Pizza sales -

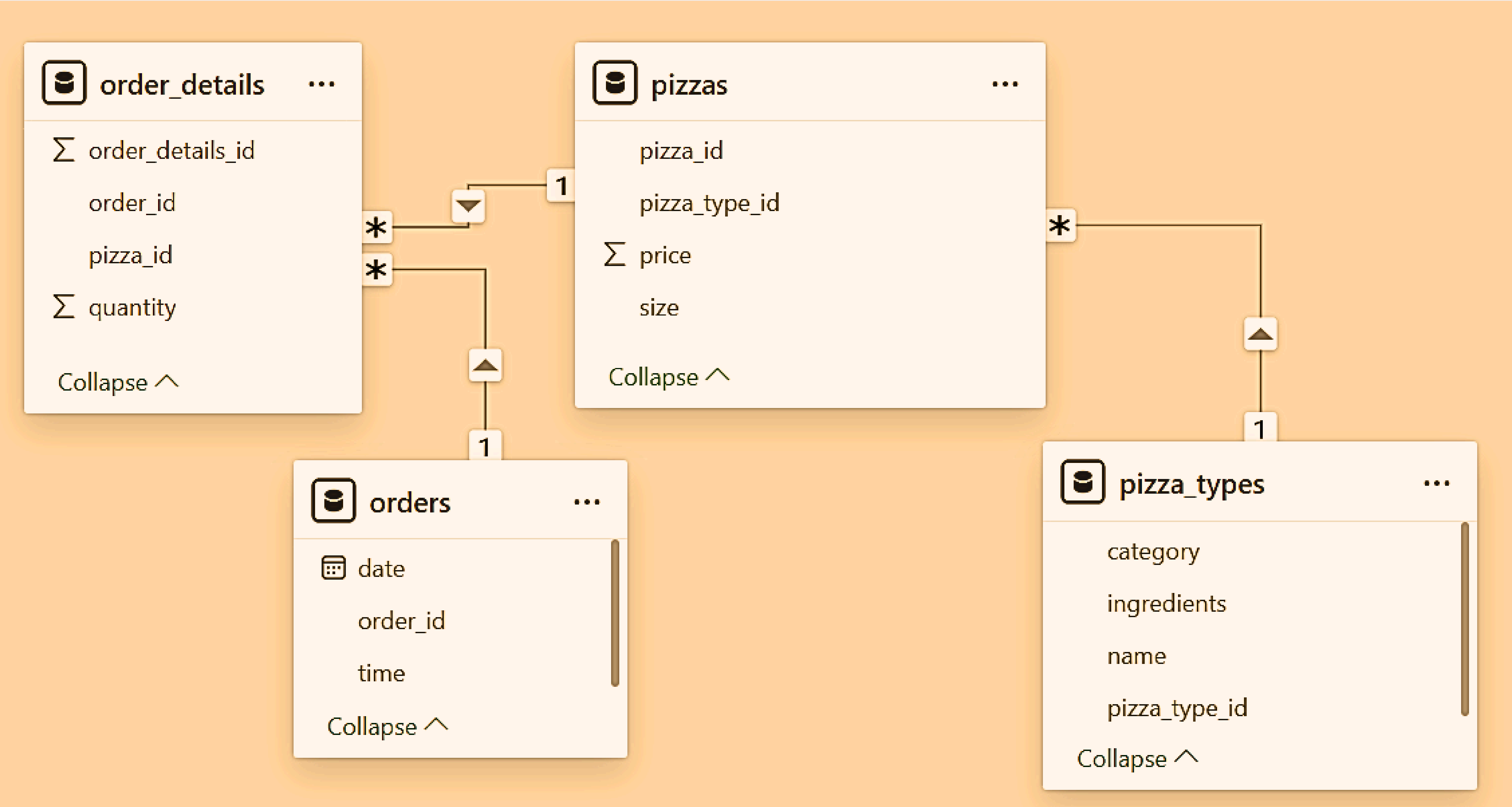
SQL project

SQL Project to Analyze Pizza Sales

Objective :

To analyze pizza sales data and derive meaningful insights using SQL based on the framed questions.

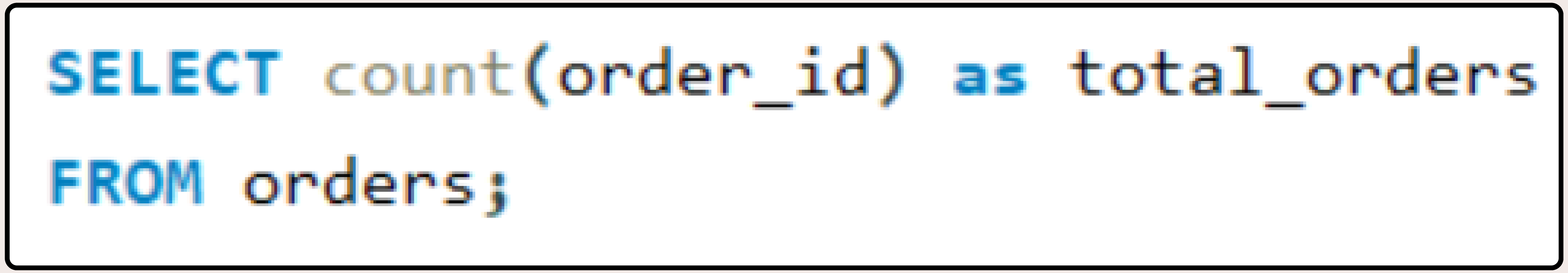
Data Model



order_details
order_details_id
order_id
pizza_id
quantity
Collapse
pizzas
pizza_id
pizza_type_id
price
size
Collapse
orders
date
order_id
time
Collapse
pizza_types
category
ingredients
name
pizza_type_id
Collapse
*
*
1
1
*
1

