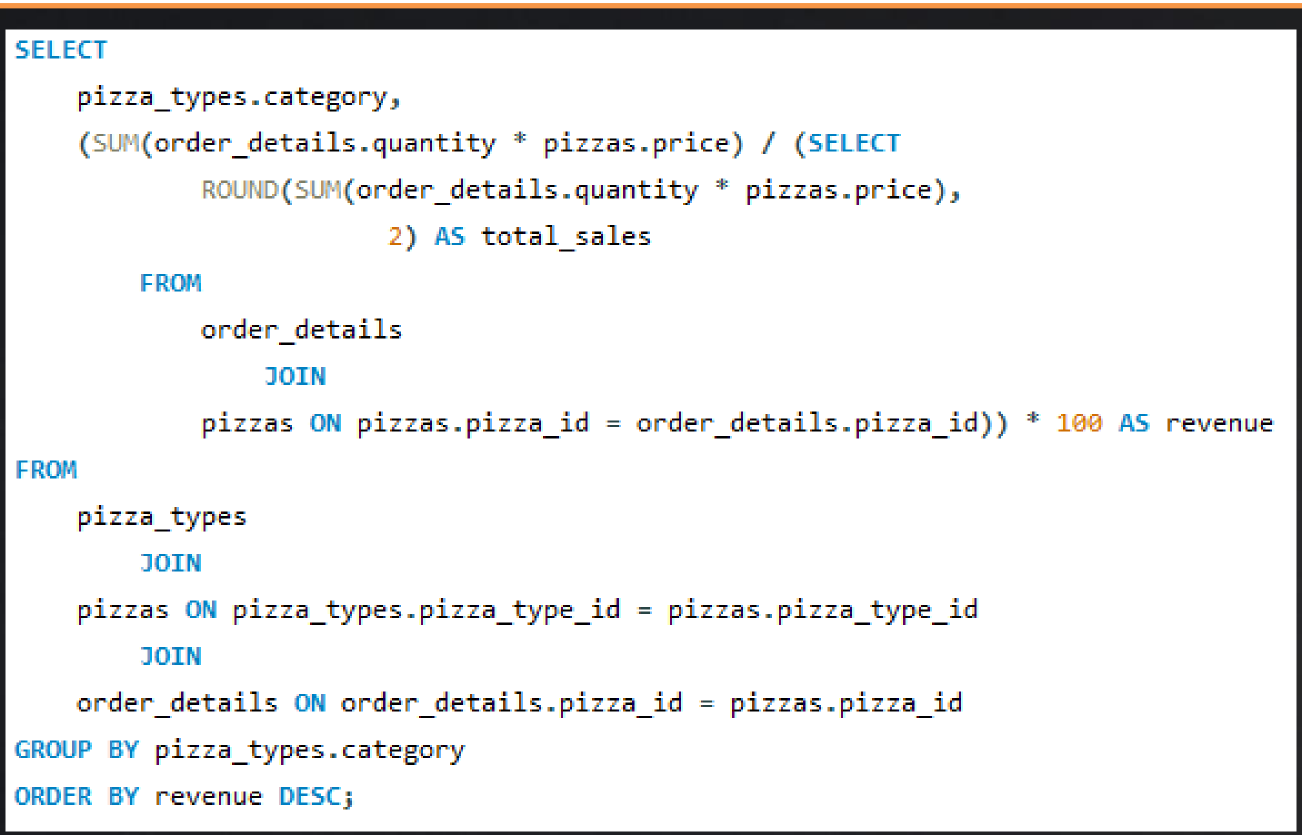


```
SELECT
    pizza_types.name,
    SUM(order_details.quantity * pizzas.price) AS revenue
FROM
    pizza_types
        JOIN
    pizzas ON pizzas.pizza_type_id = pizza_types.pizza_type_id
        JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.name
