Pizza Sales -SQL

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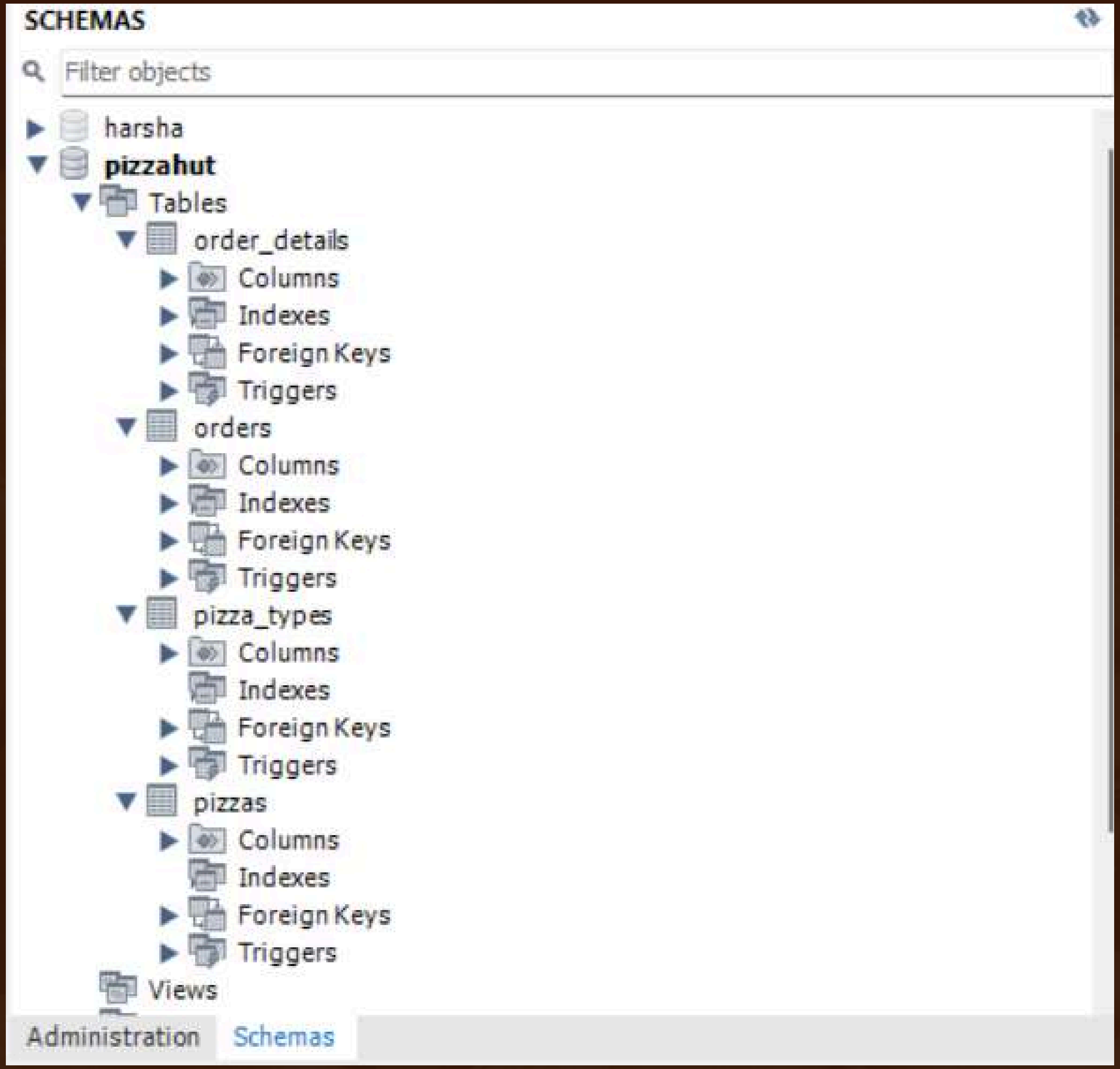
AS AN ASPIRING DATA ANALYST, I HAVE CREATED A PROJECT ANALYZING PIZZA SALES USING SQL TO DEVELOP MY DATA MANIPULATION AND ANALYTICAL SKILLS. . THIS PROJECT DEMONSTRATES MY ABILITY TO USE SQL FOR REAL-WORLD DATA ANALYSIS AND BUSINESS INSIGHTS.

Project- Details

For the Pizza Sales Analysis project, I utilized a dataset capturing detailed sales information for a pizza restaurant. The dataset includes critical aspects like order details, pizza sizes, categories, varieties, and quantities, allowing for in-depth analysis of customer preferences and business performance. Through SQL queries, I performed tasks ranging from basic data extraction to advanced operations such as joins, subqueries, and aggregations.

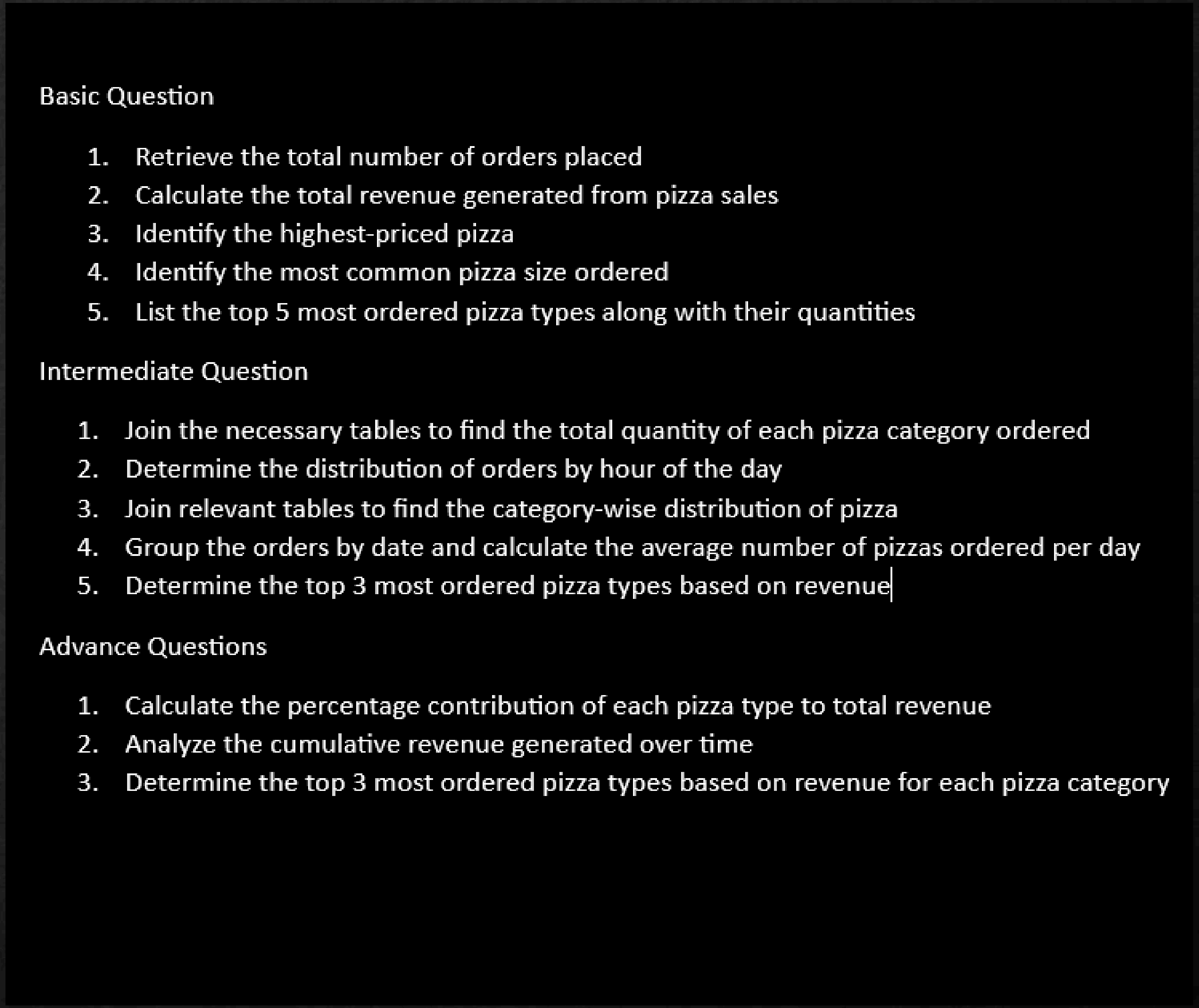
Key insights include identifying the most ordered pizza size, popular pizza categories, and top-selling varieties. This project showcases the application of SQL for business intelligence, helping to uncover patterns and trends that can inform marketing strategies and inventory management.

