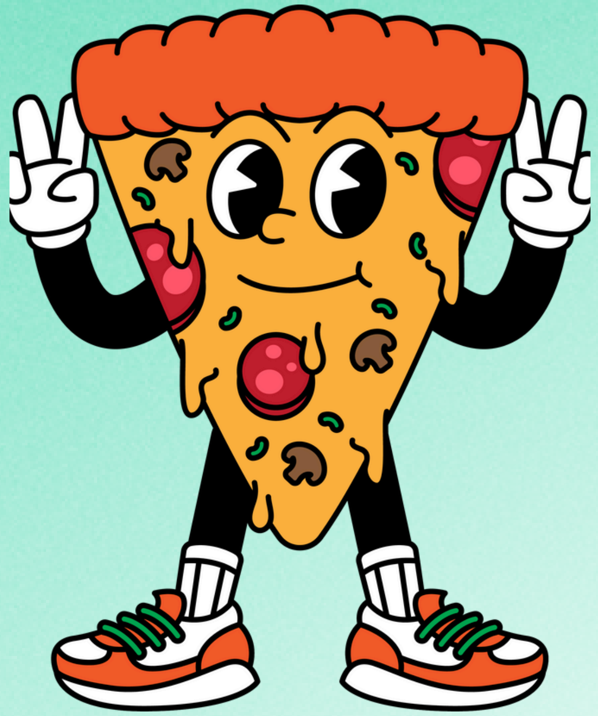
Analysis of Pizza Sales



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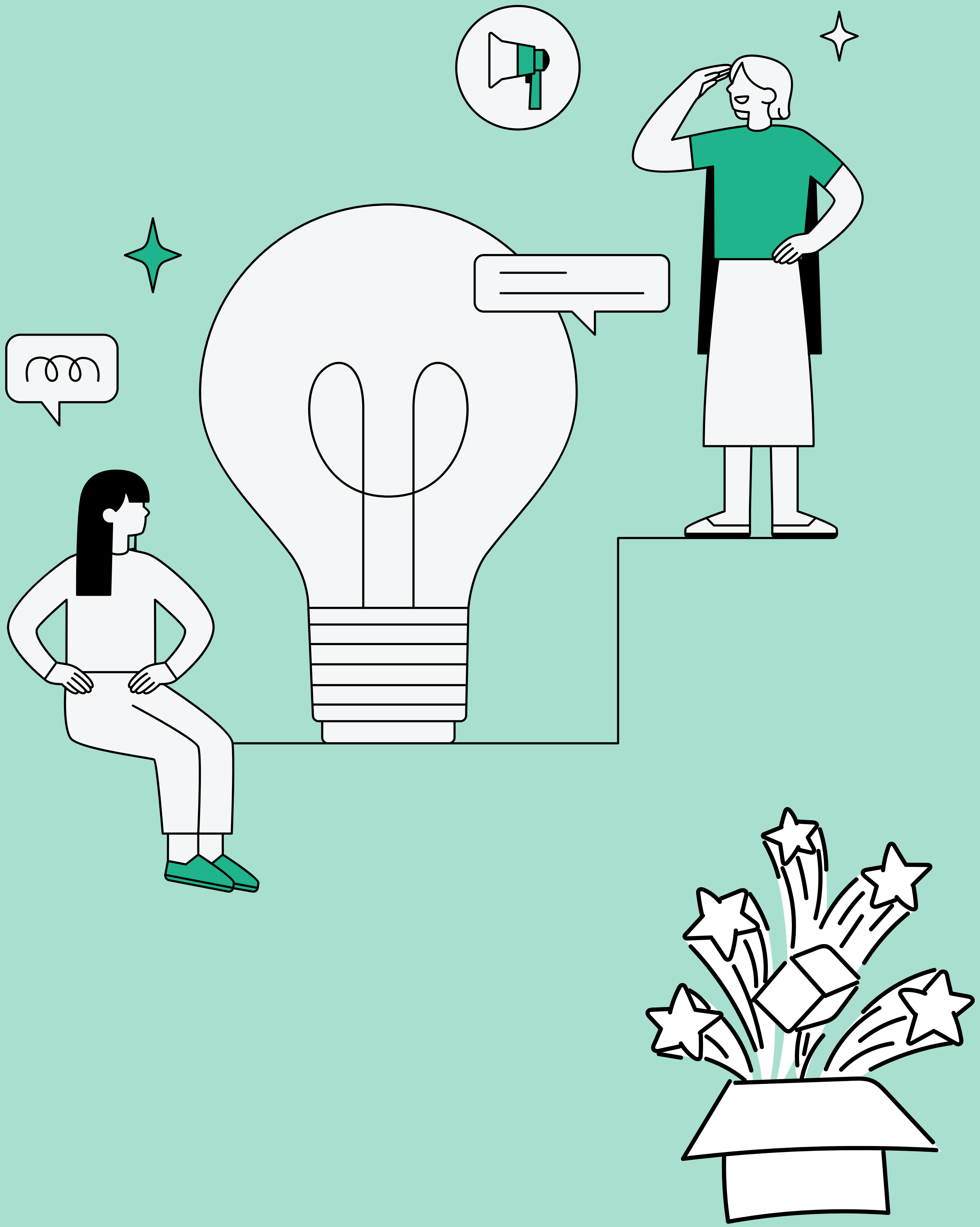
Introduction :



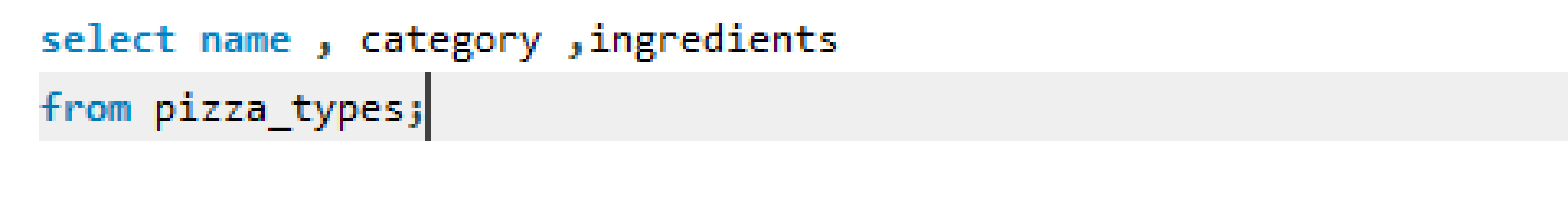
I analyzed pizza shop data using ChatGPT and SQL. The project involved four key files: Pizzas, Pizza Types, Orders, and Order Details. Through this analysis, I extracted meaningful insights into sales, popular items, and revenue trends.I want to share this project :

Quick Summary

- Total Revenue: The pizza shop generated a total revenue of $118,466.
- Top-Selling Pizza: The Pepperoni Pizza was the most ordered item, with 390 orders.
- High-Demand Categories:
- The Chicken category showed strong customer demand.
- The Classic category proved to be the most valuable, contributing approximately 30% of the total revenue.
- Popular Size: The most preferred pizza size among customers was Large (L).
- Most Valuable Order: Order ID 1096 generated the highest individual order value.
- Zero-Sales Items: Several pizzas were not sold at all, including:
- The Big Meat Pizza (sizes Small and Large)
- The Five Cheese Pizza
- The Four Cheese Pizza