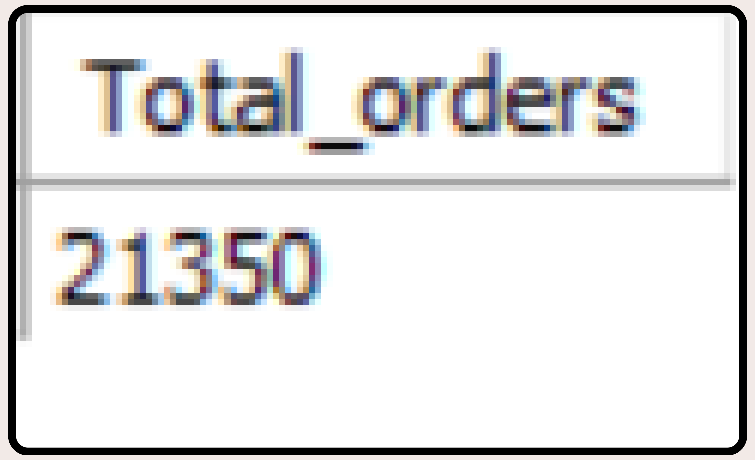
Total number of orders placed

Query



```sql
SELECT count(order_id) as total_orders
FROM orders;
```

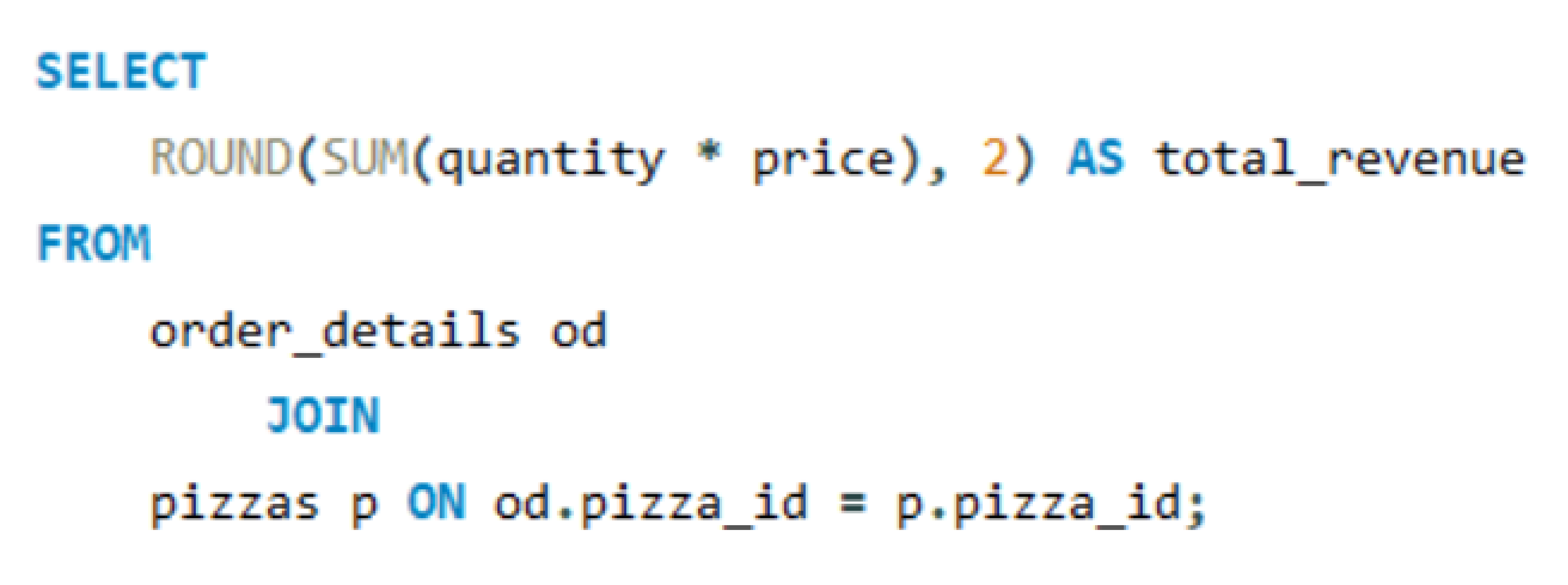
Solution



Total_orders
21350

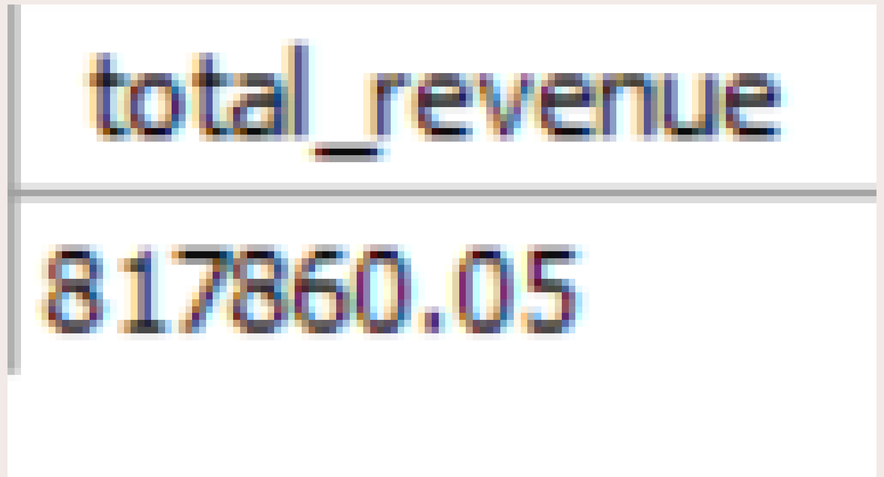
Total revenue generated

Query



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

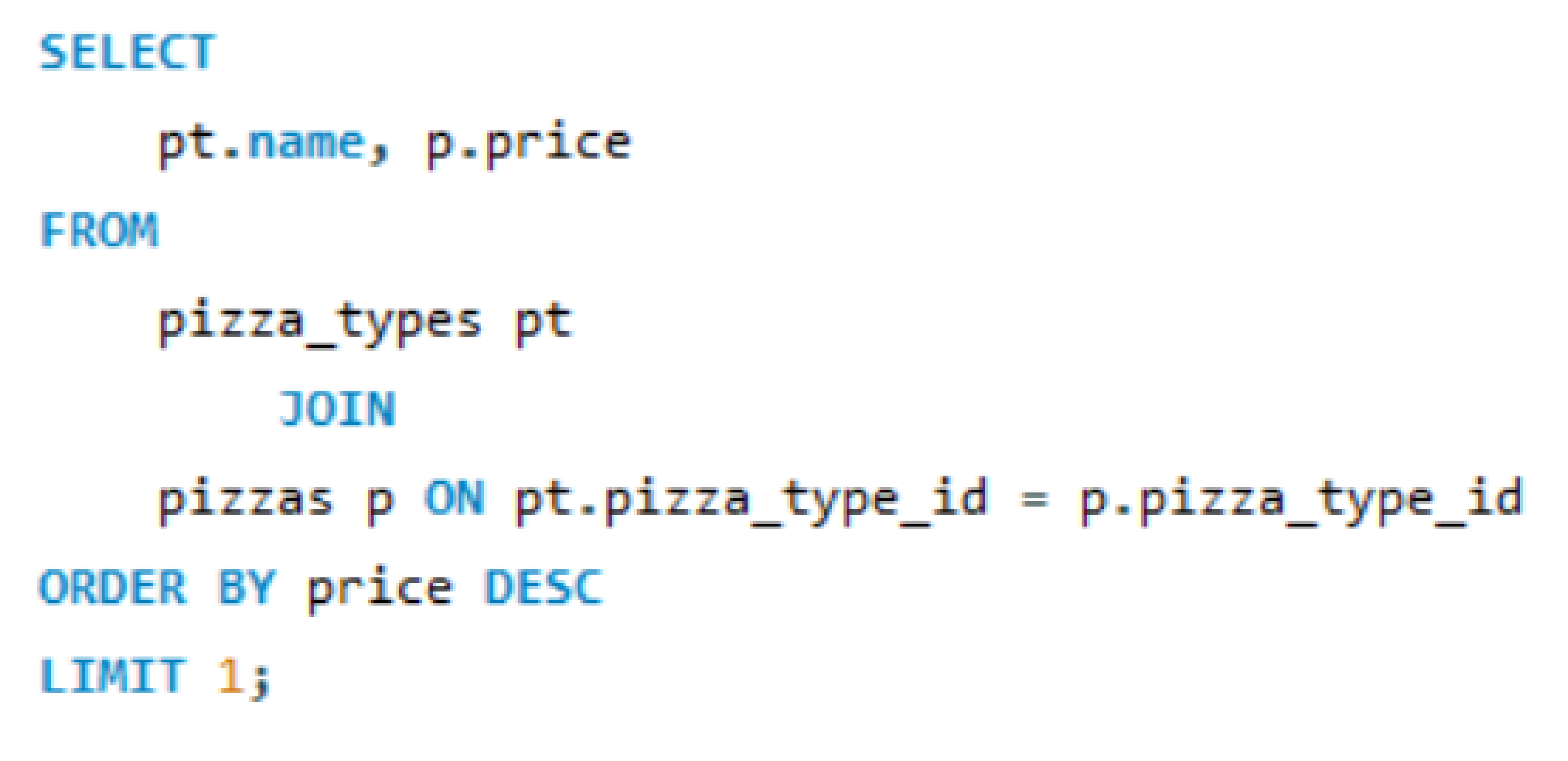
Solution