PROJECT SCHEMAS



```
SCHEMAS
Filter objects
▶ harsha
▼ pizzahut
  ▼ Tables
    ▼ order_details
      ▶ Columns
      ▶ Indexes
      ▶ Foreign Keys
      ▶ Triggers
    ▼ orders
      ▶ Columns
      ▶ Indexes
      ▶ Foreign Keys
      ▶ Triggers
    ▼ pizza_types
      ▶ Columns
        Indexes
      ▶ Foreign Keys
      ▶ Triggers
    ▼ pizzas
      ▶ Columns
        Indexes
      ▶ Foreign Keys
      ▶ Triggers
    Views
Administration   Schemas
```

QUESTIONS



Basic Question

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

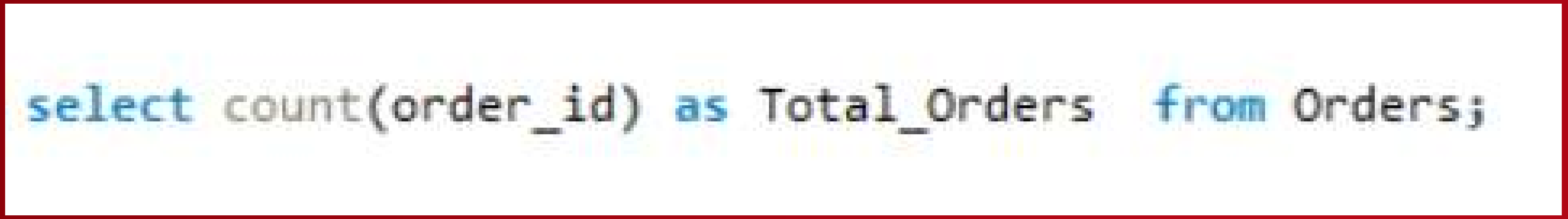
Intermediate Question

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

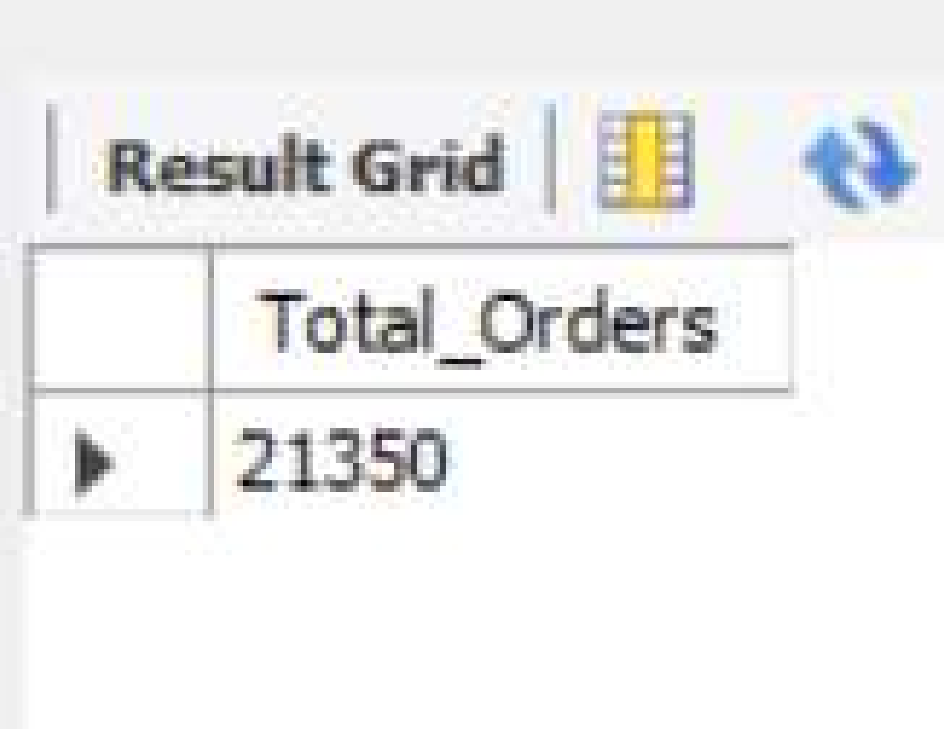
Advance Questions

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

RETRIEVE THE TOTAL NUMBER OF ORDERS PLACED

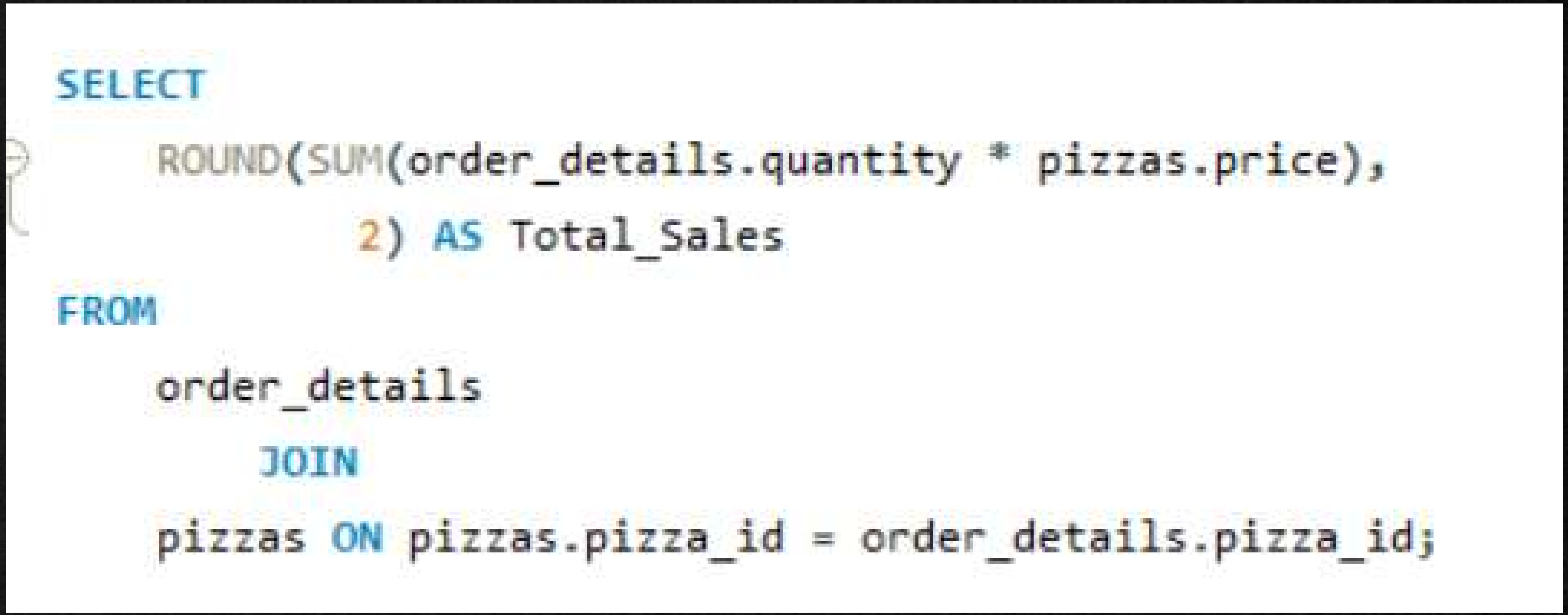


```sql
select count(order_id) as Total_Orders  from Orders;
```

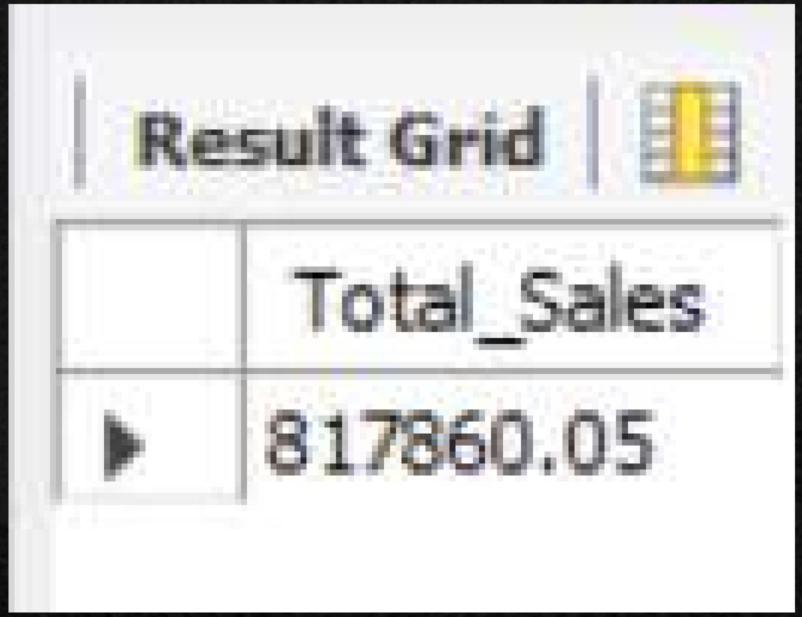


```
Total_Orders
21350
```

CALCULATE THE TOTAL REVENUE GENERATED FROM PIZZA SALES

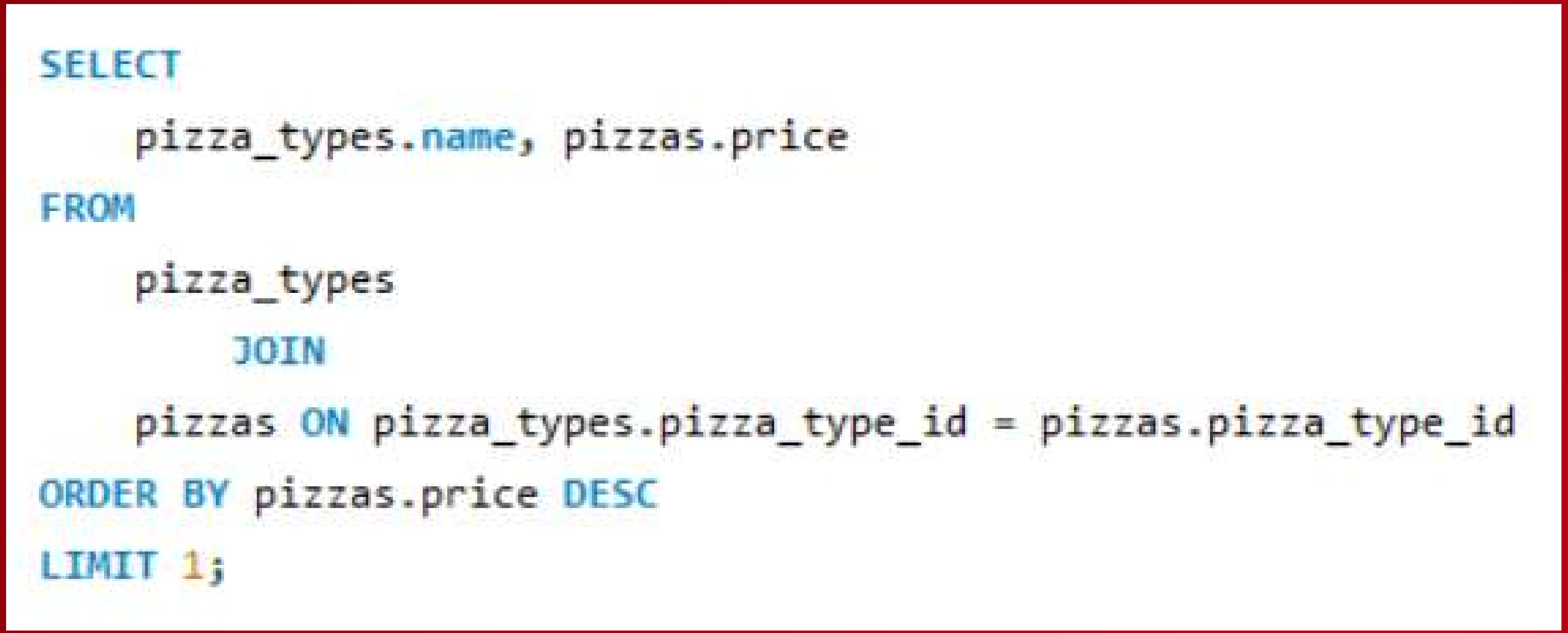


```
SELECT
    ROUND(SUM(order_details.quantity * pizzas.price),
            2) AS Total_Sales
FROM
    order_details
        JOIN
    pizzas ON pizzas.pizza_id = order_details.pizza_id;
```