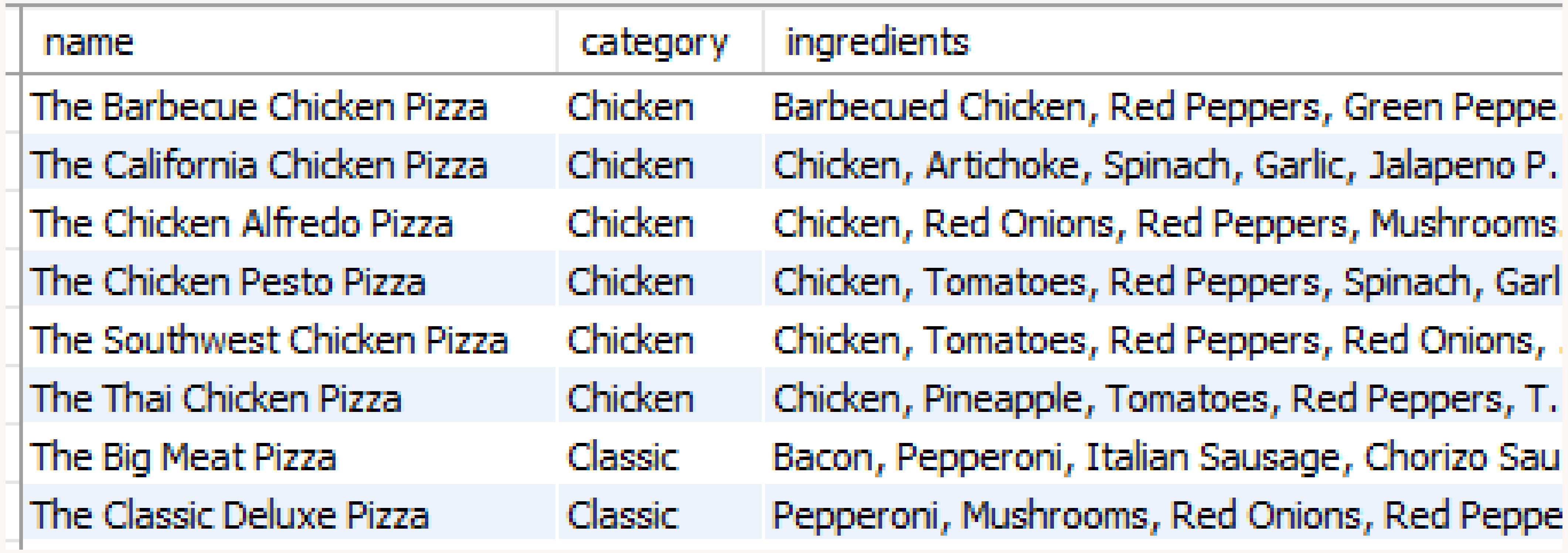
1.List all available pizza names along with their category and ingredients.

Query:



```
select name , category ,ingredients
from pizza_types;
```

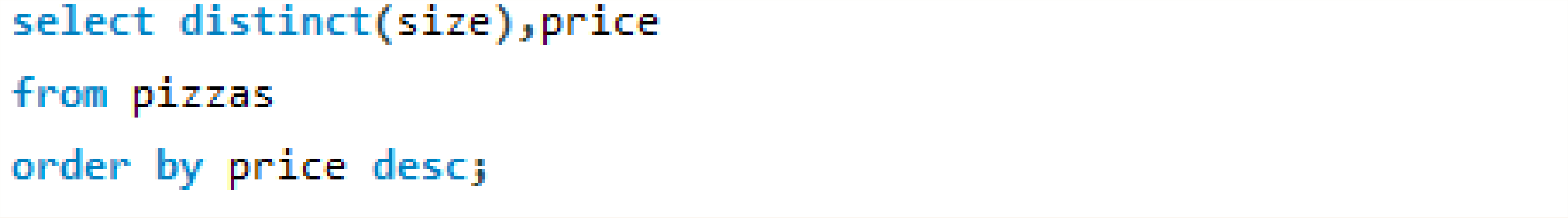
Output:



name	category	ingredients
The Barbecue Chicken Pizza	Chicken	Barbecued Chicken, Red Peppers, Green Peppe
The California Chicken Pizza	Chicken	Chicken, Artichoke, Spinach, Garlic, Jalapeno P.
The Chicken Alfredo Pizza	Chicken	Chicken, Red Onions, Red Peppers, Mushrooms
The Chicken Pesto Pizza	Chicken	Chicken, Tomatoes, Red Peppers, Spinach, Garl
The Southwest Chicken Pizza	Chicken	Chicken, Tomatoes, Red Peppers, Red Onions,
The Thai Chicken Pizza	Chicken	Chicken, Pineapple, Tomatoes, Red Peppers, T.
The Big Meat Pizza	Classic	Bacon, Pepperoni, Italian Sausage, Chorizo Sau
The Classic Deluxe Pizza	Classic	Pepperoni, Mushrooms, Red Onions, Red Peppe

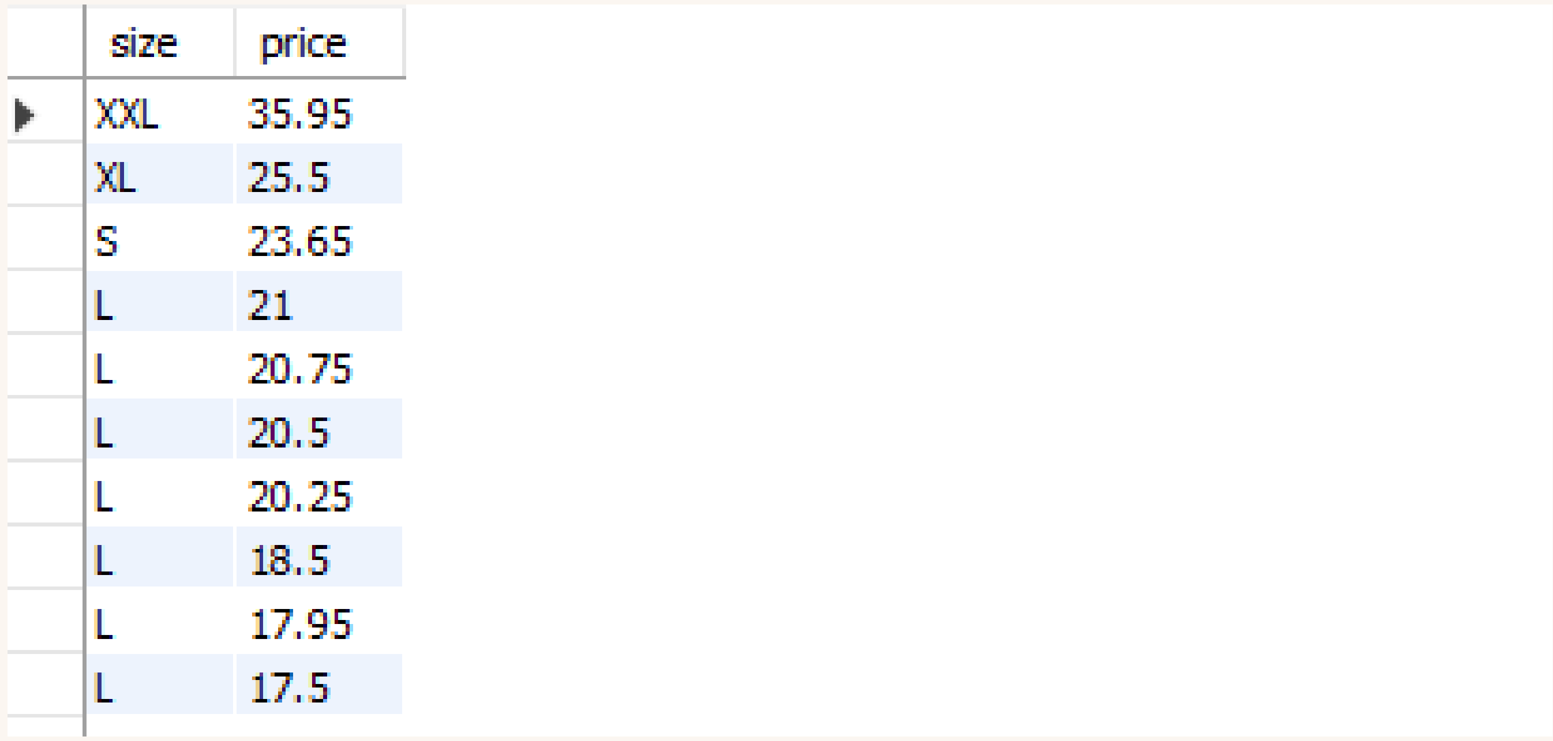
2.Show all unique pizza sizes available along with their corresponding prices.