total_revenue
817860.05

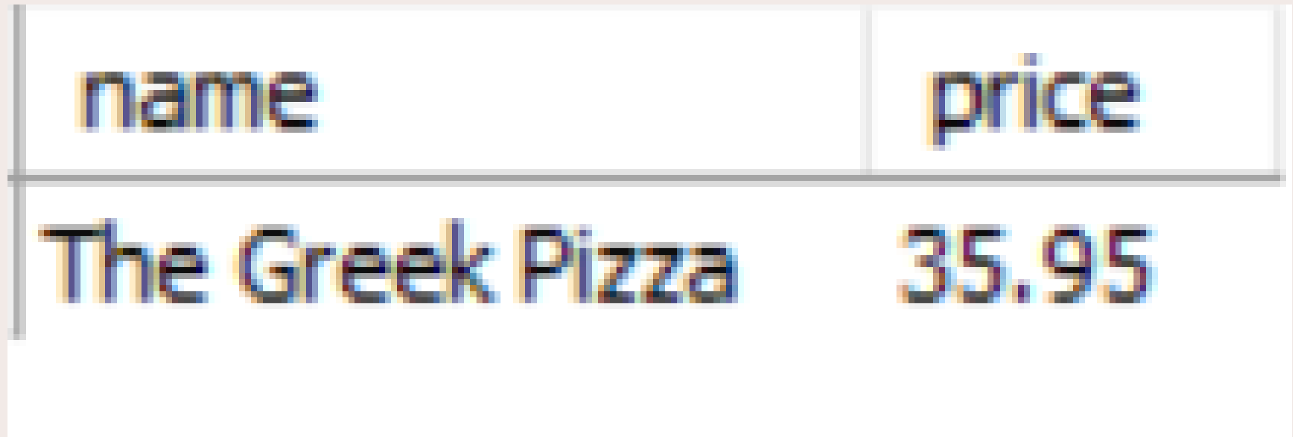
Highest priced pizza

Query



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

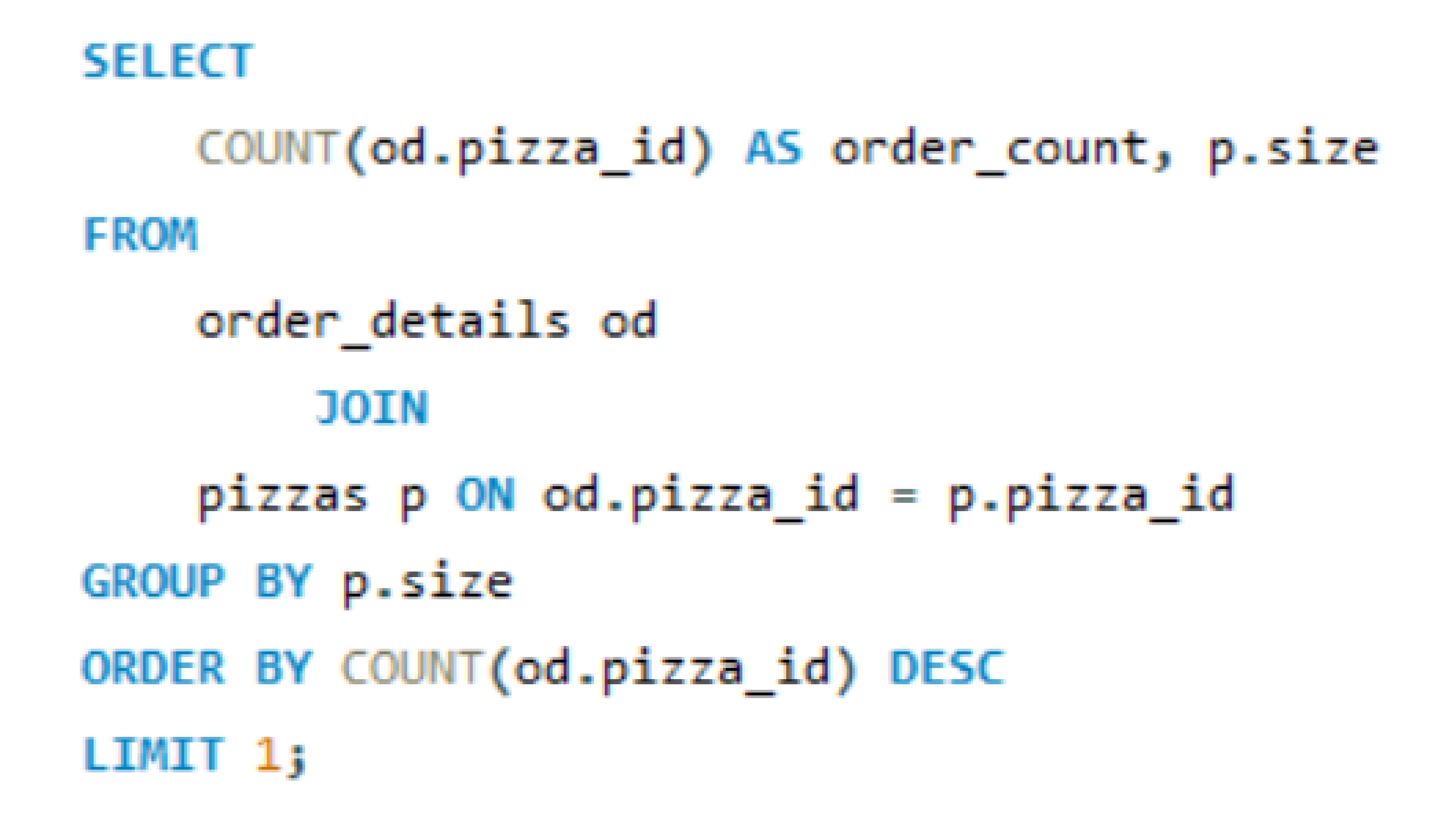
Solution



name	price
The Greek Pizza	35.95

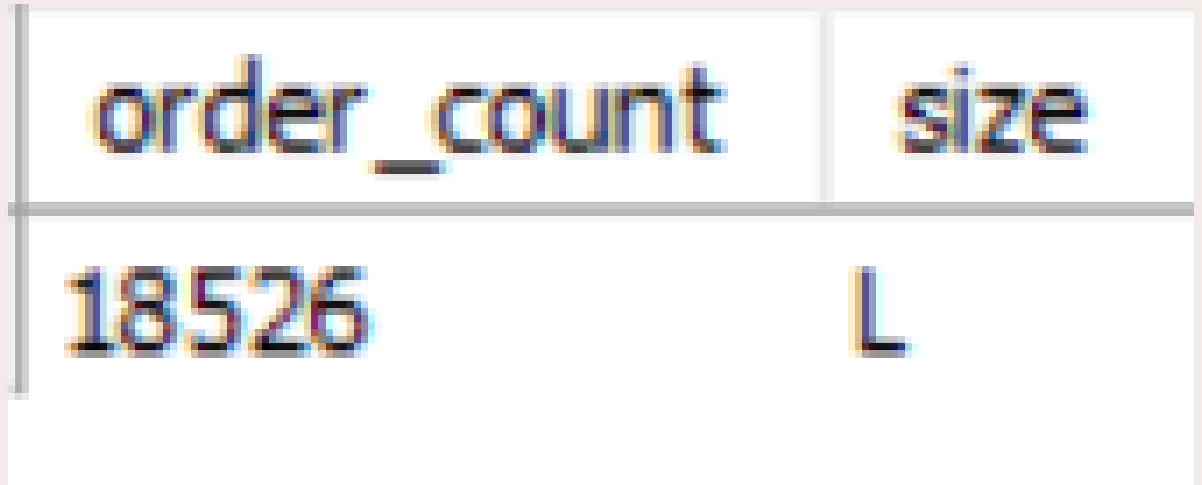
Most common pizza size ordered

Query



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

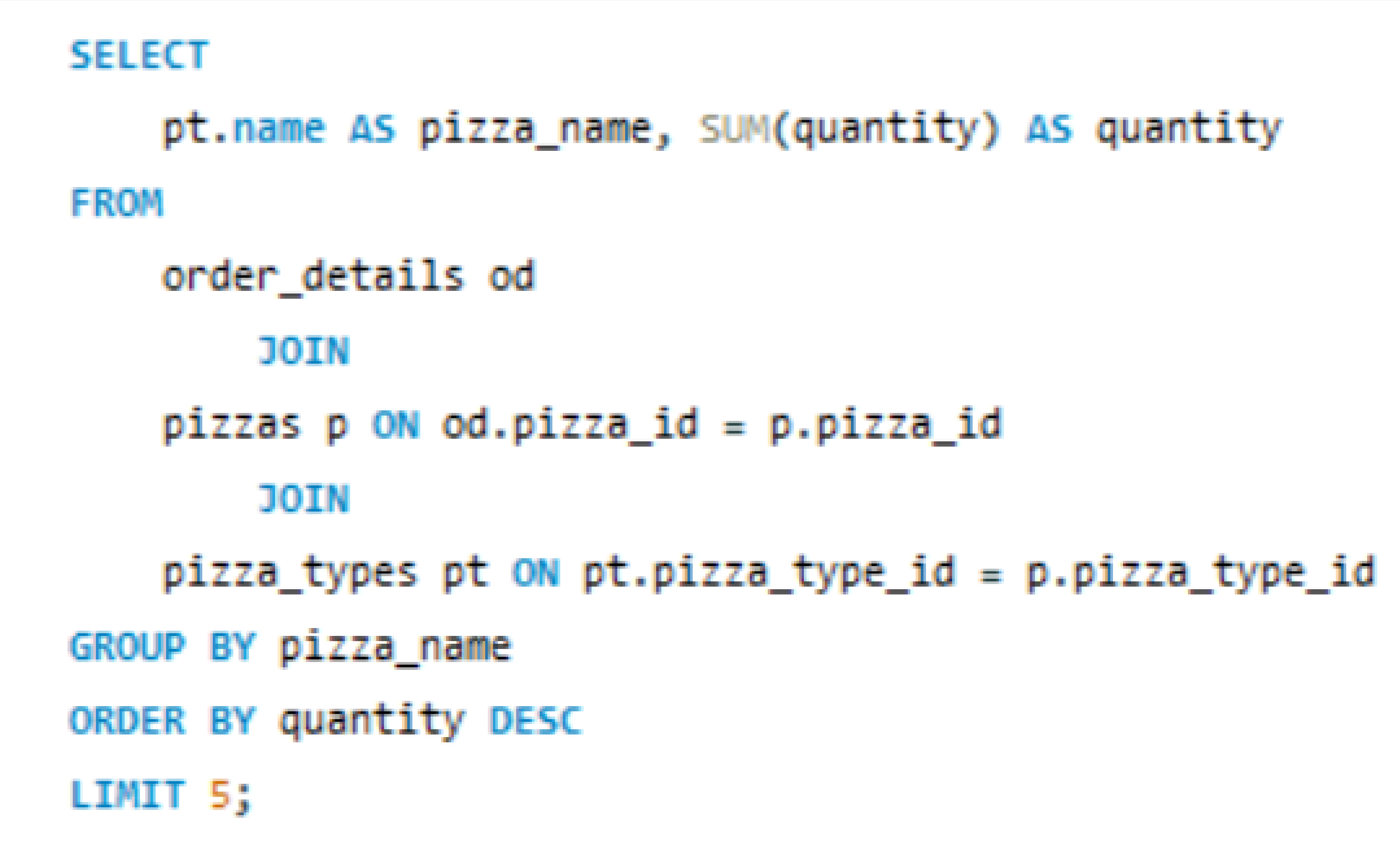