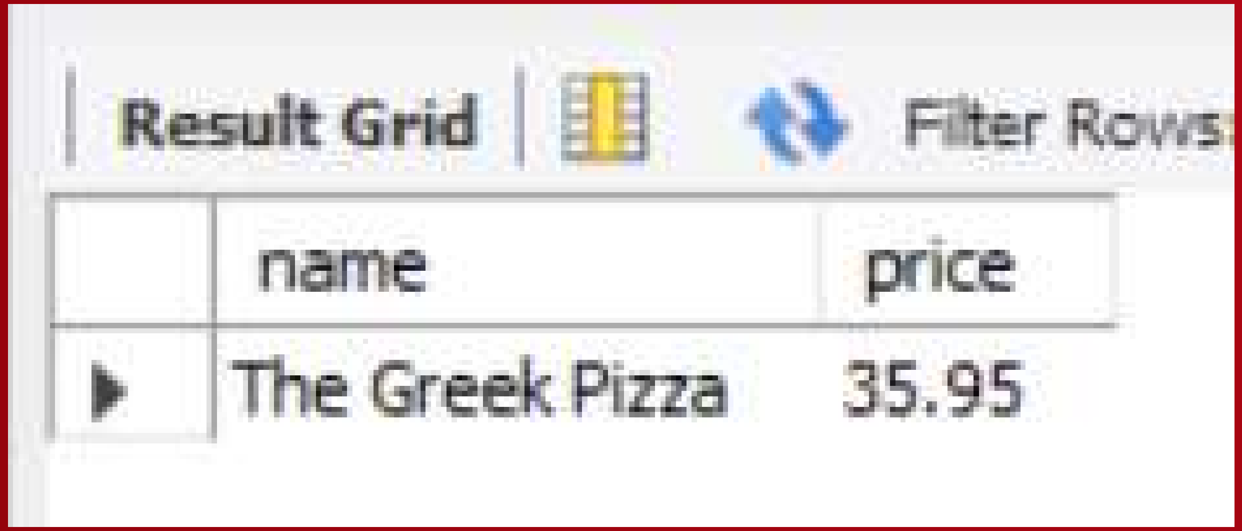


```
  Total_Sales
▶ 817860.05
```

IDENTIFY THE HIGHEST-PRICED PIZZA

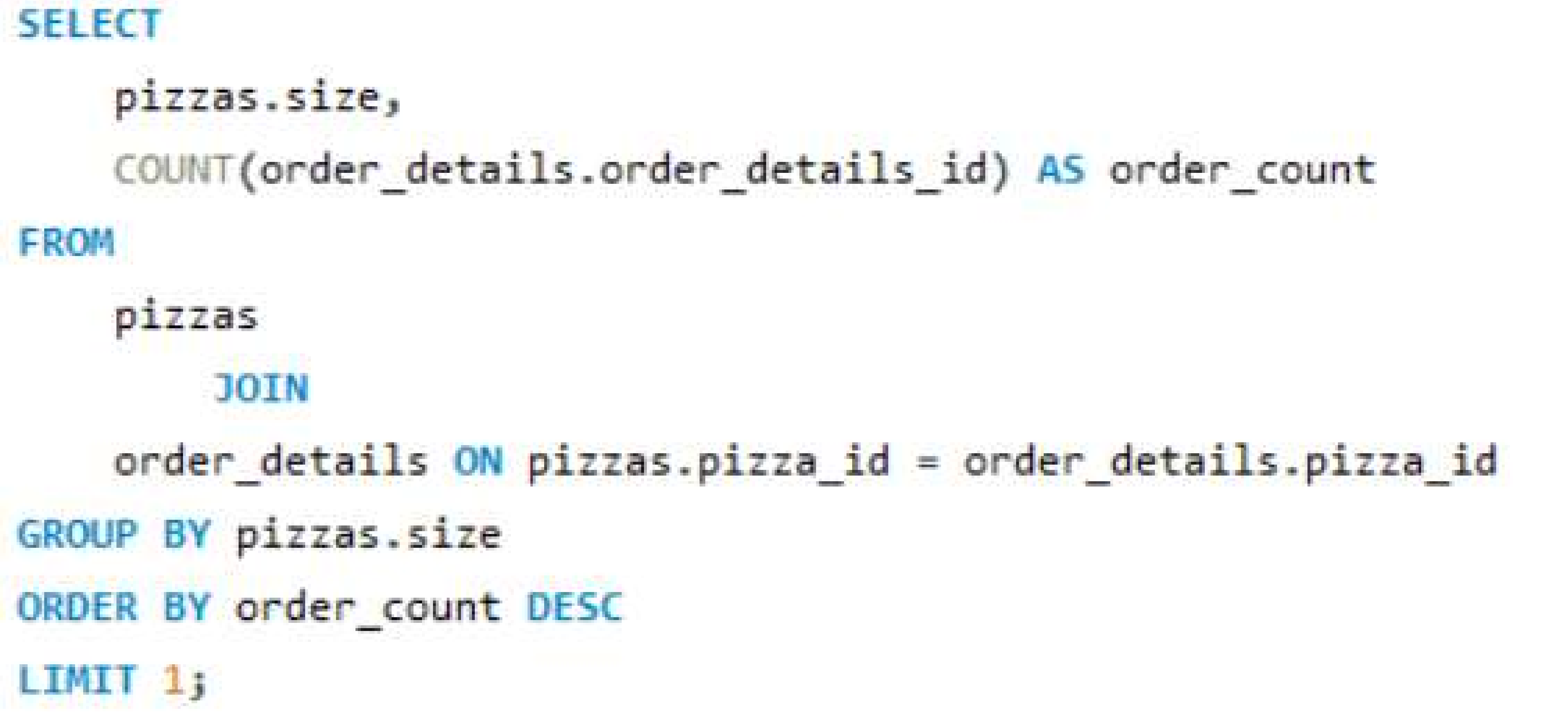


```
SELECT
    pizza_types.name, pizzas.price
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
ORDER BY pizzas.price DESC
LIMIT 1;
```

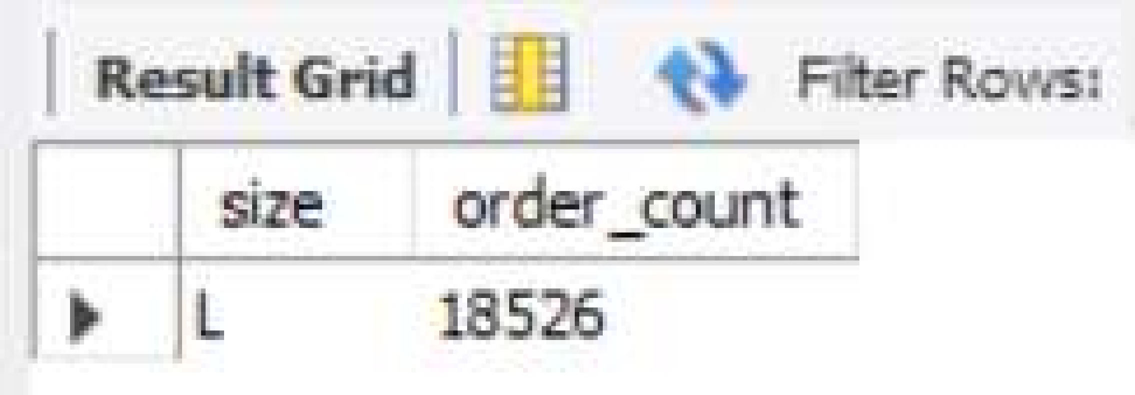


```
name             price
The Greek Pizza  35.95
```