Query:



```
select distinct(size),price
from pizzas
order by price desc;
```

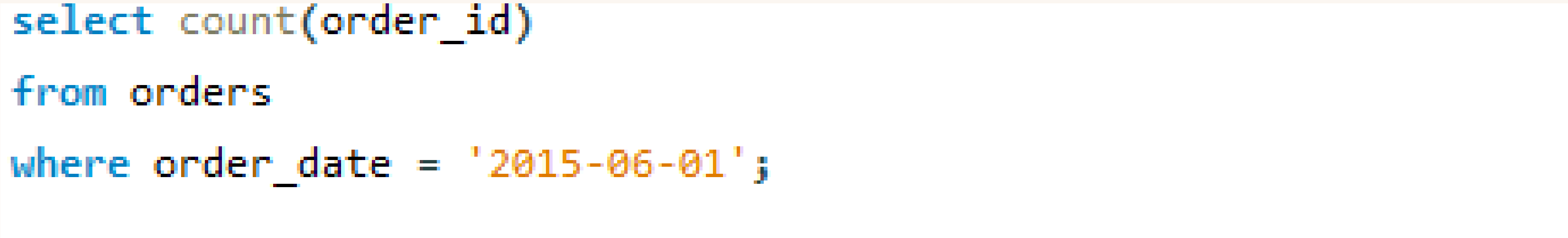
Output:



size	price
XXL	35.95
XL	25.5
S	23.65
L	21
L	20.75
L	20.5
L	20.25
L	18.5
L	17.95
L	17.5

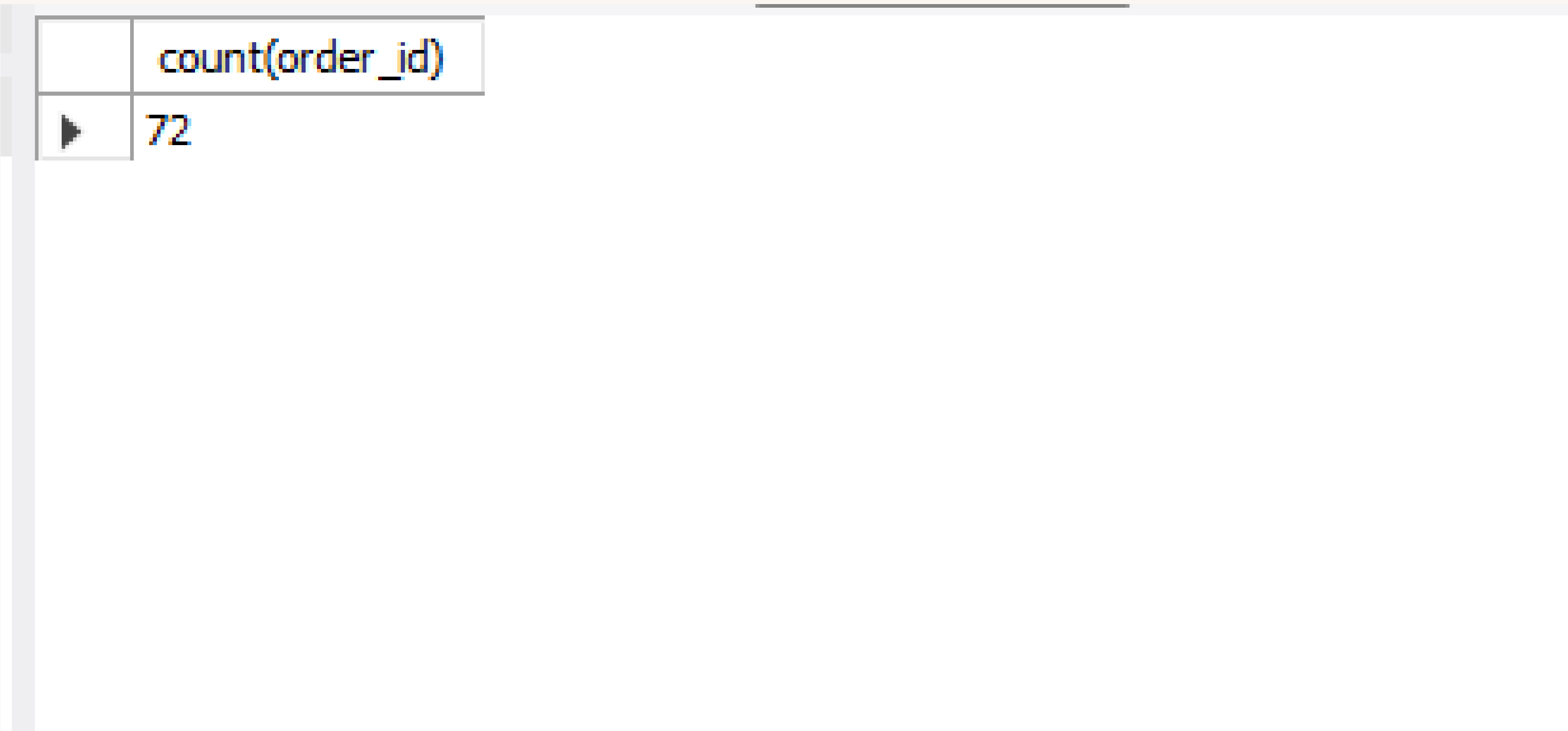
3.Find all orders made on a specific date (e.g., '2015-06-01').