Solution



order_count	size
18526	L

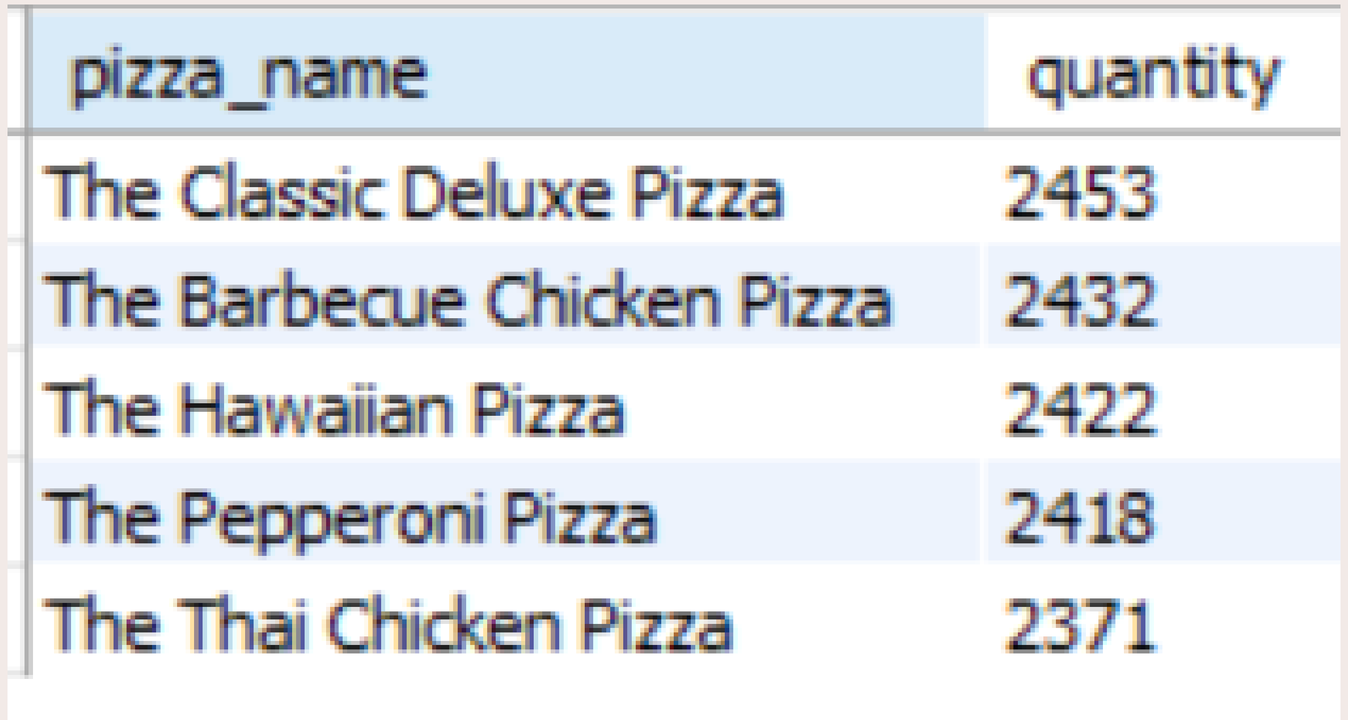
Top 5 most ordered pizza and quantities

Query



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

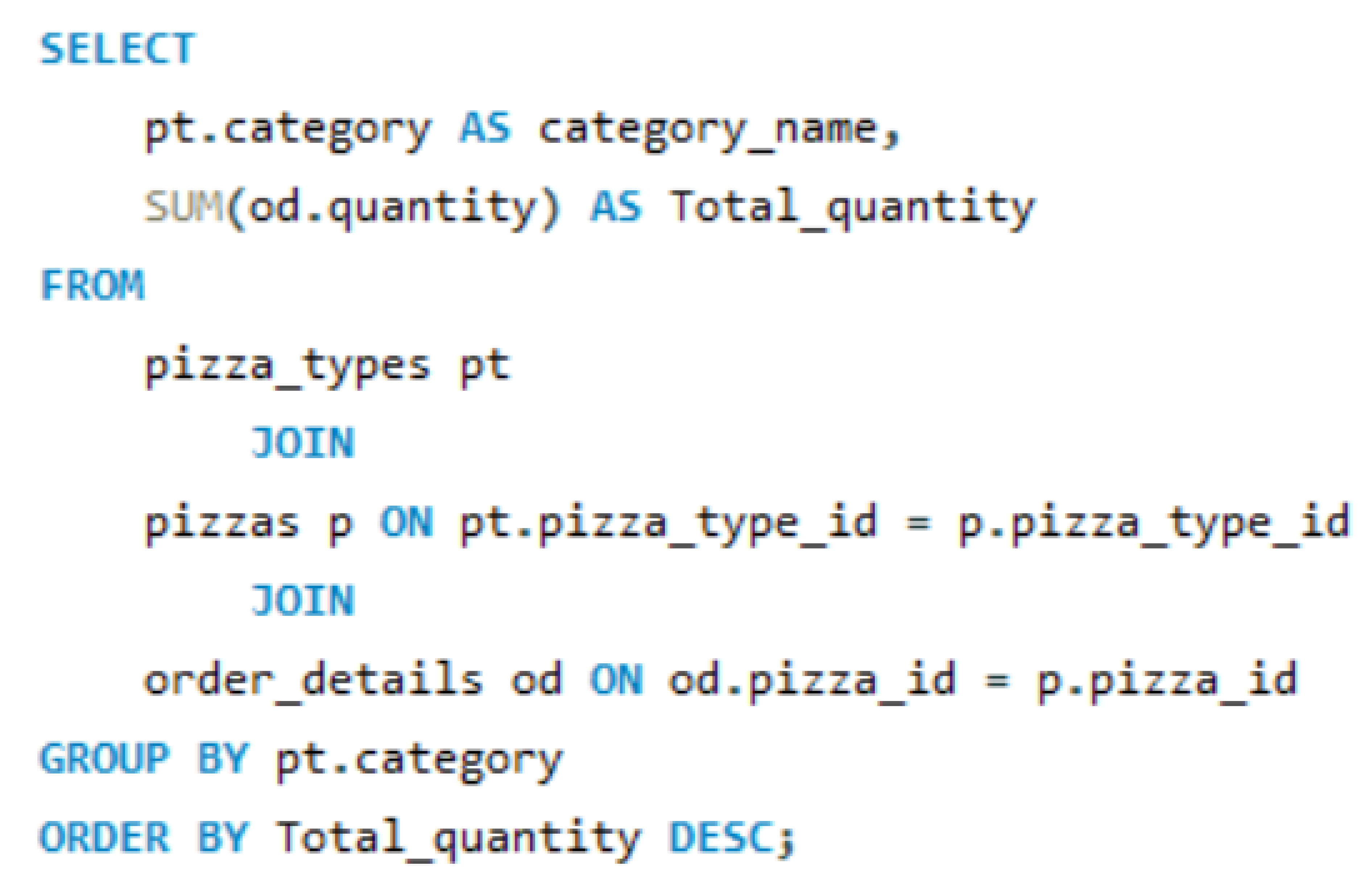
Solution



pizza_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

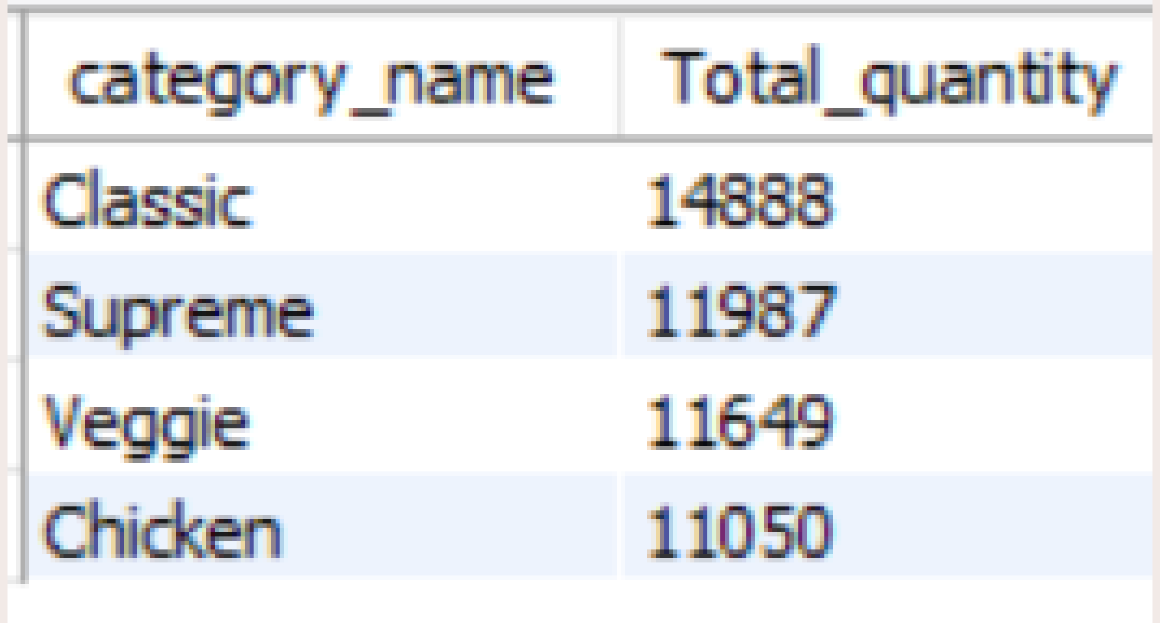
Total quantity of each pizza category ordered