IDENTIFY THE MOST COMMON PIZZA SIZE ORDERED

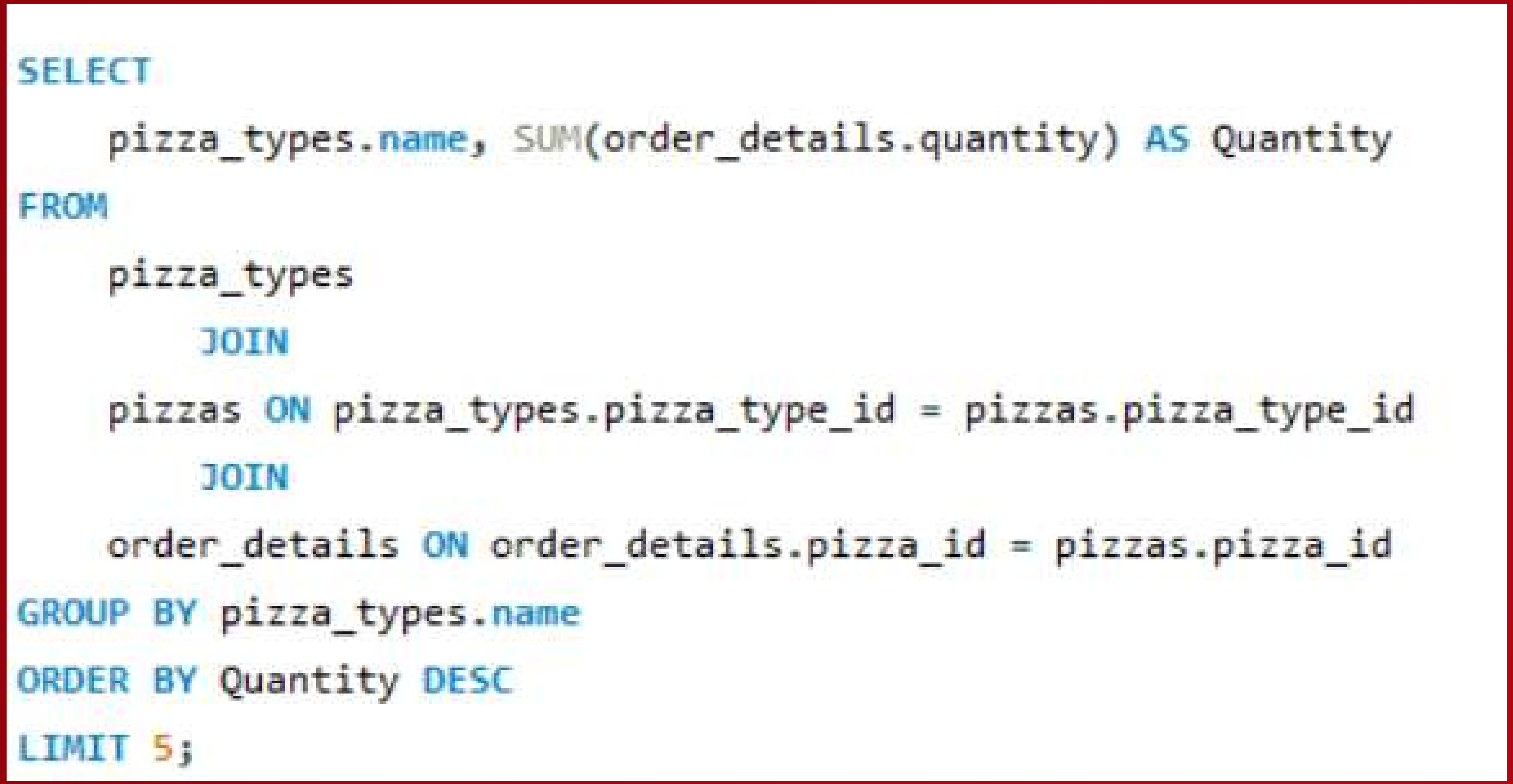


```sql
SELECT
    pizzas.size,
    COUNT(order_details.order_details_id) AS order_count
FROM
    pizzas
        JOIN
    order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY pizzas.size
ORDER BY order_count DESC
LIMIT 1;
```

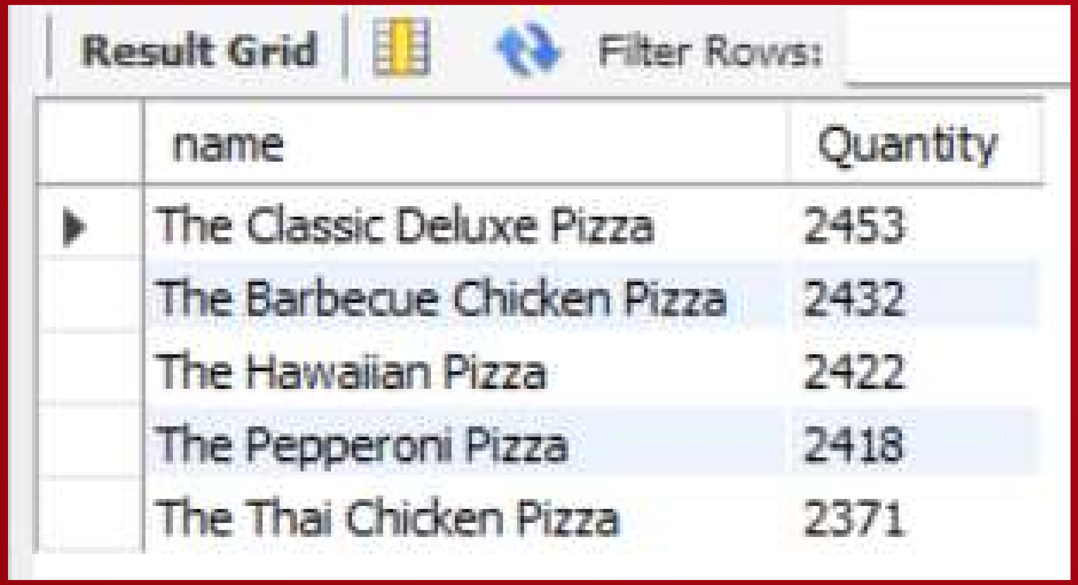


size	order_count
L	18526

LIST THE TOP 5 MOST ORDERED PIZZA TYPES ALONG WITH THEIR QUANTITIES

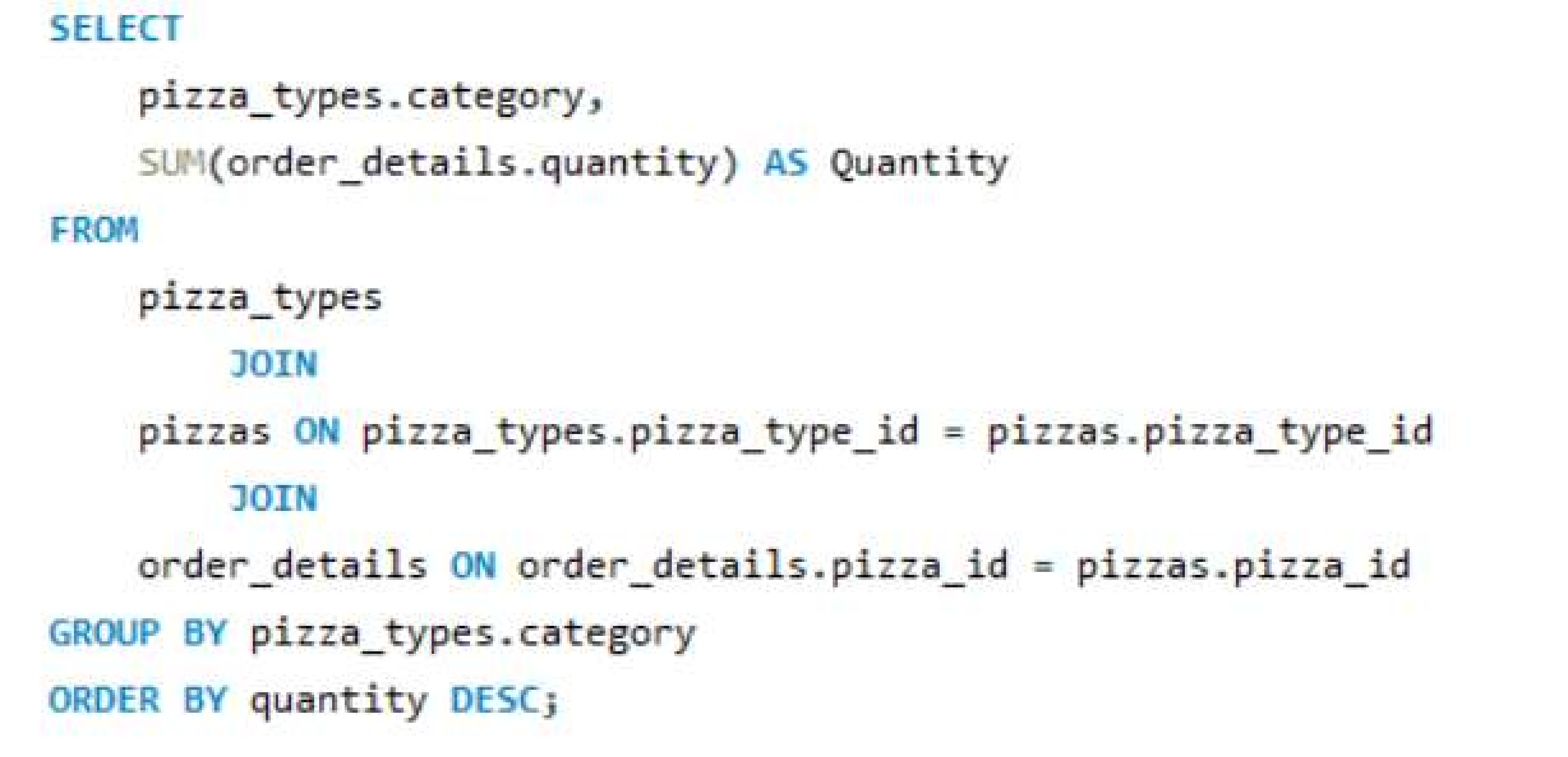


```
SELECT
    pizza_types.name, SUM(order_details.quantity) AS Quantity
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.name
ORDER BY Quantity DESC
LIMIT 5;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

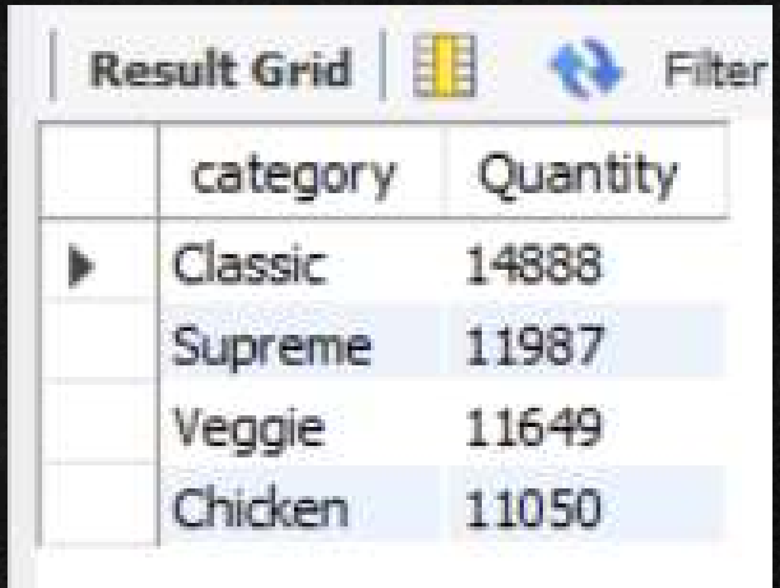


name	Quantity
The Classic Deluxe Pizza	2453
The Barbecue Chicken Pizza	2432
The Hawaiian Pizza	2422
The Pepperoni Pizza	2418
The Thai Chicken Pizza	2371

JOIN THE NECESSARY TABLES TO FIND THE TOTAL QUANTITY OF EACH PIZZA CATEGORY ORDERED

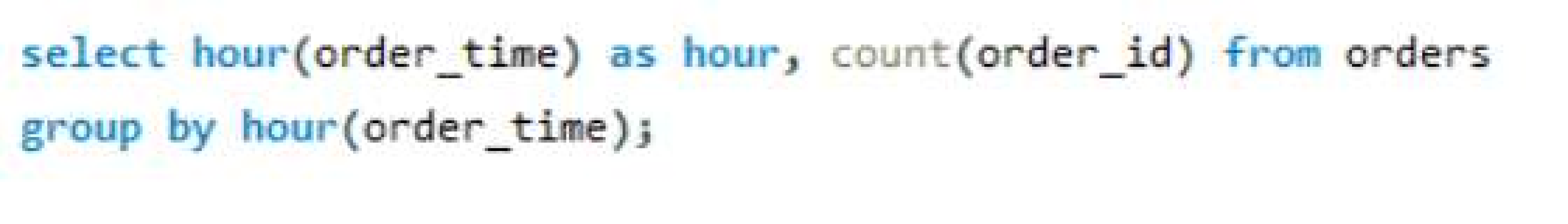