ORDER BY revenue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

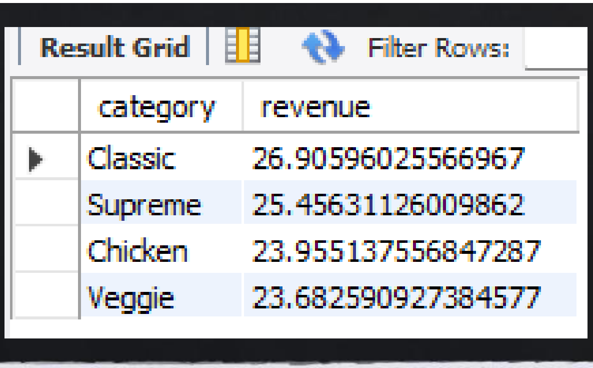


name	revenue
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5
The Classic Deluxe Pizza	38180.5
The Spicy Italian Pizza	34831.25

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

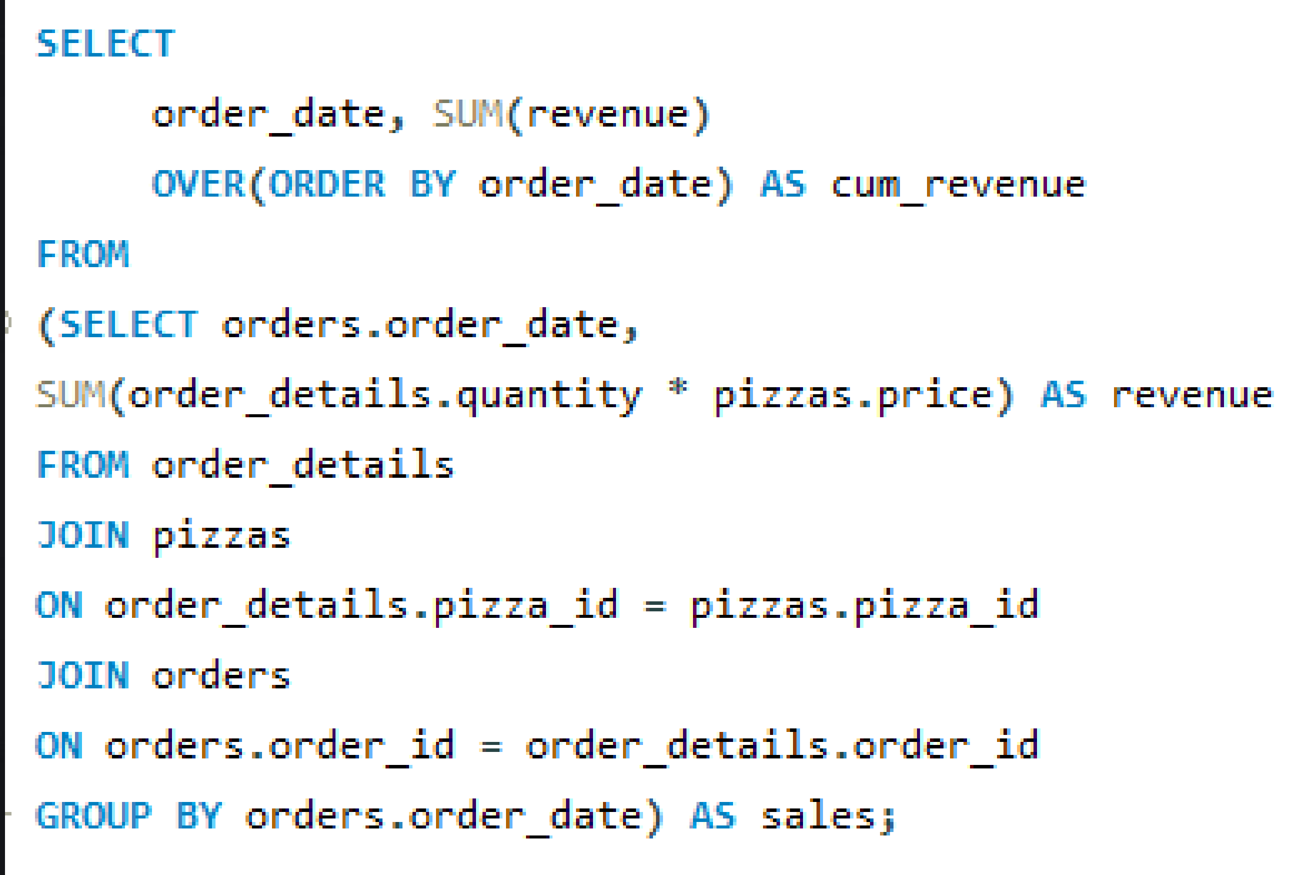