Query:



```
select count(order_id)
from orders
where order_date = '2015-06-01';
```

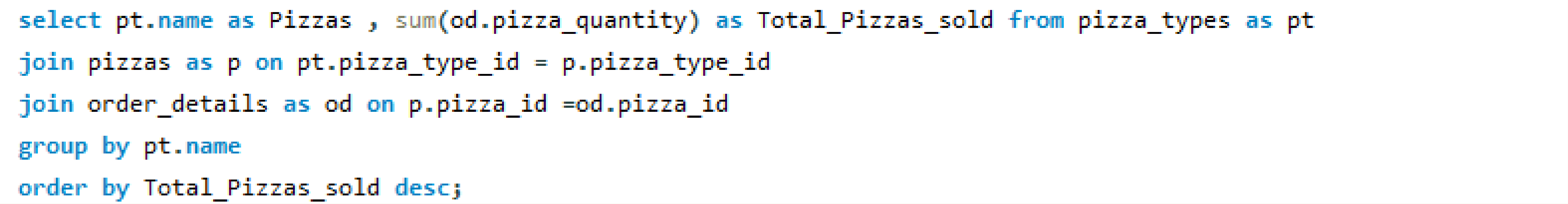
Output:



count(order_id)
72

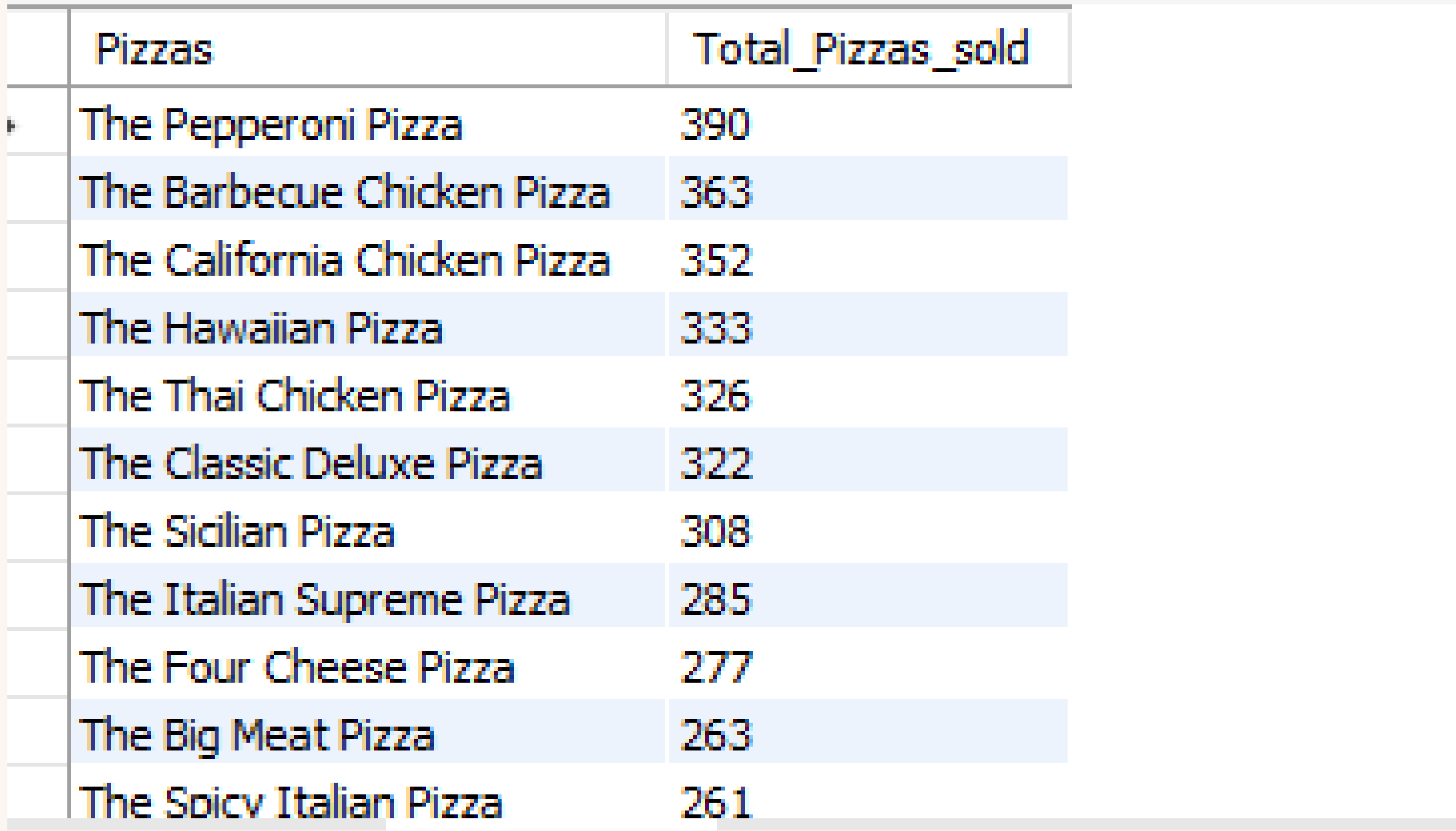
4.Find the total number of pizzas sold per pizza type.

Query:



```
select pt.name as Pizzas , sum(od.pizza_quantity) as Total_Pizzas_sold from pizza_types as pt
join pizzas as p on pt.pizza_type_id = p.pizza_type_id
join order_details as od on p.pizza_id =od.pizza_id
group by pt.name
order by Total_Pizzas_sold desc;
```

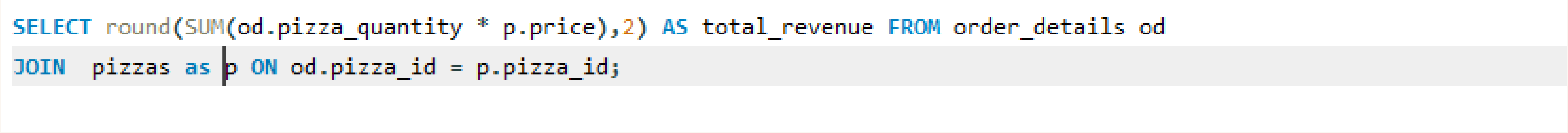
Output:



Pizzas	Total_Pizzas_sold
The Pepperoni Pizza	390
The Barbecue Chicken Pizza	363
The California Chicken Pizza	352
The Hawaiian Pizza	333
The Thai Chicken Pizza	326
The Classic Deluxe Pizza	322
The Sicilian Pizza	308
The Italian Supreme Pizza	285
The Four Cheese Pizza	277
The Big Meat Pizza	263
The Spicy Italian Pizza	261