Query



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

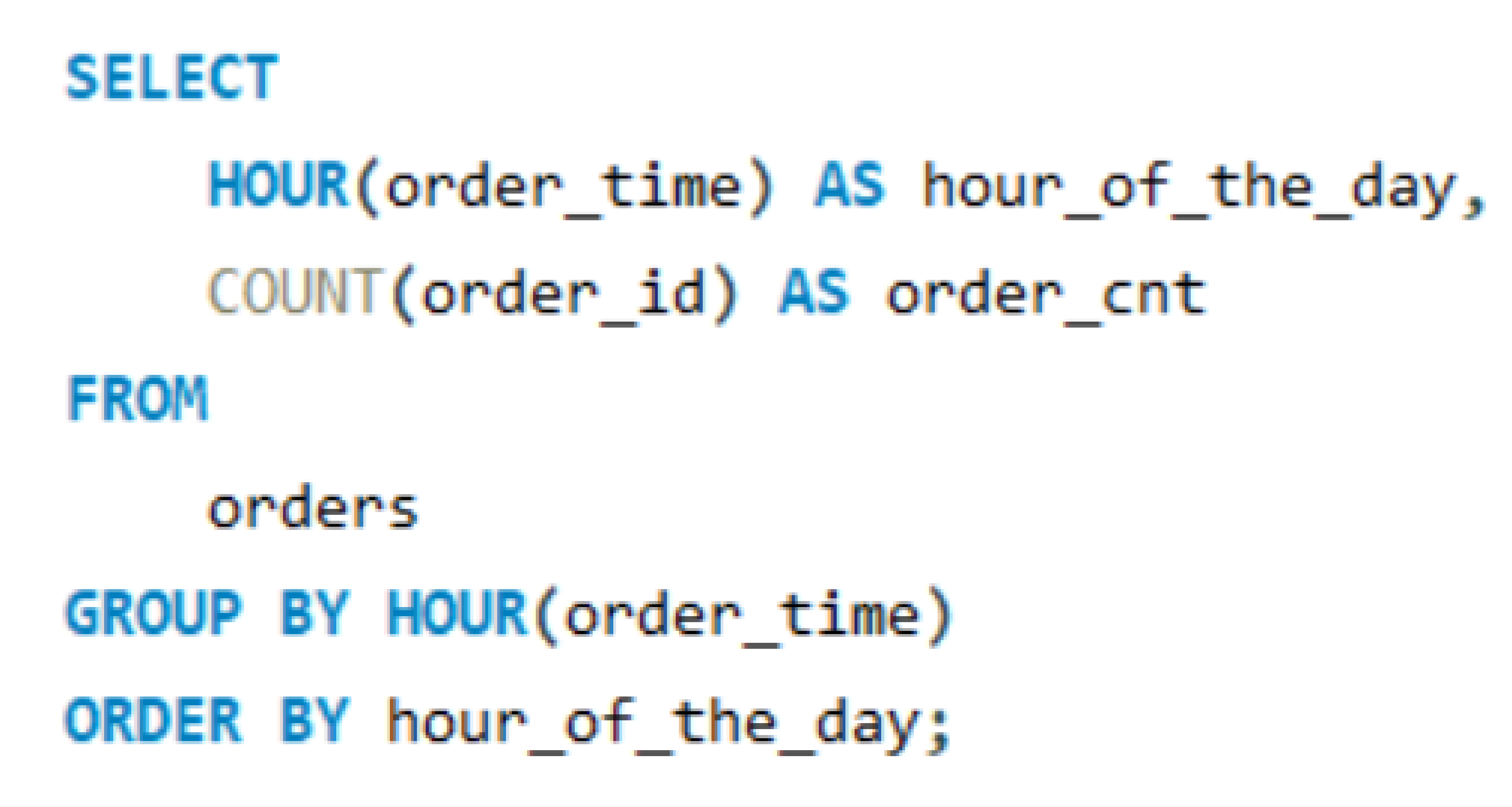
Solution



category_name	Total_quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

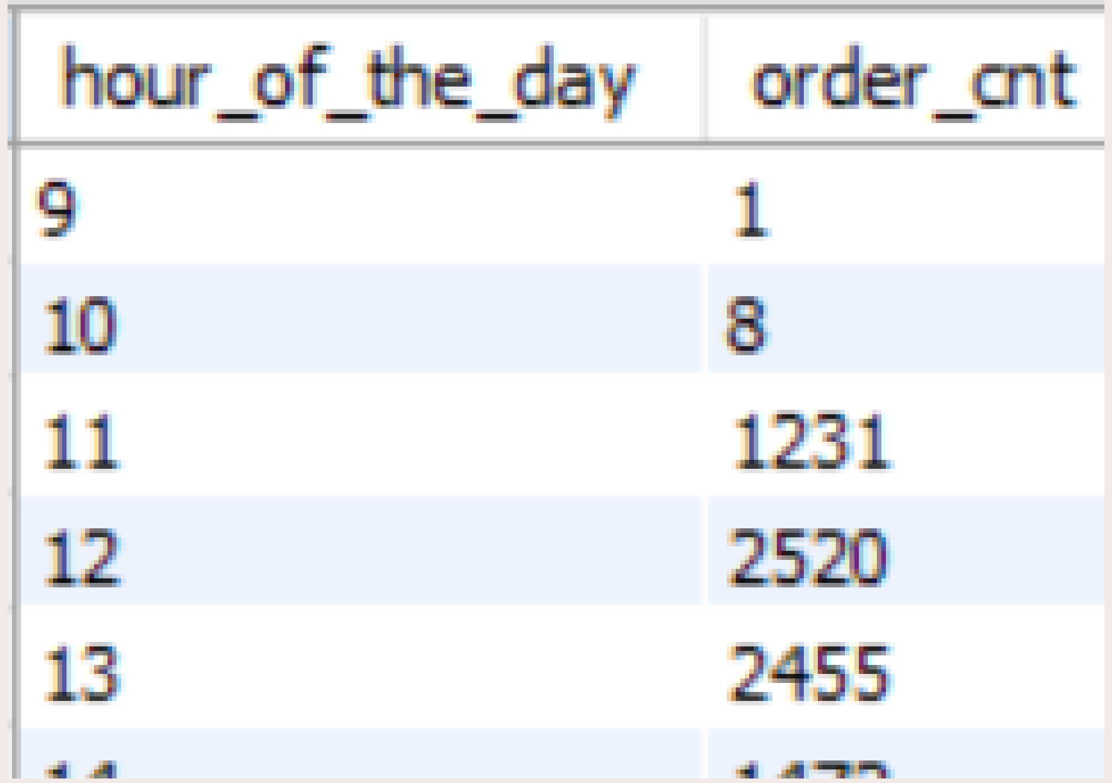
Distribution of orders by hour of the day

Query



```
SELECT
    HOUR(order_time) AS hour_of_the_day,
    COUNT(order_id) AS order_cnt
FROM
    orders
GROUP BY HOUR(order_time)
ORDER BY hour_of_the_day;
```

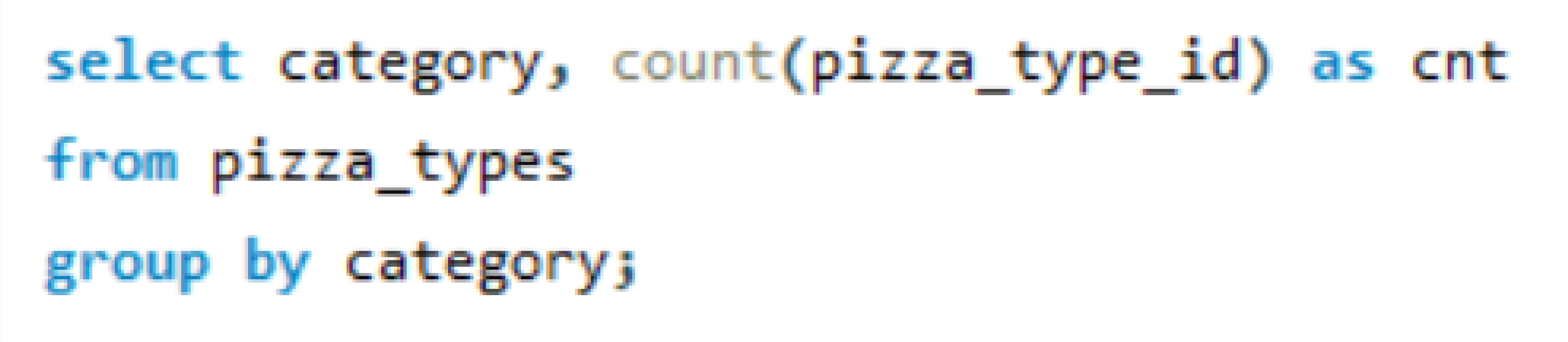
Solution



hour_of_the_day	order_cnt
9	1
10	8
11	1231
12	2520
13	2455

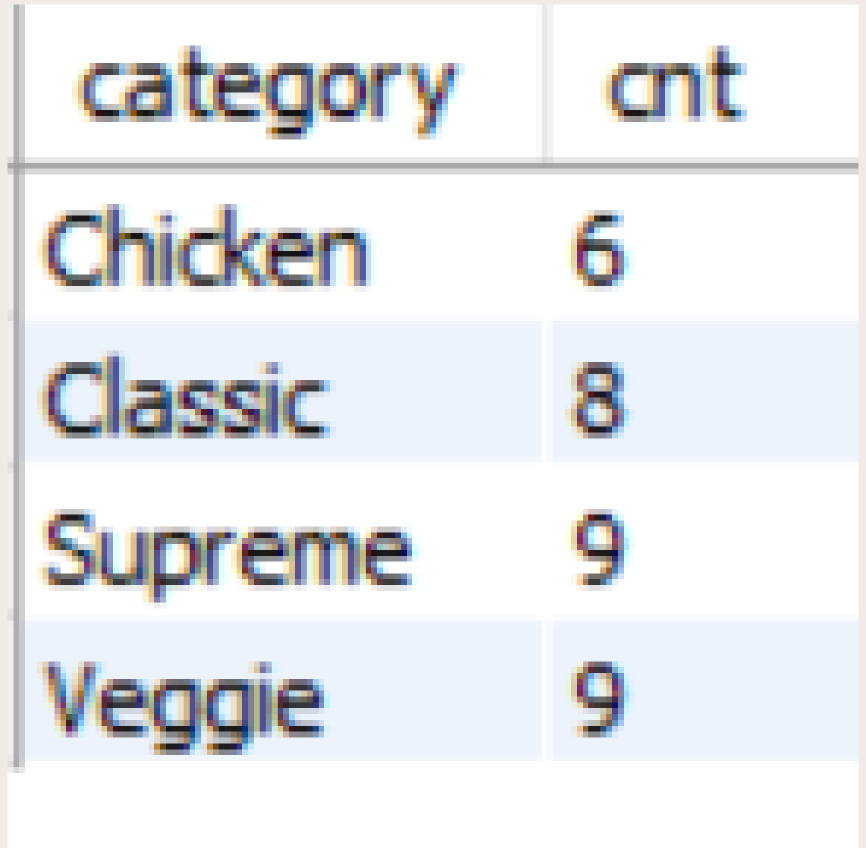
Category-wise distribution of pizzas

Query



```
select category, count(pizza_type_id) as cnt
from pizza_types
group by category;
```