```sql
SELECT
    pizza_types.category,
    (SUM(order_details.quantity * pizzas.price) / (SELECT
            ROUND(SUM(order_details.quantity * pizzas.price),
                        2) AS total_sales
        FROM
            order_details
                JOIN
            pizzas ON pizzas.pizza_id =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

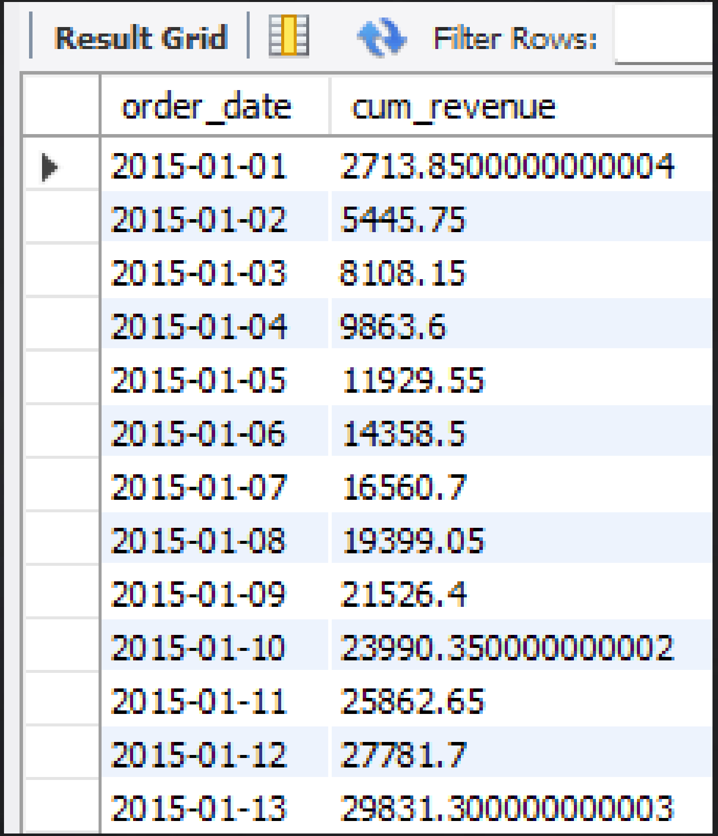


category	revenue
Classic	26.90596025566967
Supreme	25.45631126009862
Chicken	23.955137556847287
Veggie	23.682590927384577

Analyze the cumulative revenue generated over time.