```
SELECT
    pizza_types.category,
    SUM(order_details.quantity) AS Quantity
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.category
ORDER BY quantity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

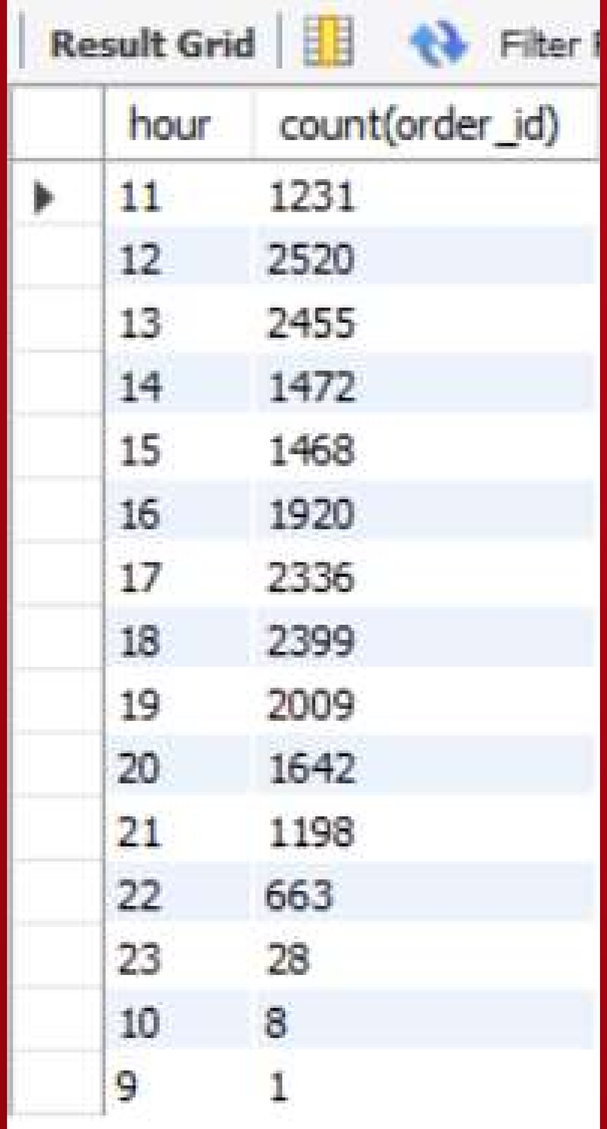


	category	Quantity
▶	Classic	14888
	Supreme	11987
	Veggie	11649
	Chicken	11050

DETERMINE THE DISTRIBUTION OF ORDERS BY HOUR OF THE DAY

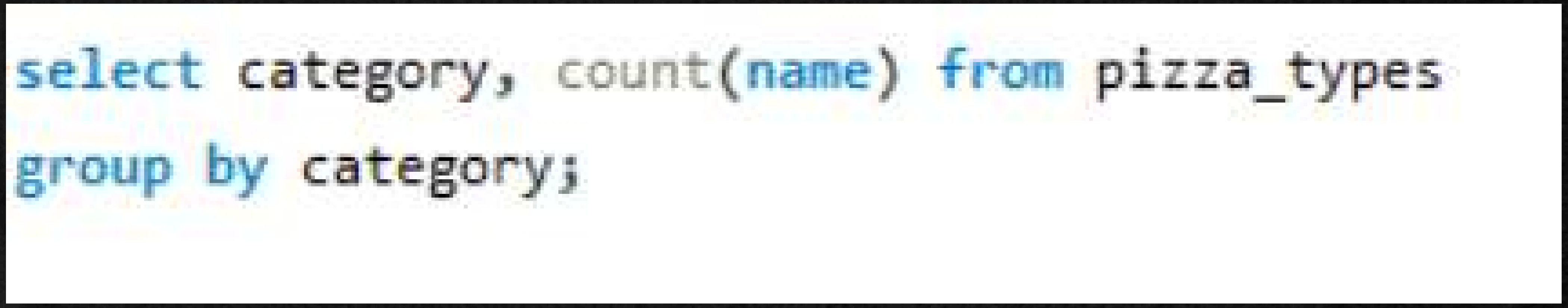


```
select hour(order_time) as hour, count(order_id) from orders
group by hour(order_time);
```

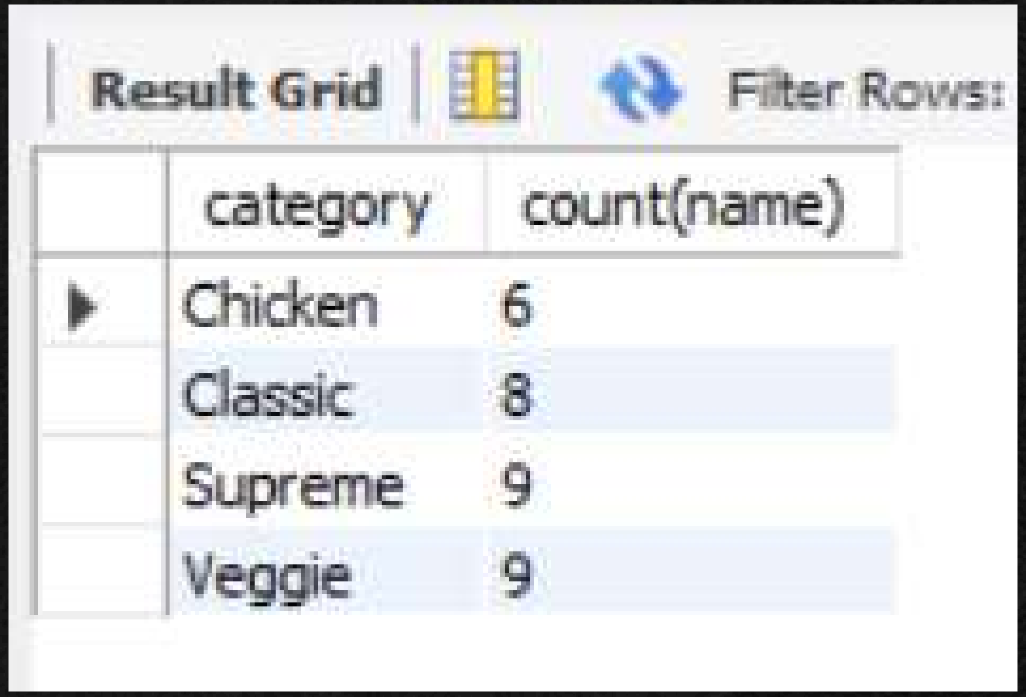


hour	count(order_id)
11	1231
12	2520
13	2455
14	1472
15	1468
16	1920
17	2336
18	2399
19	2009
20	1642
21	1198
22	663
23	28
10	8
9	1