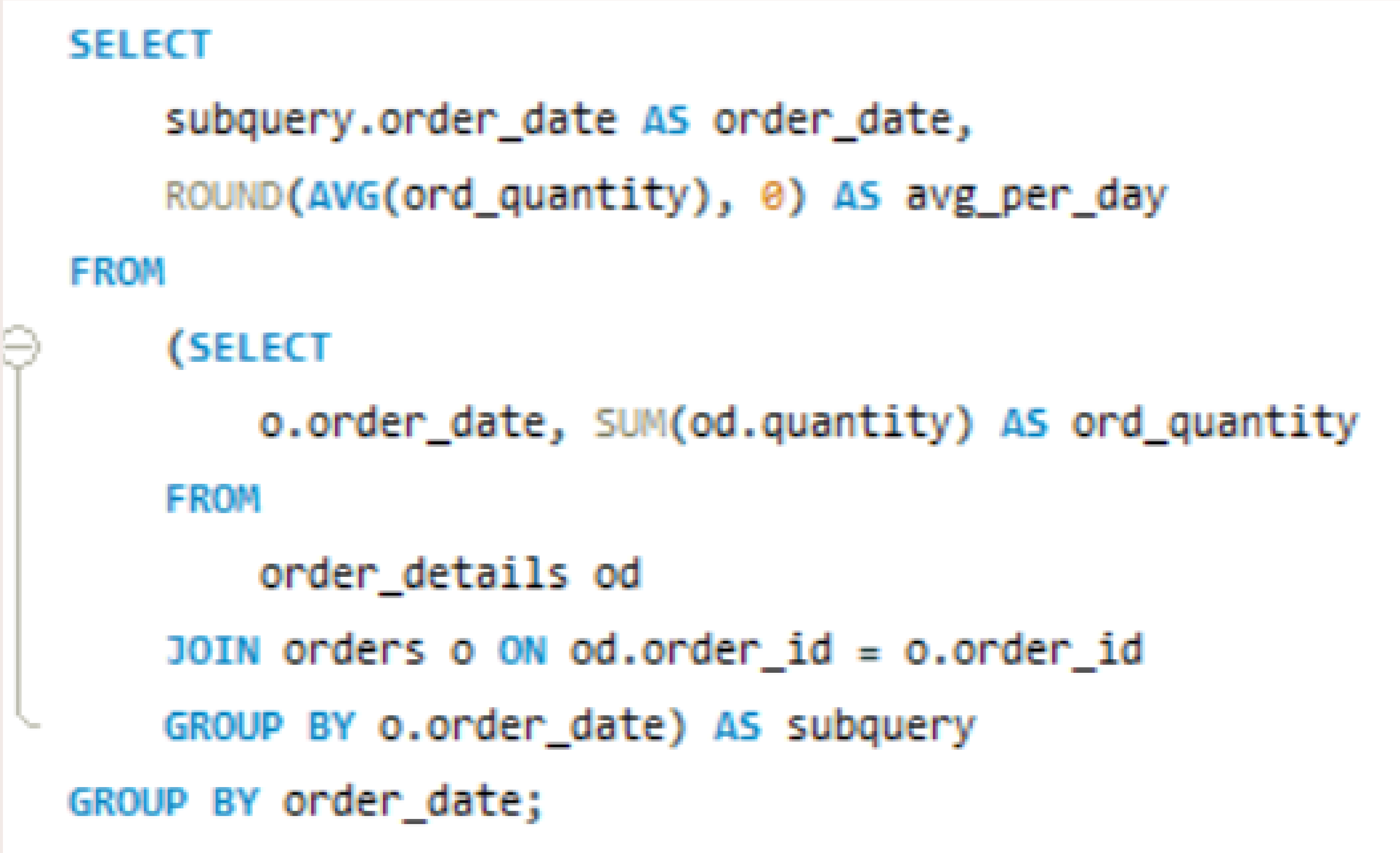
Solution



category	cnt
Chicken	6
Classic	8
Supreme	9
Veggie	9

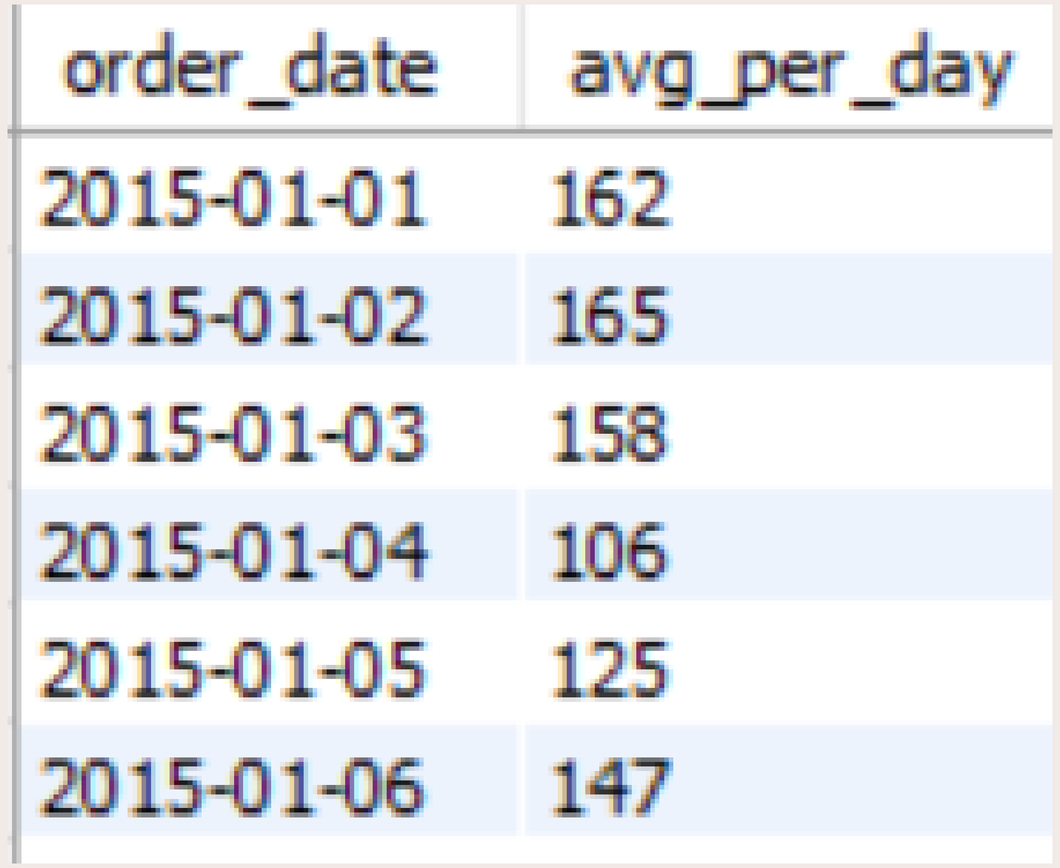
Average number of pizzas ordered per day

Query



```sql
SELECT
    subquery.order_date AS order_date,
    ROUND(AVG(ord_quantity), 0) AS avg_per_day
FROM
    (SELECT
        o.order_date, SUM(od.quantity) AS ord_quantity
    FROM
        order_details od
    JOIN orders o ON od.order_id = o.order_id
    GROUP BY o.order_date) AS subquery
GROUP BY order_date;
```

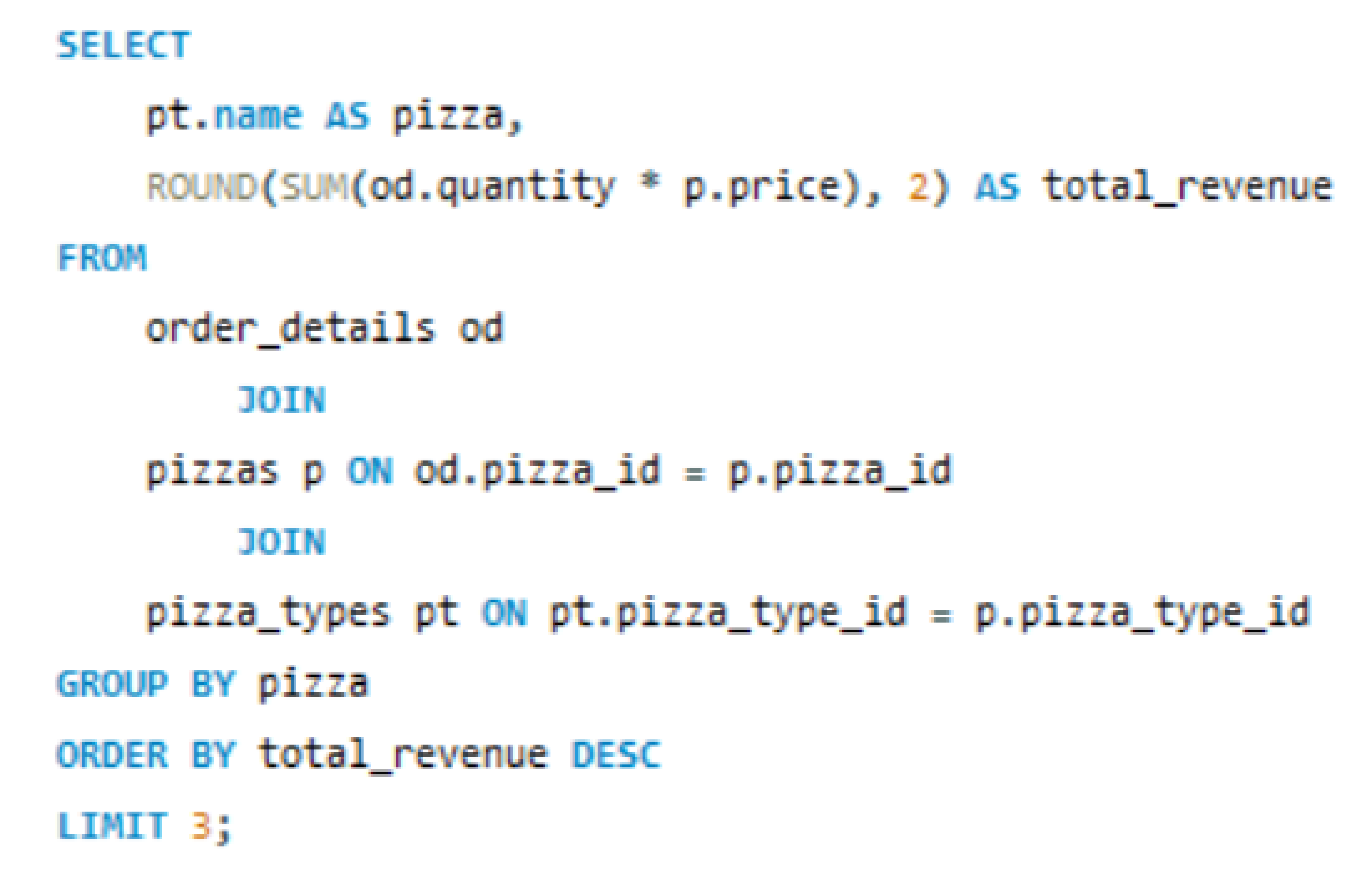
Solution



order_date	avg_per_day
2015-01-01	162
2015-01-02	165
2015-01-03	158
2015-01-04	106
2015-01-05	125
2015-01-06	147

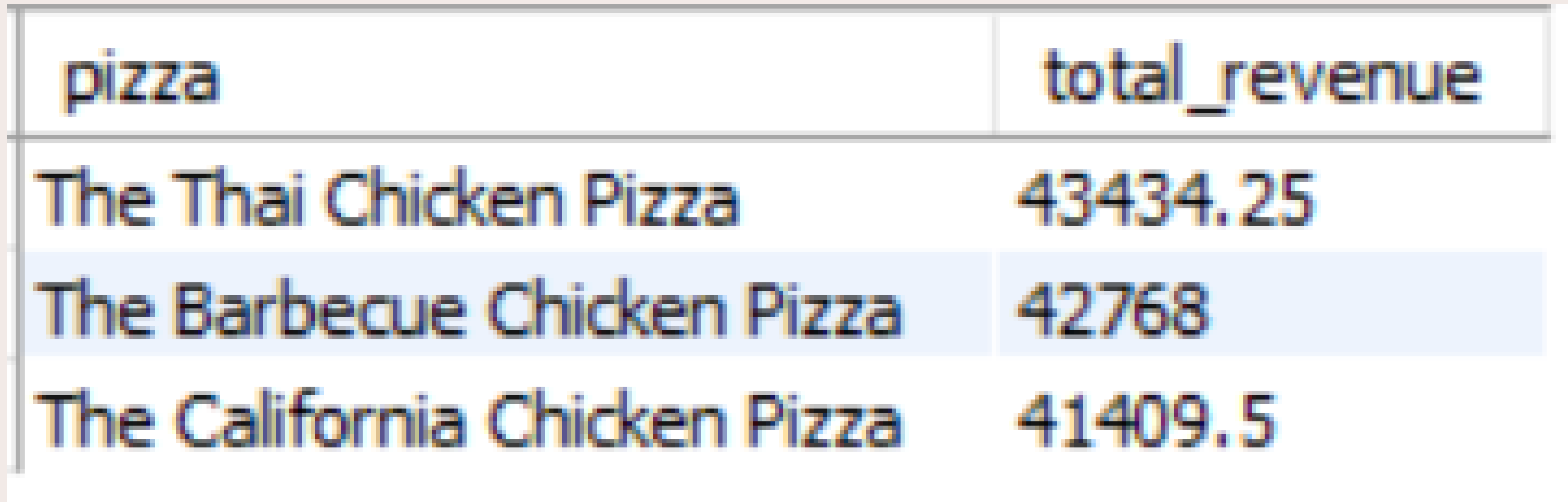
Top 3 ordered pizza types on revenue

Query



```
SELECT
    pt.name AS pizza,
    ROUND(SUM(od.quantity * p.price), 2) AS total_revenue
FROM
    order_details od
        JOIN
    pizzas p ON od.pizza_id = p.pizza_id
        JOIN
    pizza_types pt ON pt.pizza_type_id = p.pizza_type_id
GROUP BY pizza
ORDER BY total_revenue DESC
LIMIT 3;
```