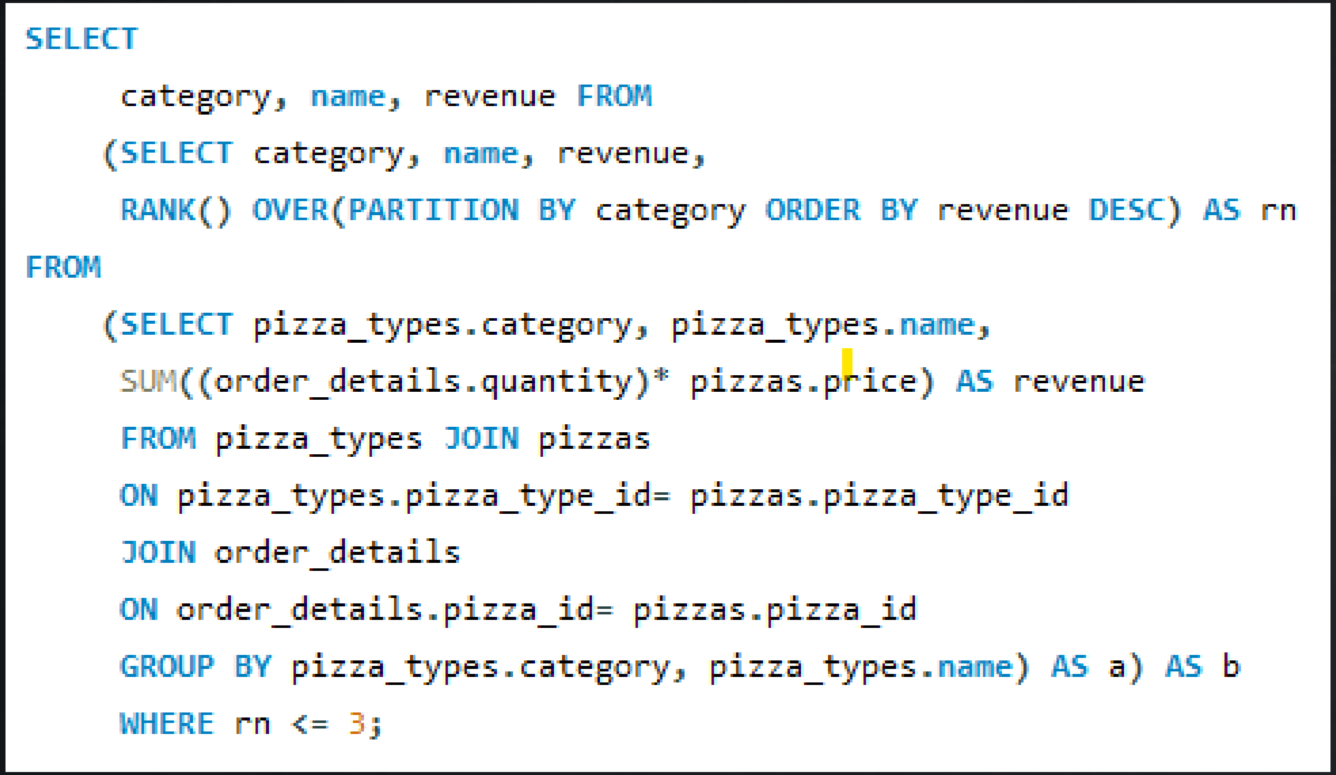


```
SELECT
     order_date, SUM(revenue)
     OVER(ORDER BY order_date) AS cum_revenue
FROM
(SELECT orders.order_date,
SUM(order_details.quantity * pizzas.price) AS revenue
FROM order_details
JOIN pizzas
ON order_details.pizza_id = pizzas.pizza_id
JOIN orders
ON orders.order_id = order_details.order_id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

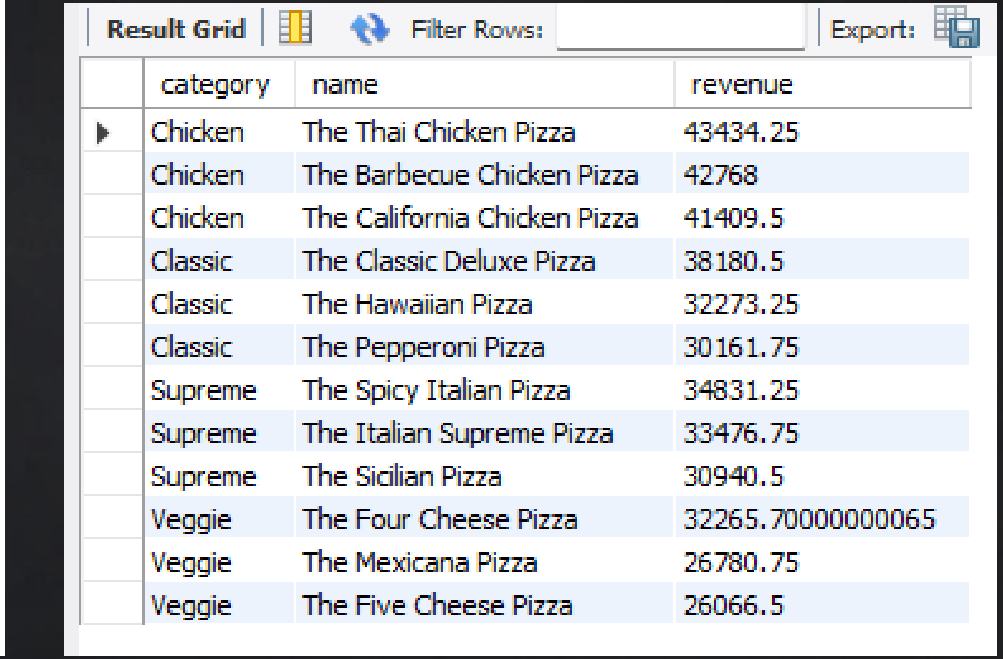


order_date	cum_revenue
2015-01-01	2713.8500000000004
2015-01-02	5445.75
2015-01-03	8108.15
2015-01-04	9863.6
2015-01-05	11929.55
2015-01-06	14358.5
2015-01-07	16560.7
2015-01-08	19399.05
2015-01-09	21526.4
2015-01-10	23990.350000000002
2015-01-11	25862.65
2015-01-12	27781.7
2015-01-13	29831.300000000003

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 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;
```



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

THANK YOU

Made by : Rishav Raj