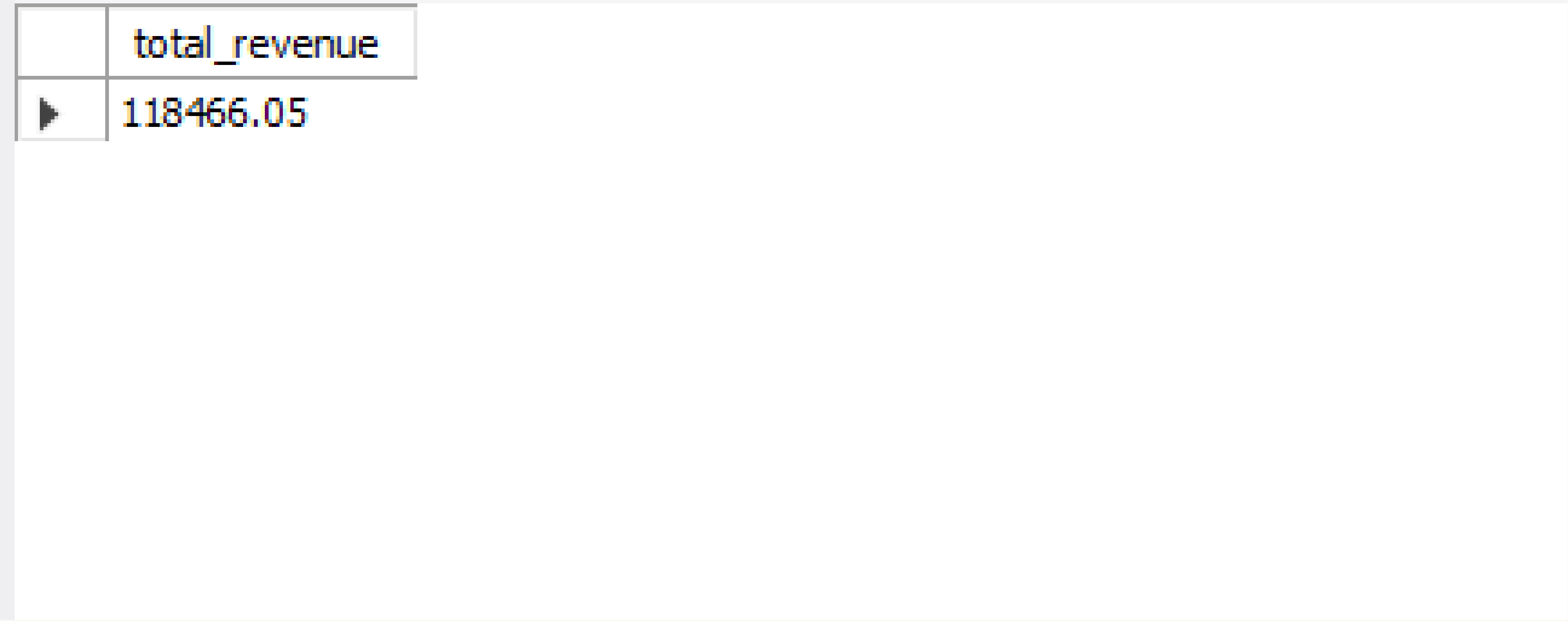
5.Calculate the total revenue generated from all orders.

Query:



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

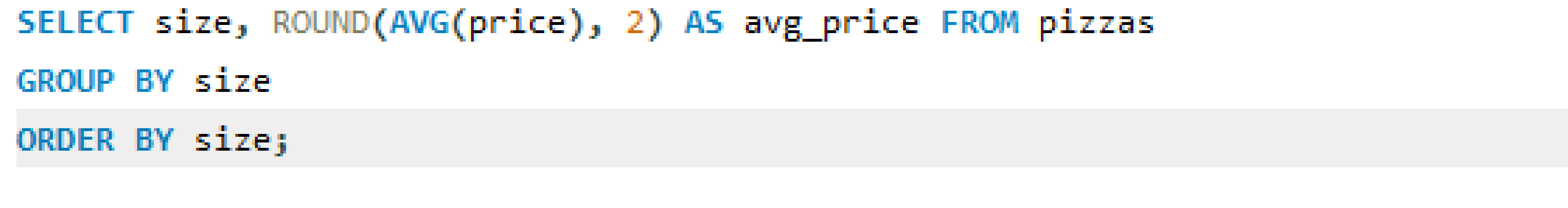
Output:



total_revenue
118466.05

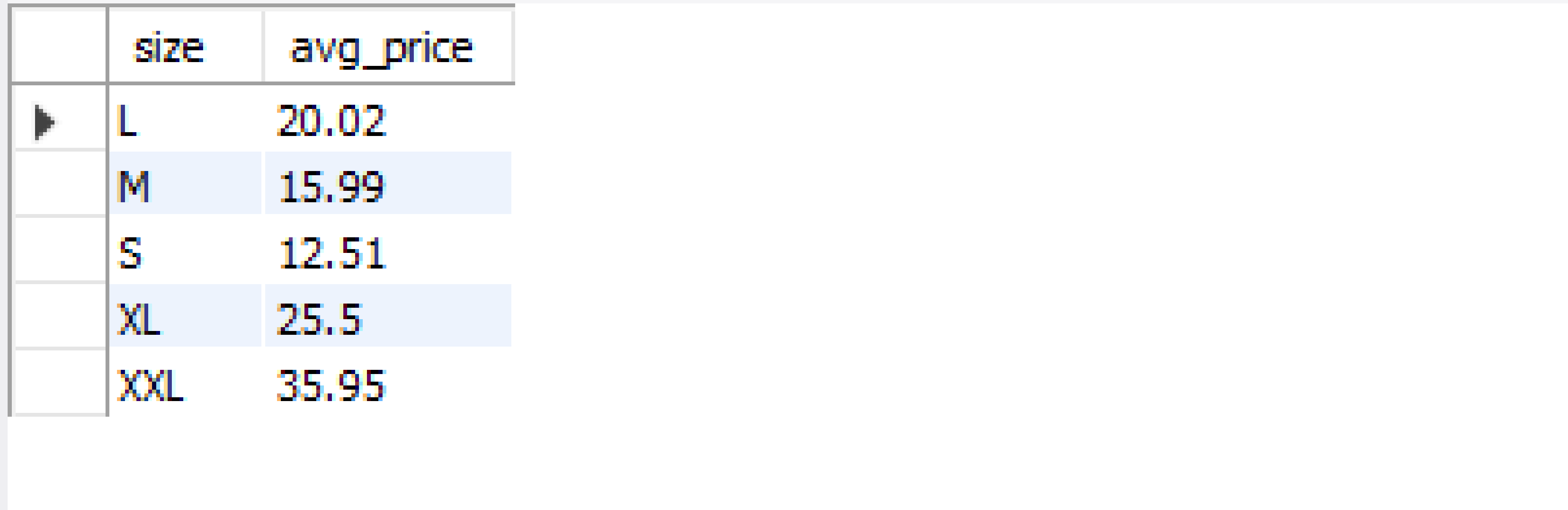
6.Find the average price of pizzas for each size category.

Query:



```
SELECT size, ROUND(AVG(price), 2) AS avg_price FROM pizzas
GROUP BY size
ORDER BY size;
```

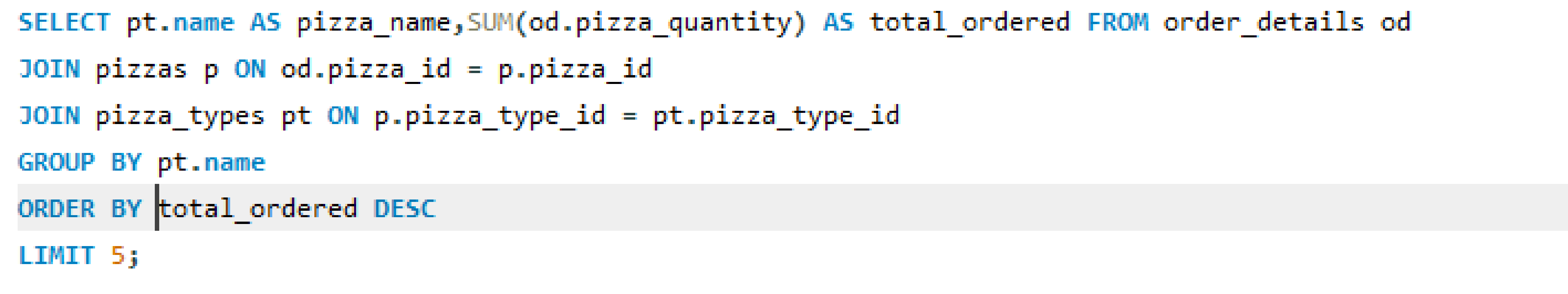
Output:



size	avg_price
L	20.02
M	15.99
S	12.51
XL	25.5
XXL	35.95

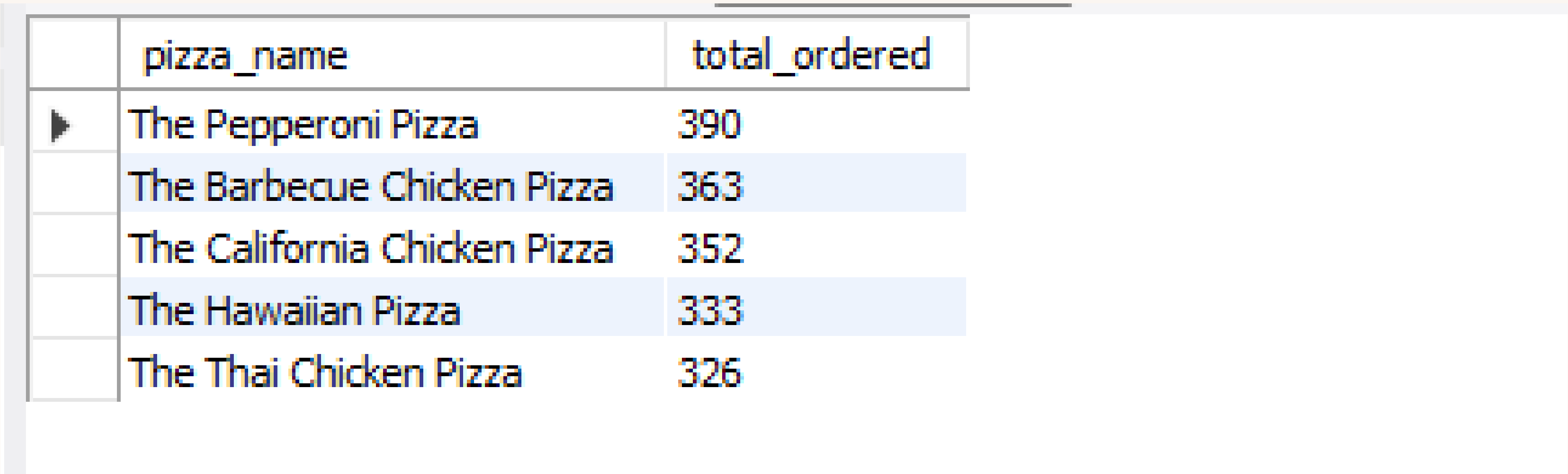
7.List the top 5 most frequently ordered pizzas.

Query:



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

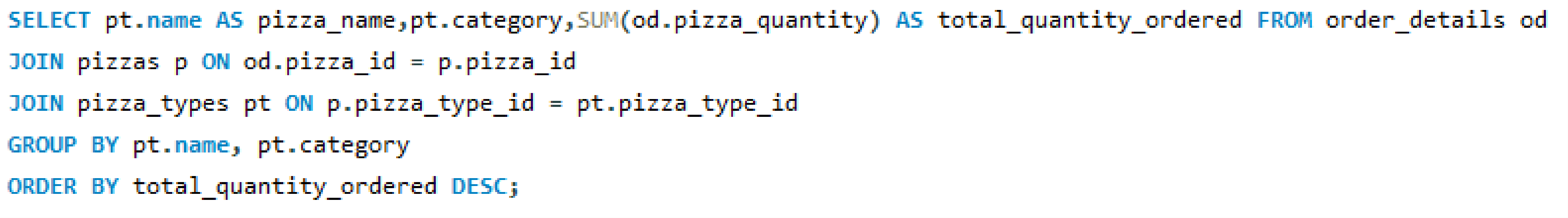
Output:



pizza_name	total_ordered
The Pepperoni Pizza	390
The Barbecue Chicken Pizza	363
The California Chicken Pizza	352
The Hawaiian Pizza	333
The Thai Chicken Pizza	326

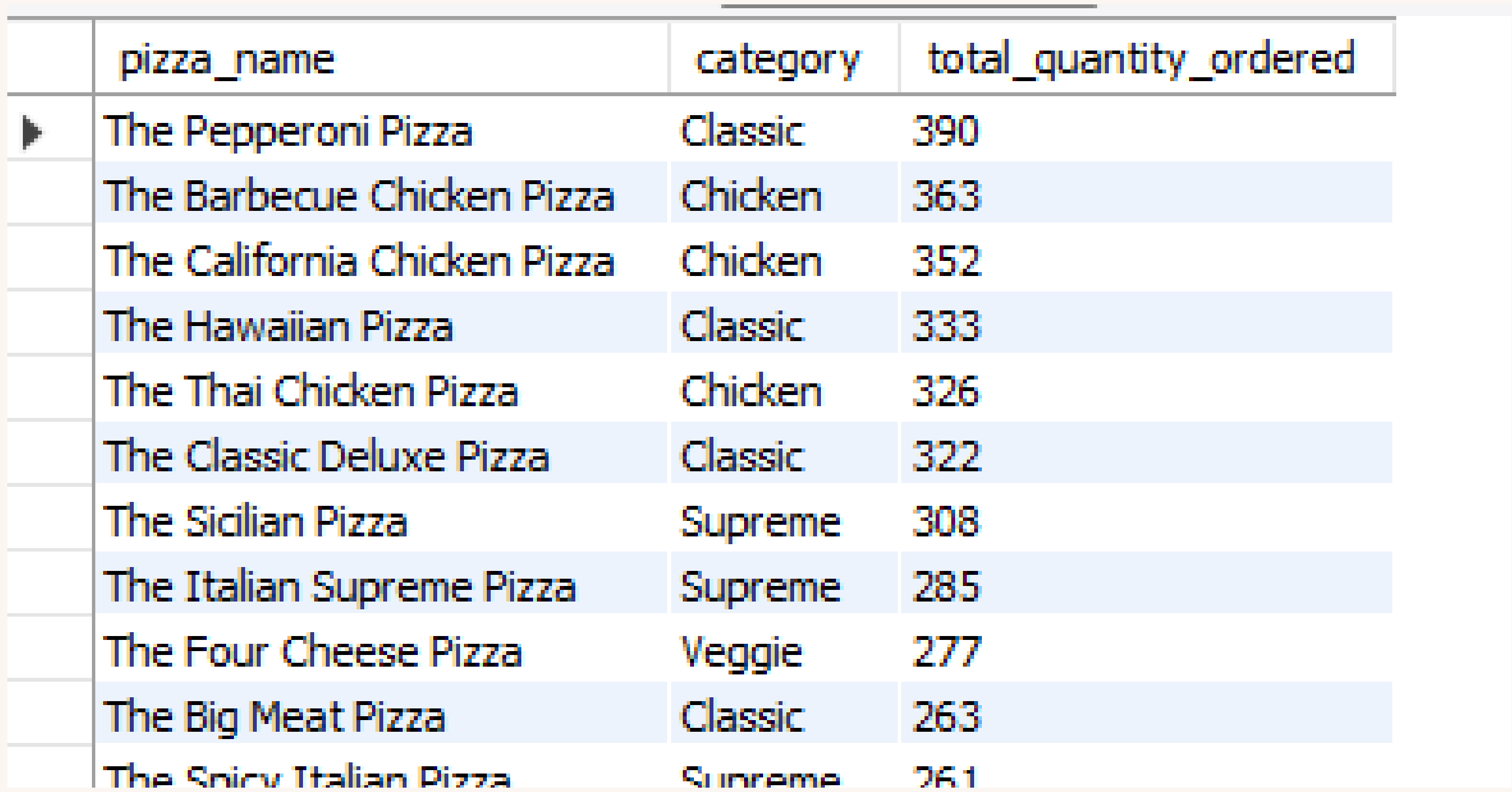
8.Find the total quantity of each pizza ordered along with the pizza name and category.