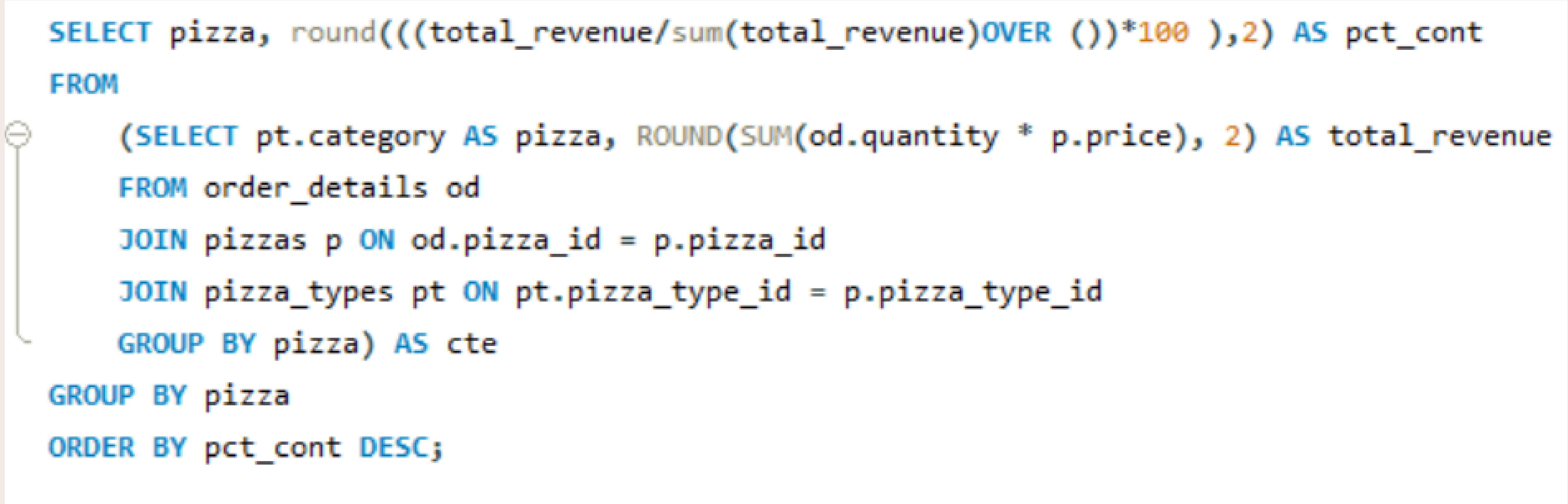
Solution



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

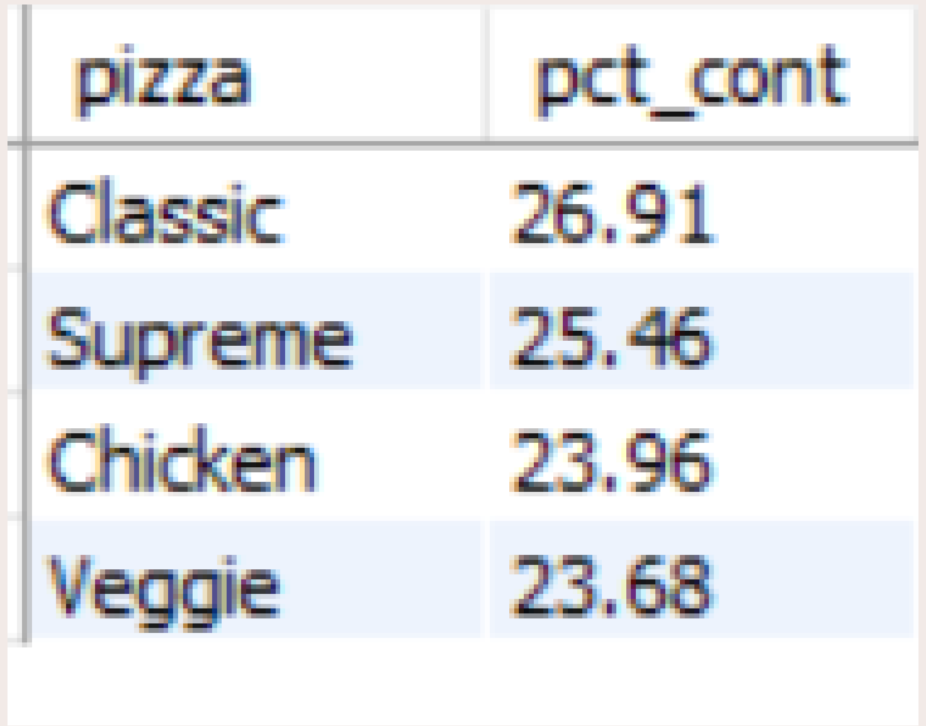
% contribution of each pizza type to total revenue

Query



```
SELECT pizza, round(((total_revenue/sum(total_revenue)OVER ())*100 ),2) AS pct_cont
FROM
    (SELECT pt.category AS pizza, ROUND(SUM(od.quantity * p.price), 2) AS total_revenue
    FROM order_details od
    JOIN pizzas p ON od.pizza_id = p.pizza_id
    JOIN pizza_types pt ON pt.pizza_type_id = p.pizza_type_id
    GROUP BY pizza) AS cte
GROUP BY pizza
ORDER BY pct_cont DESC;
```