JOIN RELEVANT TABLES TO FIND THE CATEGORY-WISE DISTRIBUTION OF PIZZAS

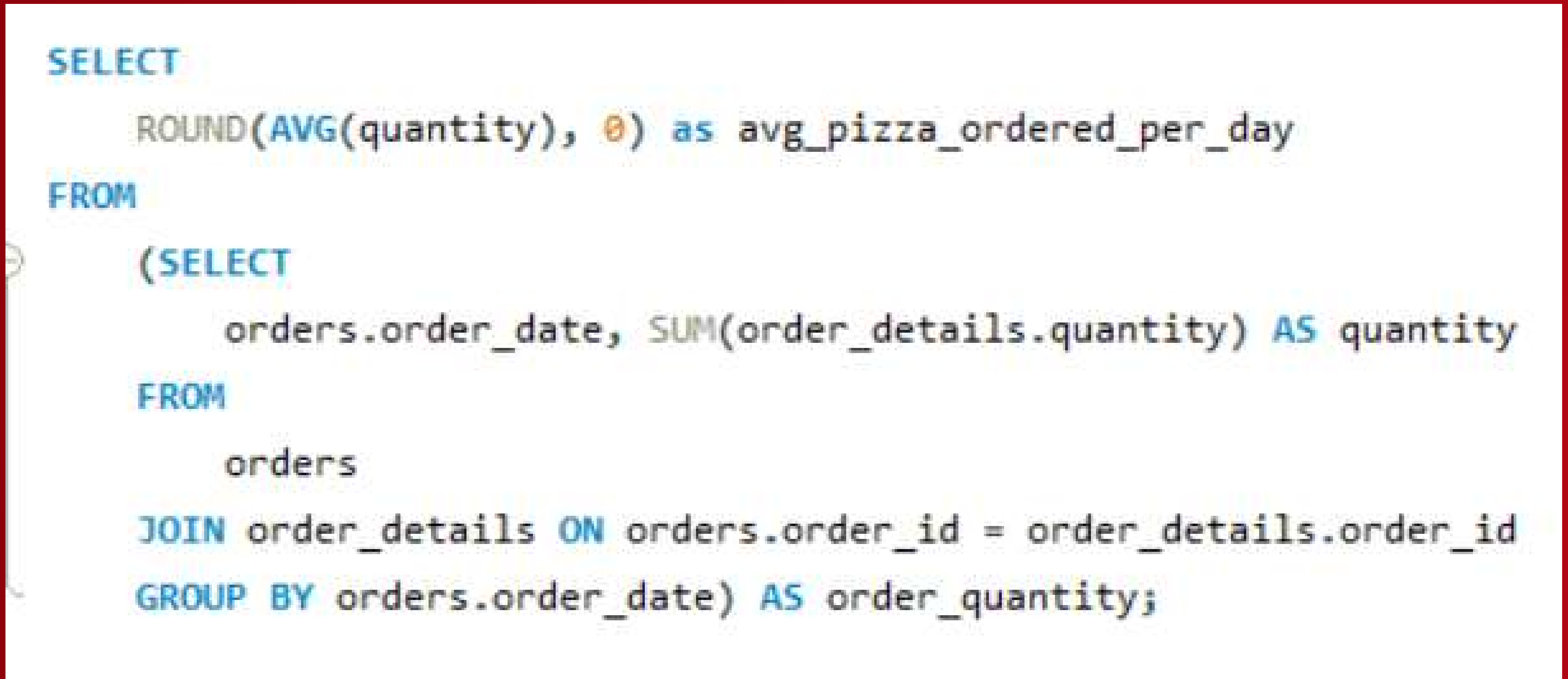


```
select category, count(name) from pizza_types
group by category;
```

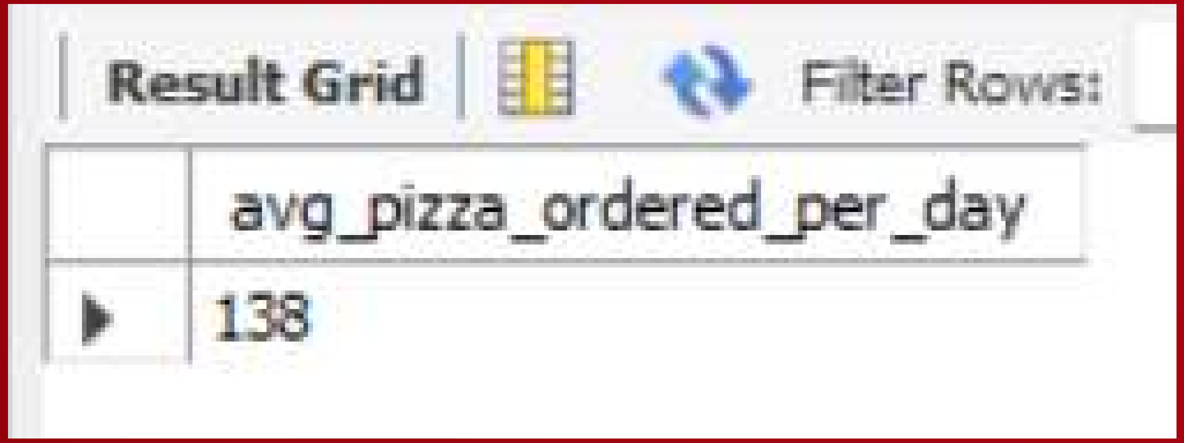


category	count(name)
Chicken	6
Classic	8
Supreme	9
Veggie	9

GROUP THE ORDERS BY DATE AND CALCULATE THE AVERAGE NUMBER OF PIZZAS ORDERED PER DAY

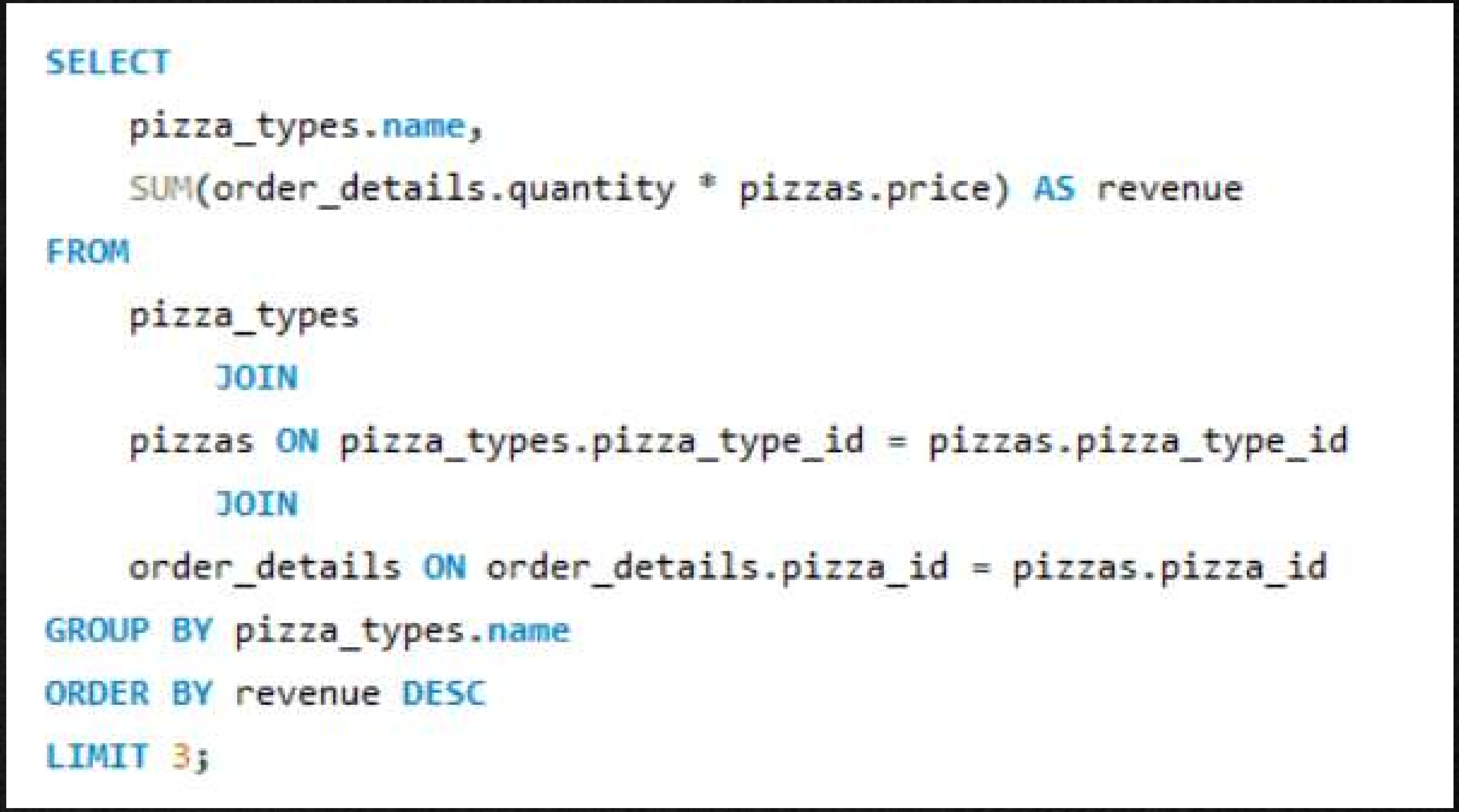


```
SELECT
    ROUND(AVG(quantity), 0) as avg_pizza_ordered_per_day
FROM
    (SELECT
        orders.order_date, SUM(order_details.quantity) AS quantity
    FROM
        orders
    JOIN order_details ON orders.order_id = order_details.order_id
    GROUP BY orders.order_date) AS order_quantity;
```