Query:



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

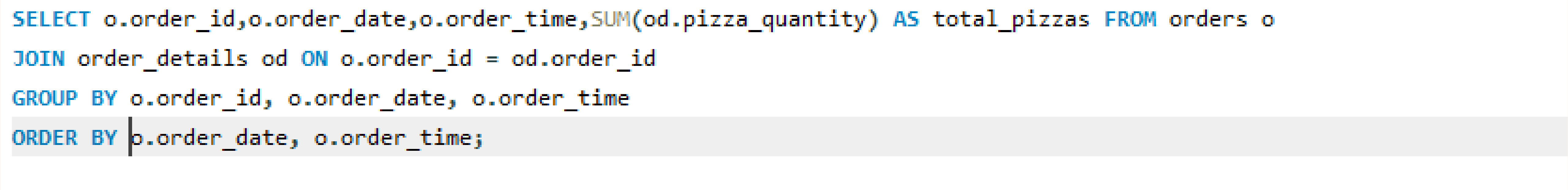
Output:



pizza_name	category	total_quantity_ordered
The Pepperoni Pizza	Classic	390
The Barbecue Chicken Pizza	Chicken	363
The California Chicken Pizza	Chicken	352
The Hawaiian Pizza	Classic	333
The Thai Chicken Pizza	Chicken	326
The Classic Deluxe Pizza	Classic	322
The Sicilian Pizza	Supreme	308
The Italian Supreme Pizza	Supreme	285
The Four Cheese Pizza	Veggie	277
The Big Meat Pizza	Classic	263
The Spicy Italian Pizza	Supreme	261

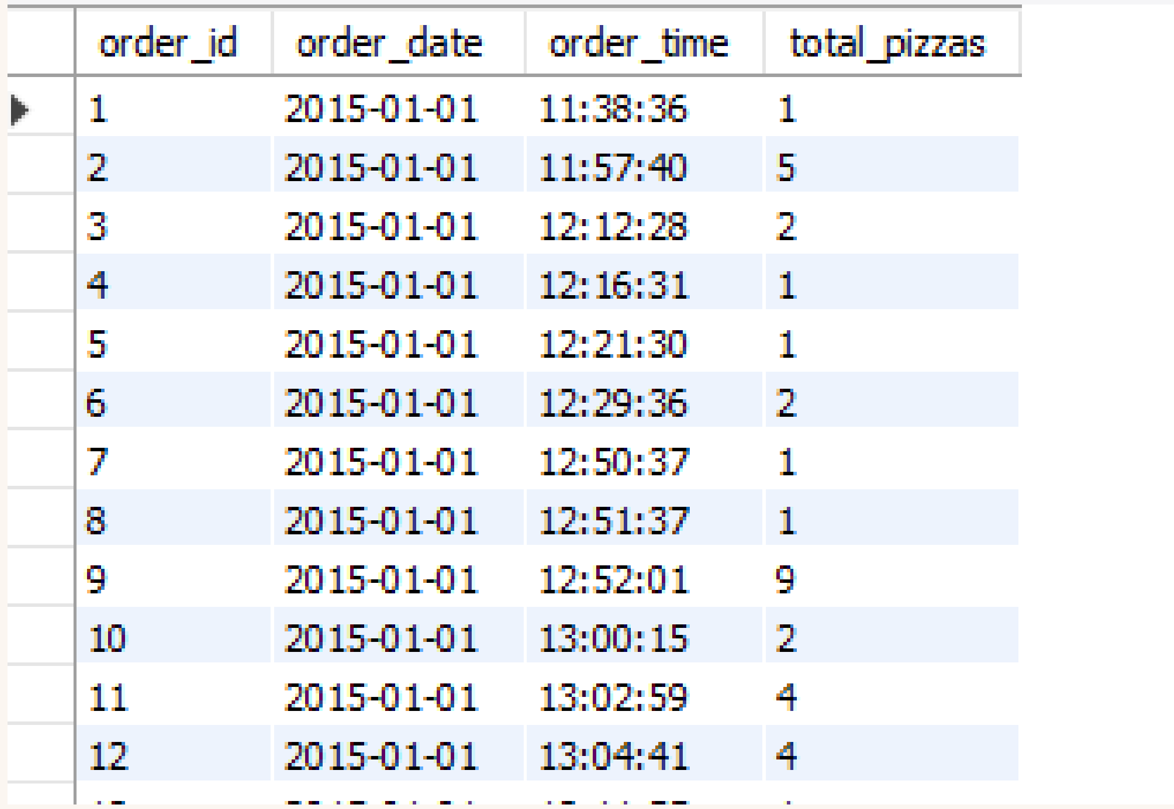
9.List all orders with the order date, time, and the total number of pizzas in each order.

Query:



```
SELECT o.order_id,o.order_date,o.order_time,SUM(od.pizza_quantity) AS total_pizzas FROM orders o
JOIN order_details od ON o.order_id = od.order_id
GROUP BY o.order_id, o.order_date, o.order_time
ORDER BY o.order_date, o.order_time;
```

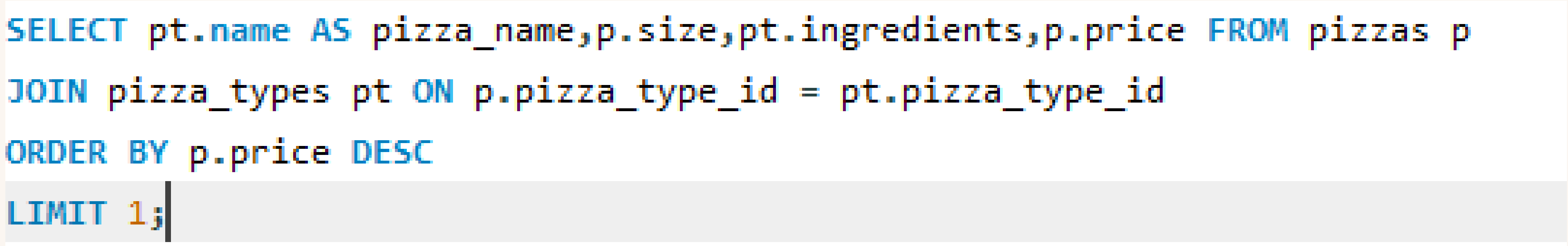
Output:



order_id	order_date	order_time	total_pizzas
1	2015-01-01	11:38:36	1
2	2015-01-01	11:57:40	5
3	2015-01-01	12:12:28	2
4	2015-01-01	12:16:31	1
5	2015-01-01	12:21:30	1
6	2015-01-01	12:29:36	2
7	2015-01-01	12:50:37	1
8	2015-01-01	12:51:37	1
9	2015-01-01	12:52:01	9
10	2015-01-01	13:00:15	2
11	2015-01-01	13:02:59	4
12	2015-01-01	13:04:41	4