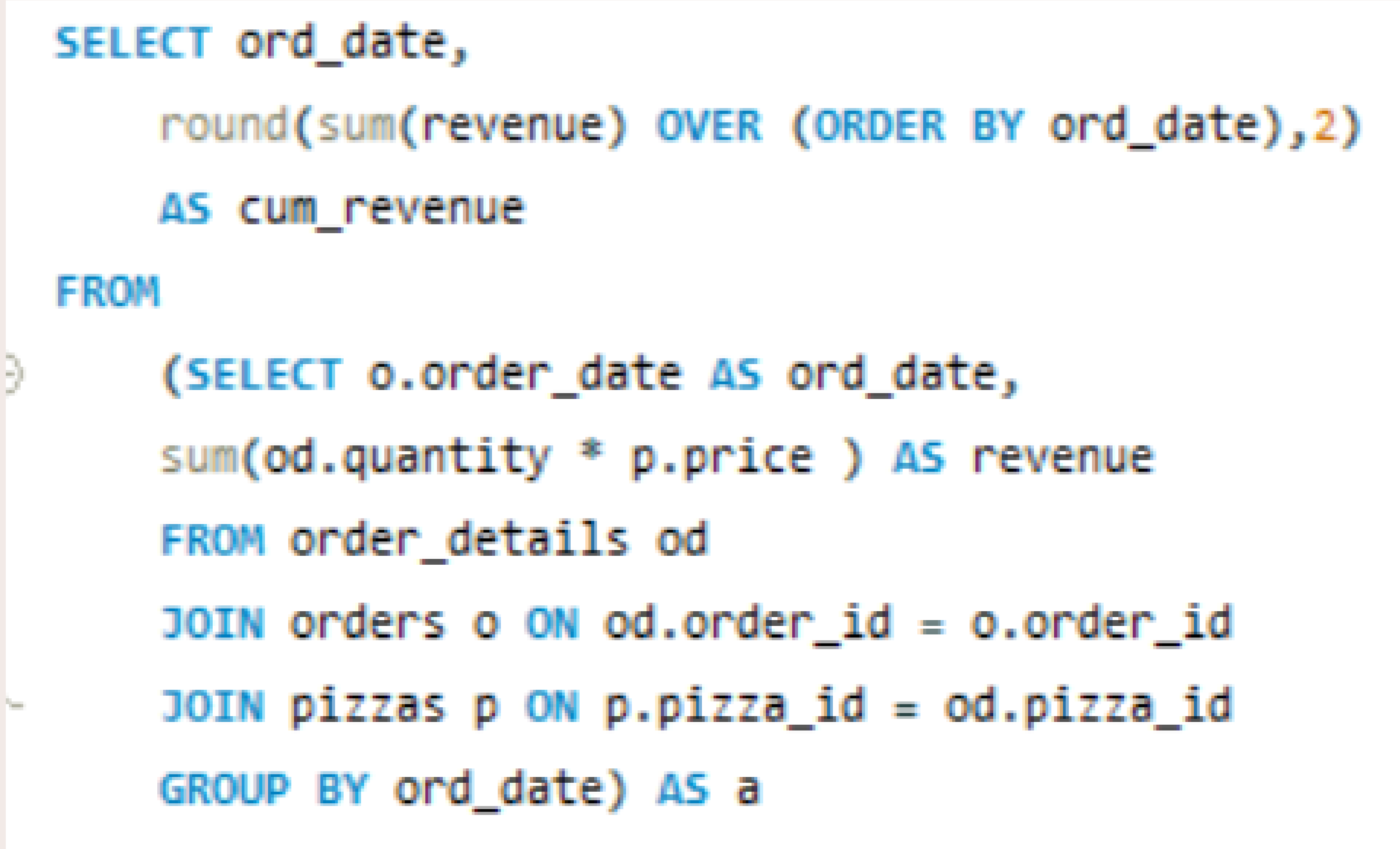
Solution



pizza	pct_cont
Classic	26.91
Supreme	25.46
Chicken	23.96
Veggie	23.68

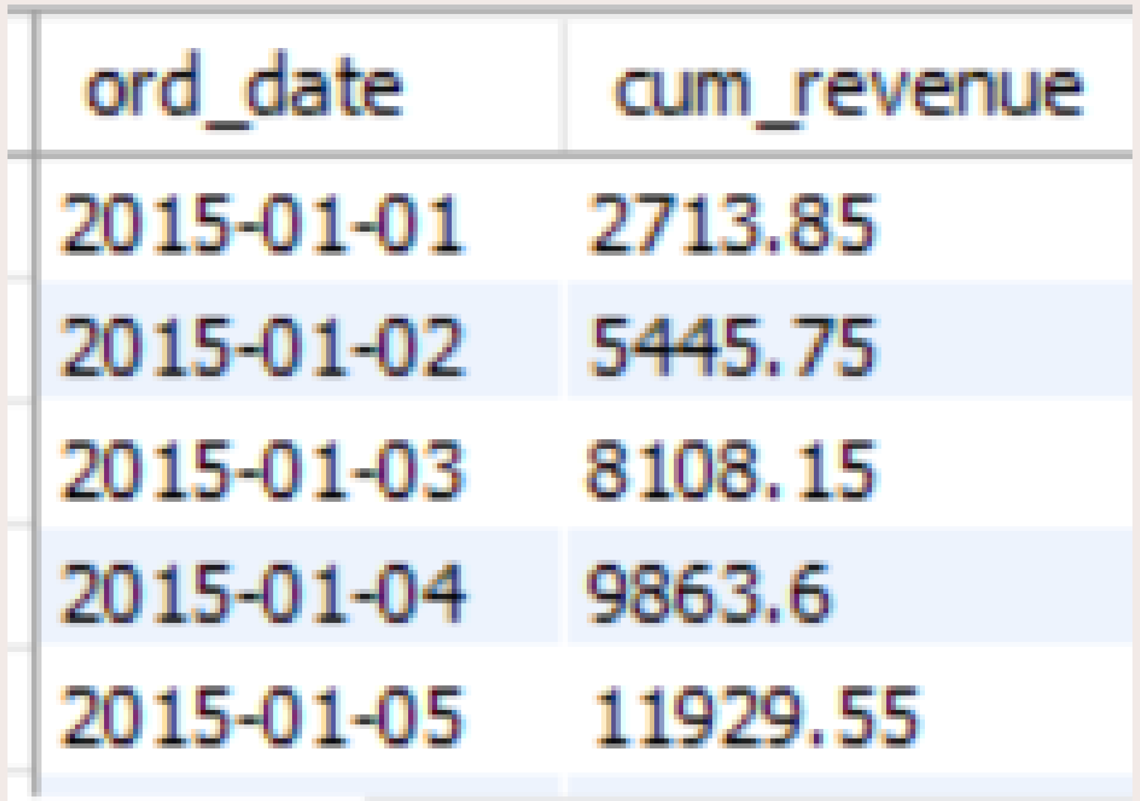
Cumulative revenue generated over time

Query



```
SELECT ord_date,
    round(sum(revenue) OVER (ORDER BY ord_date),2)
    AS cum_revenue
FROM
    (SELECT o.order_date AS ord_date,
    sum(od.quantity * p.price ) AS revenue
    FROM order_details od
    JOIN orders o ON od.order_id = o.order_id
    JOIN pizzas p ON p.pizza_id = od.pizza_id
    GROUP BY ord_date) AS a
```

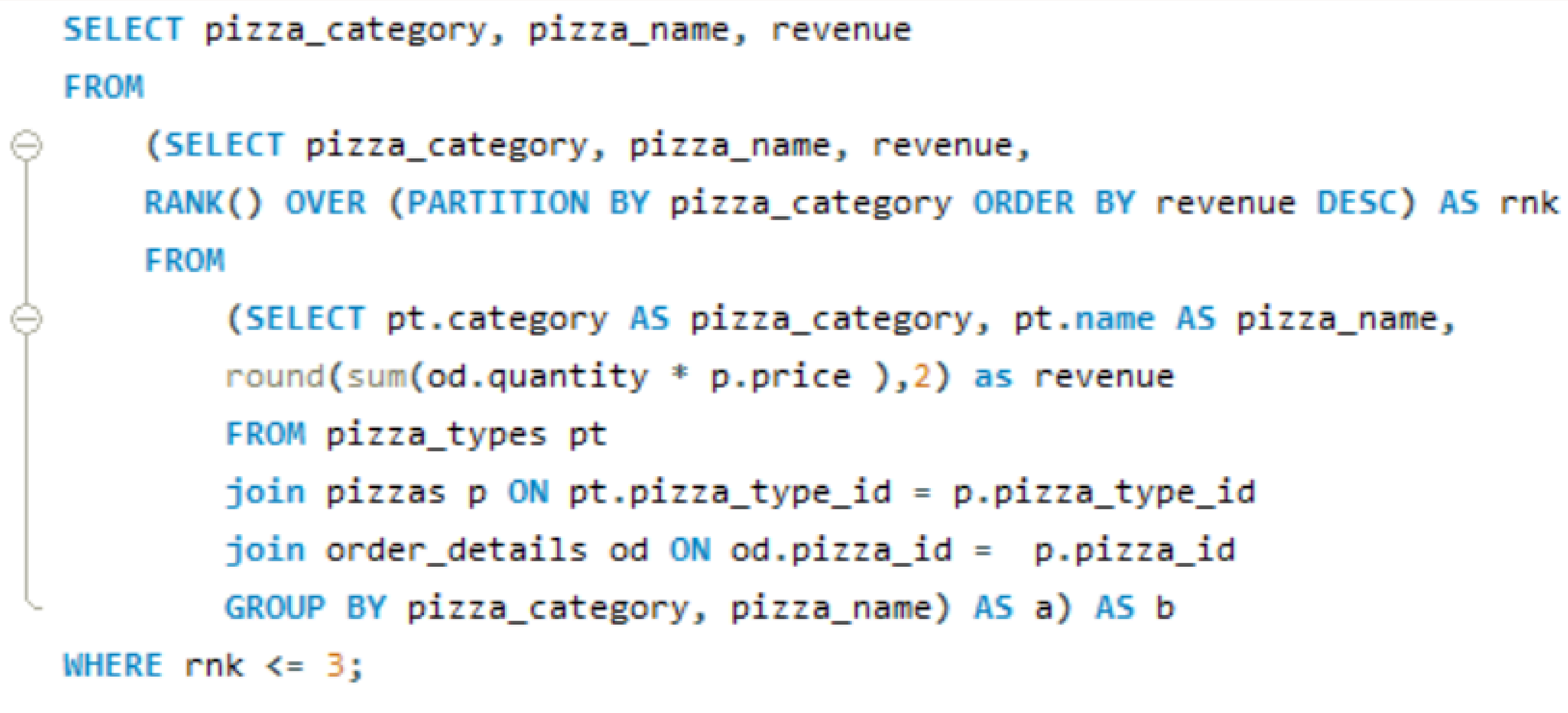
Solution



ord_date	cum_revenue
2015-01-01	2713.85
2015-01-02	5445.75
2015-01-03	8108.15
2015-01-04	9863.6
2015-01-05	11929.55

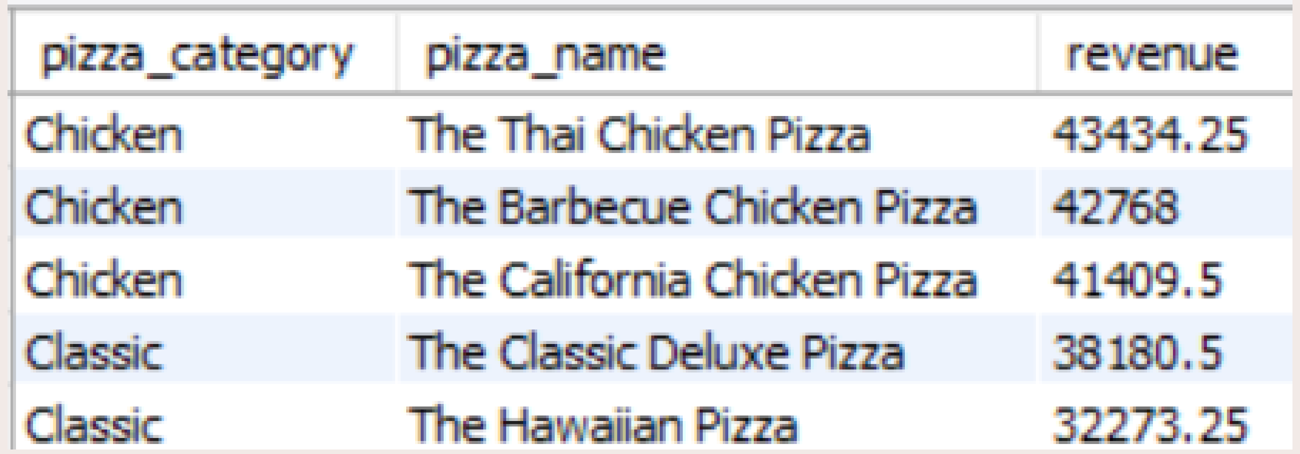
Top 3 pizza types on revenue for each pizza category

Query



```
SELECT pizza_category, pizza_name, revenue
FROM
    (SELECT pizza_category, pizza_name, revenue,
    RANK() OVER (PARTITION BY pizza_category ORDER BY revenue DESC) AS rnk
    FROM
        (SELECT pt.category AS pizza_category, pt.name AS pizza_name,
        round(sum(od.quantity * p.price ),2) as revenue
        FROM pizza_types pt
        join pizzas p ON pt.pizza_type_id = p.pizza_type_id
        join order_details od ON od.pizza_id =  p.pizza_id
        GROUP BY pizza_category, pizza_name) AS a) AS b
WHERE rnk <= 3;
```

Solution



pizza_category	pizza_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

Some Insights from the Analysis

- Total number of orders: 21,350
- Total revenue: $817,860.05
- Highest priced pizza: The Greek Pizza
- Large-sized pizza is preferred most commonly.
- "The Classic Deluxe Pizza" is the most loved pizza, with the highest order count of 2,453.
- Classic type pizzas are the most preferred and contribute the highest percentage to revenue (27%).
- Peak hours are between 12 PM to 7 PM.
- Maximum revenue is received from "The Thai Chicken Pizza."

THANK YOU