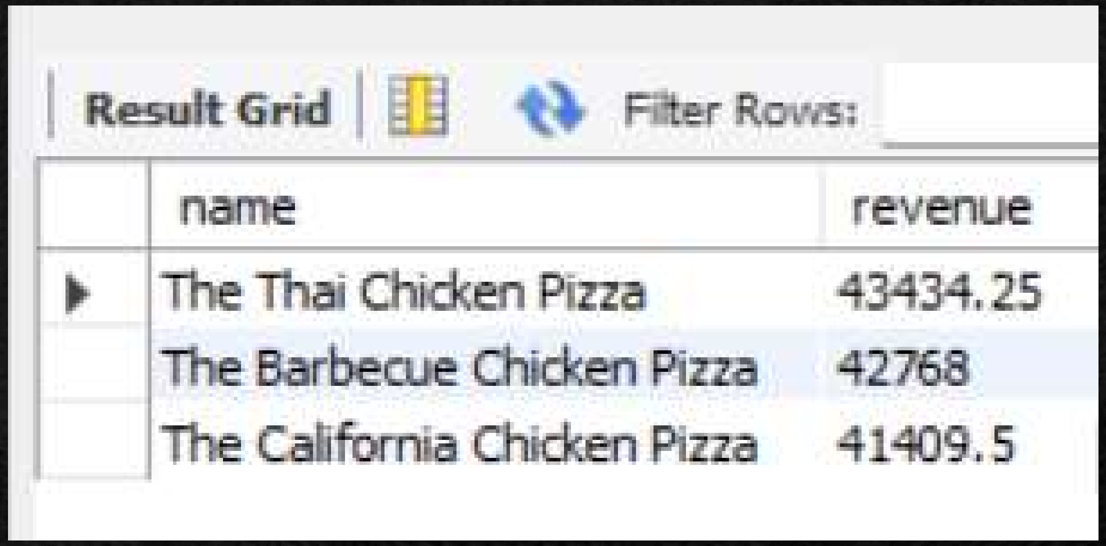


```
avg_pizza_ordered_per_day
138
```

DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE

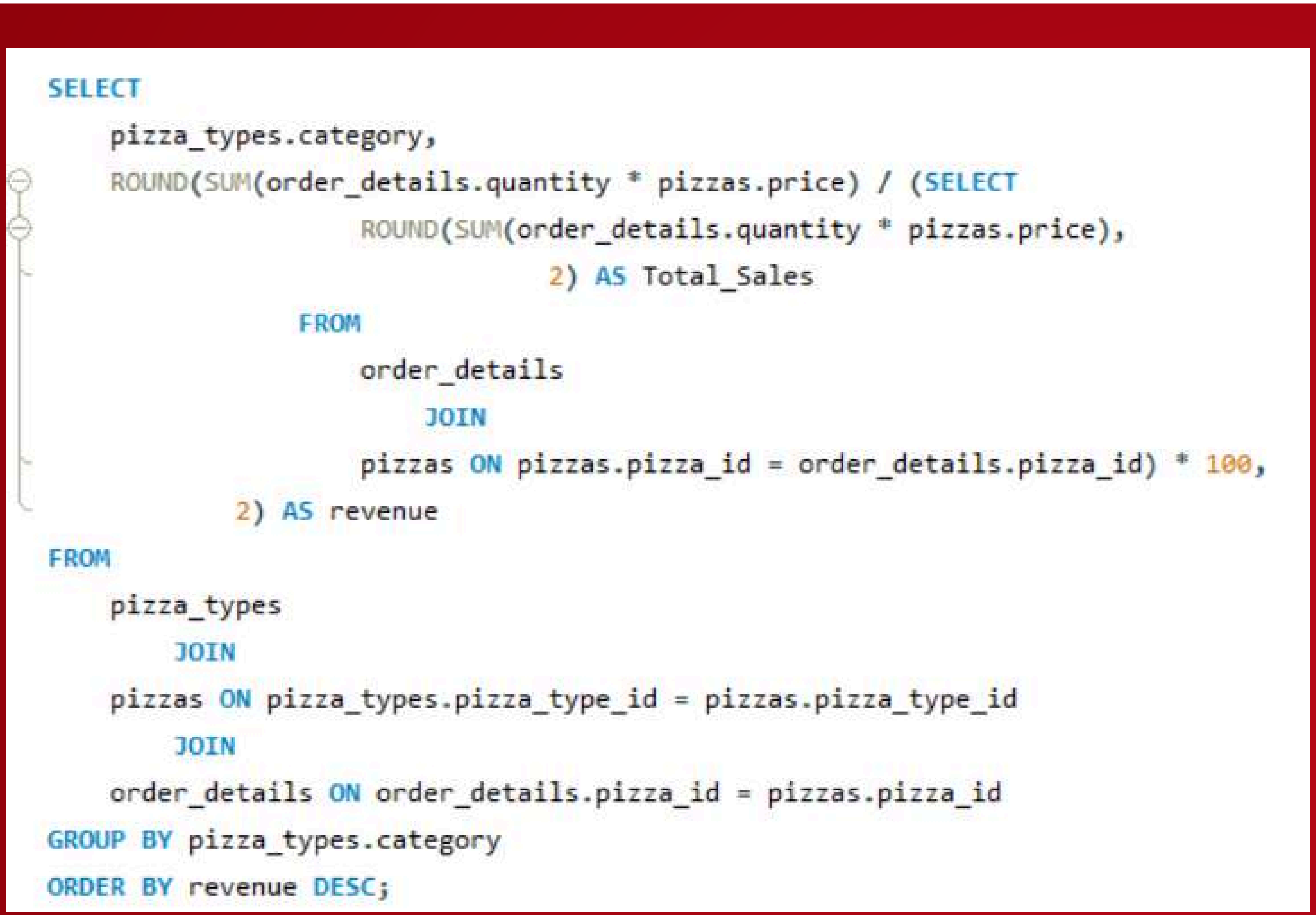


```
SELECT
    pizza_types.name,
    SUM(order_details.quantity * pizzas.price) AS revenue
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.name
ORDER BY revenue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

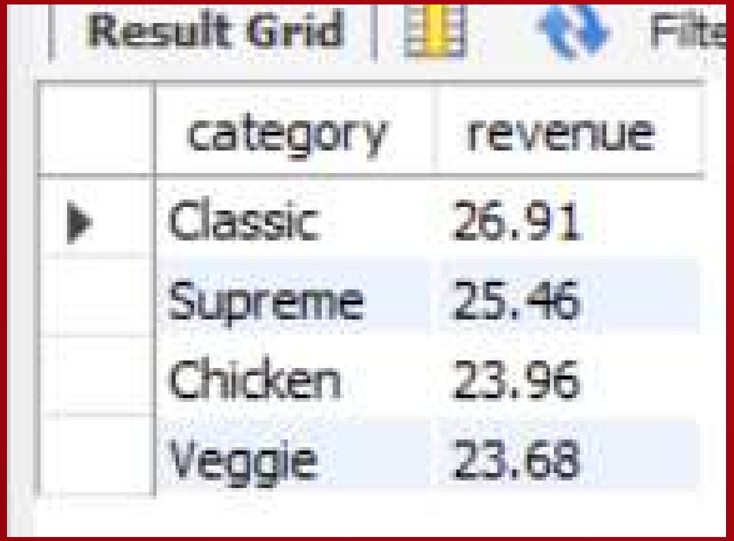


	name	revenue
▶	The Thai Chicken Pizza	43434.25
	The Barbecue Chicken Pizza	42768
	The California Chicken Pizza	41409.5

CALCULATE THE PERCENTAGE CONTRIBUTION OF EACH PIZZA TYPE TO TOTAL REVENUE

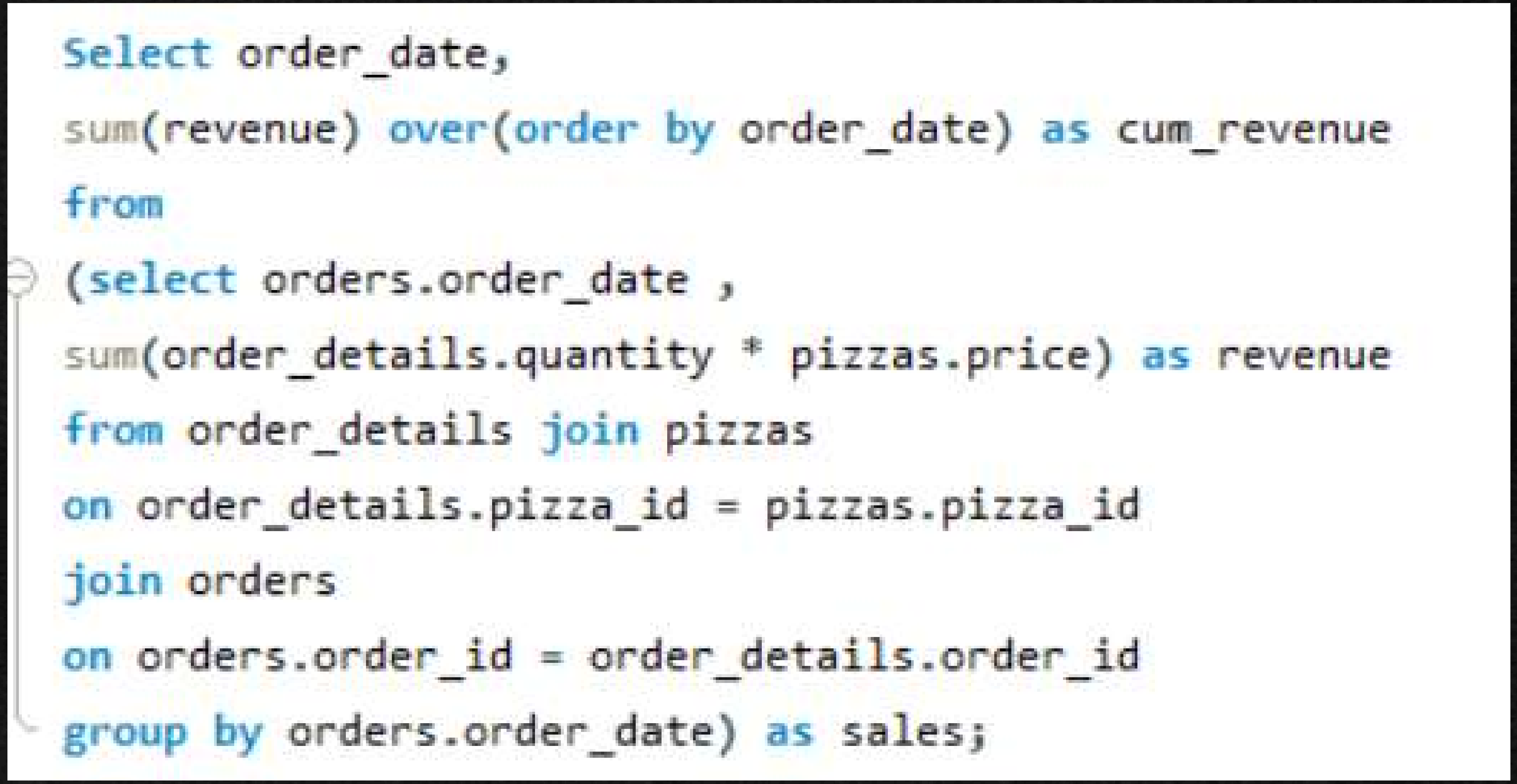


```
SELECT
    pizza_types.category,
    ROUND(SUM(order_details.quantity * pizzas.price) / (SELECT
                ROUND(SUM(order_details.quantity * pizzas.price),
                        2) AS Total_Sales
            FROM
                order_details
                    JOIN
                pizzas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

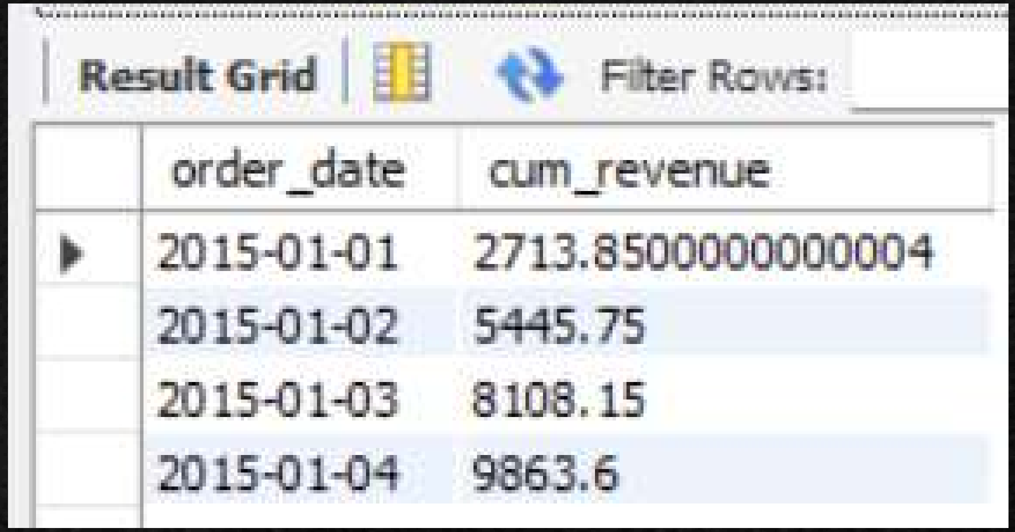


category	revenue
Classic	26.91
Supreme	25.46
Chicken	23.96
Veggie	23.68

ANALYZE THE CUMULATIVE REVENUE GENERATED OVER TIME

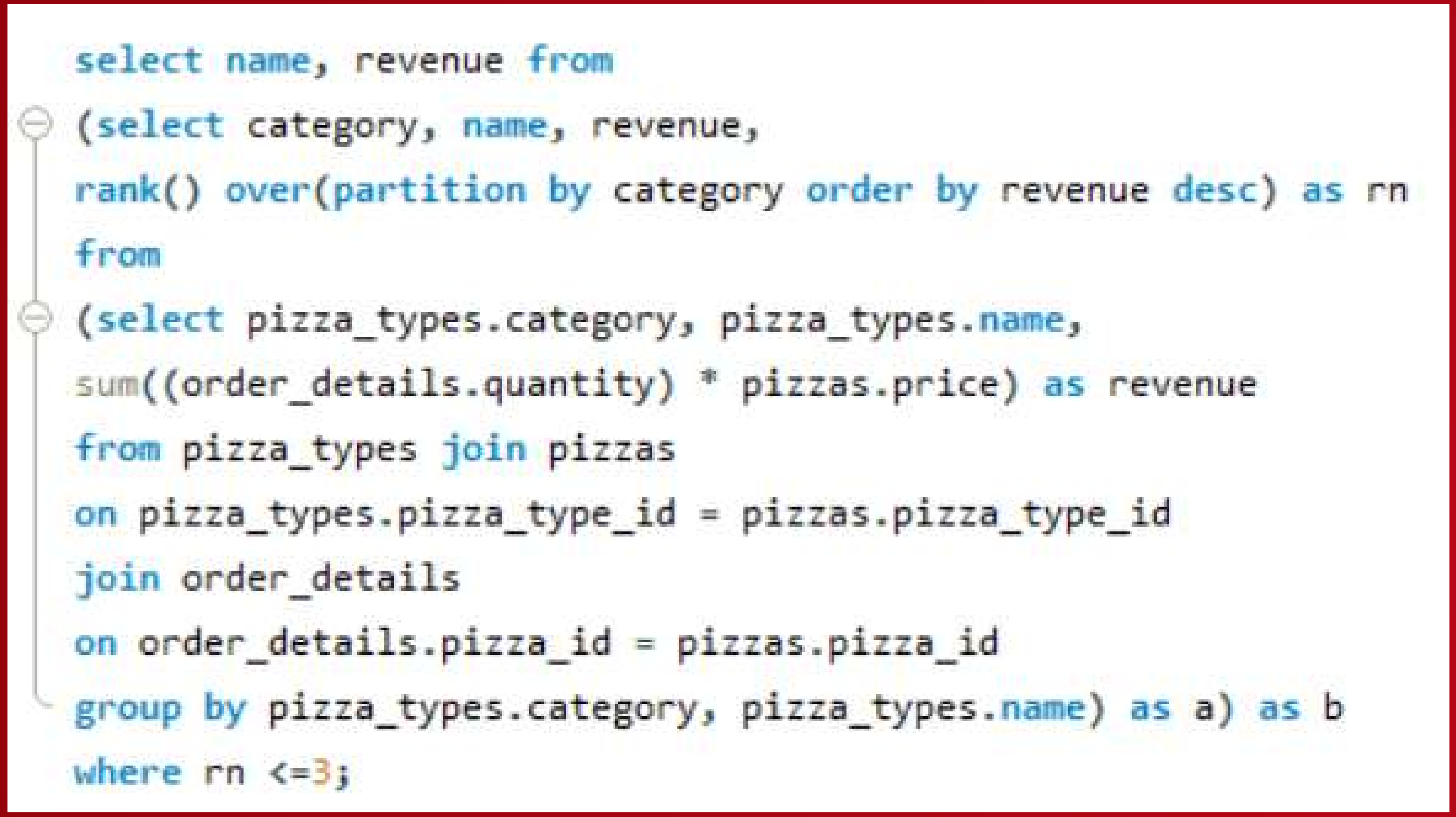


```
Select order_date,
sum(revenue) over(order by order_date) as cum_revenue
from
(select orders.order_date ,
sum(order_details.quantity * pizzas.price) as revenue
from order_details join pizzas
on order_details.pizza_id = pizzas.pizza_id
join orders
on orders.order_id = order_details.order_id
group by orders.order_date) as sales;
```

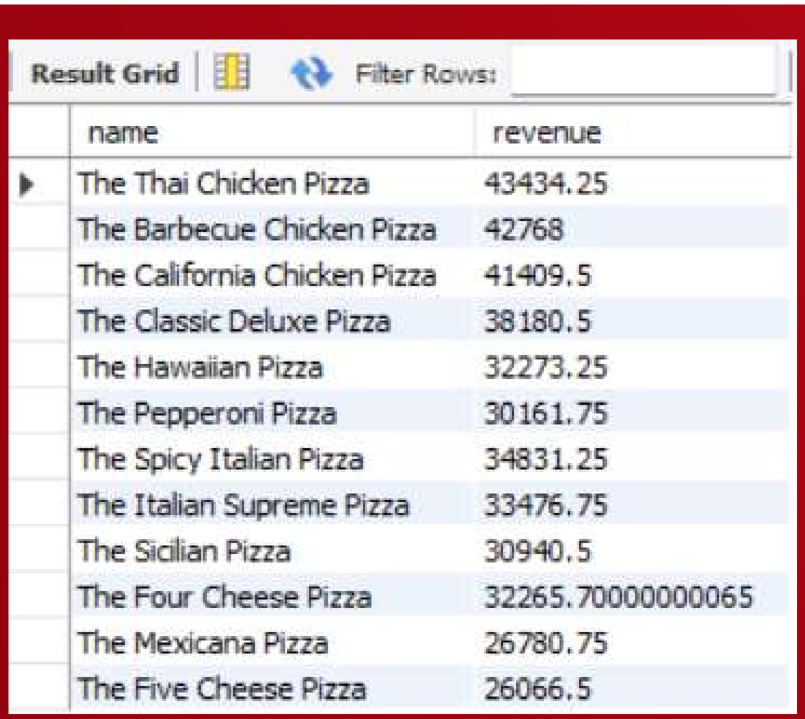


```
  order_date   cum_revenue
▶ 2015-01-01   2713.8500000000004
  2015-01-02   5445.75
  2015-01-03   8108.15
  2015-01-04   9863.6
```

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!