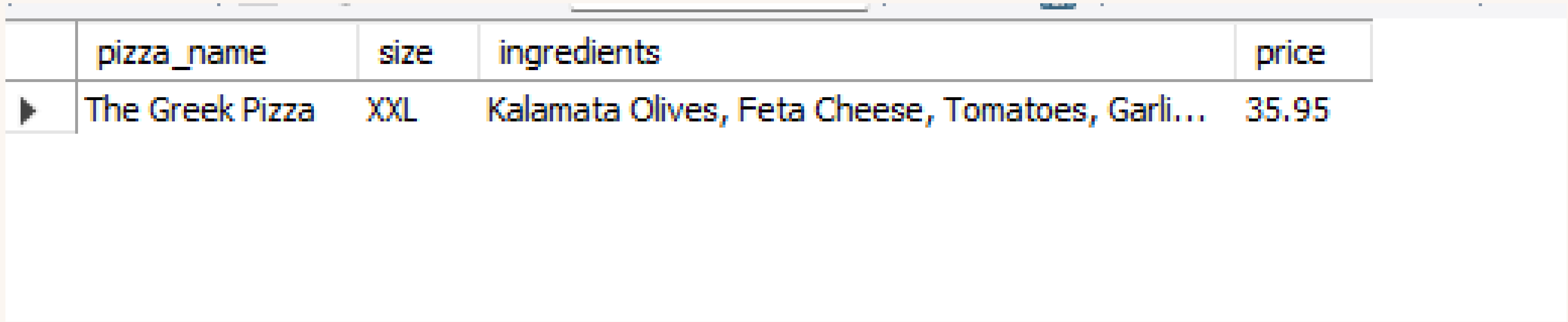
10.Retrieve details of the most expensive pizza(s) including its name, size, and ingredients.

Query:



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

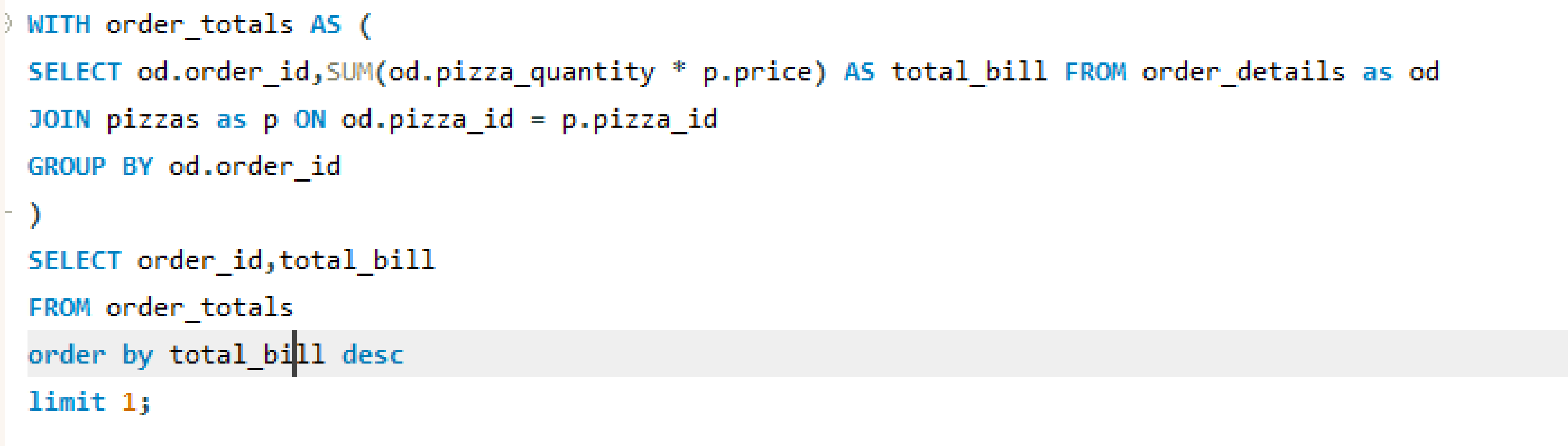
Output:



pizza_name	size	ingredients	price
The Greek Pizza	XXL	Kalamata Olives, Feta Cheese, Tomatoes, Garli...	35.95

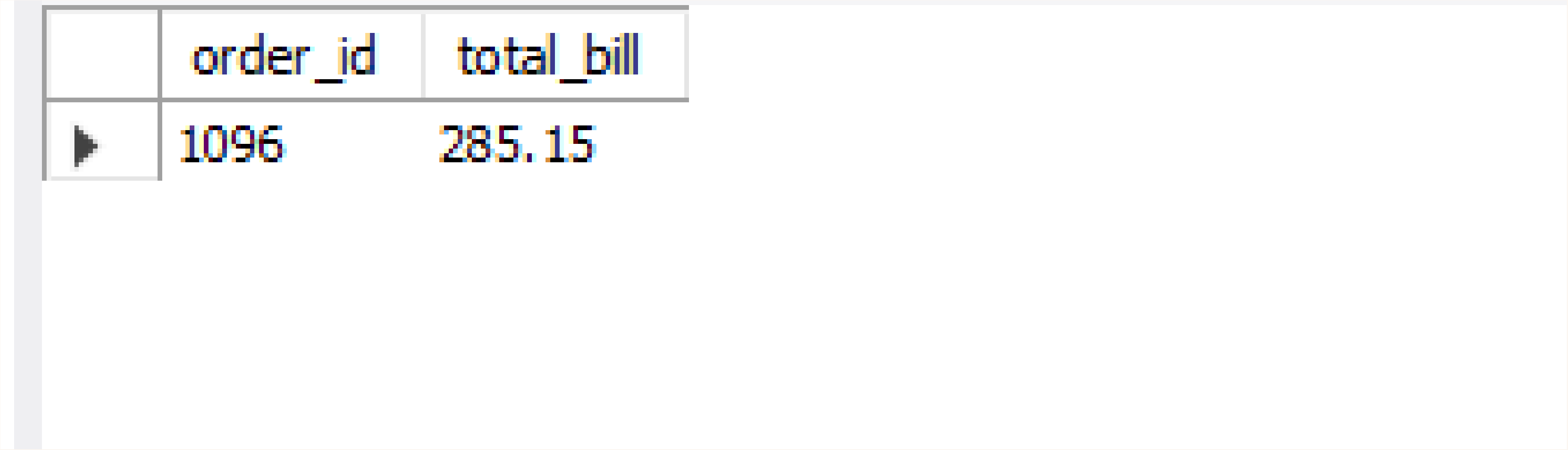
11.Find the order with the highest total bill value.

Query:



```
WITH order_totals AS (
SELECT od.order_id,SUM(od.pizza_quantity * p.price) AS total_bill FROM order_details as od
JOIN pizzas as p ON od.pizza_id = p.pizza_id
GROUP BY od.order_id
)
SELECT order_id,total_bill
FROM order_totals
order by total_bill desc
limit 1;
```

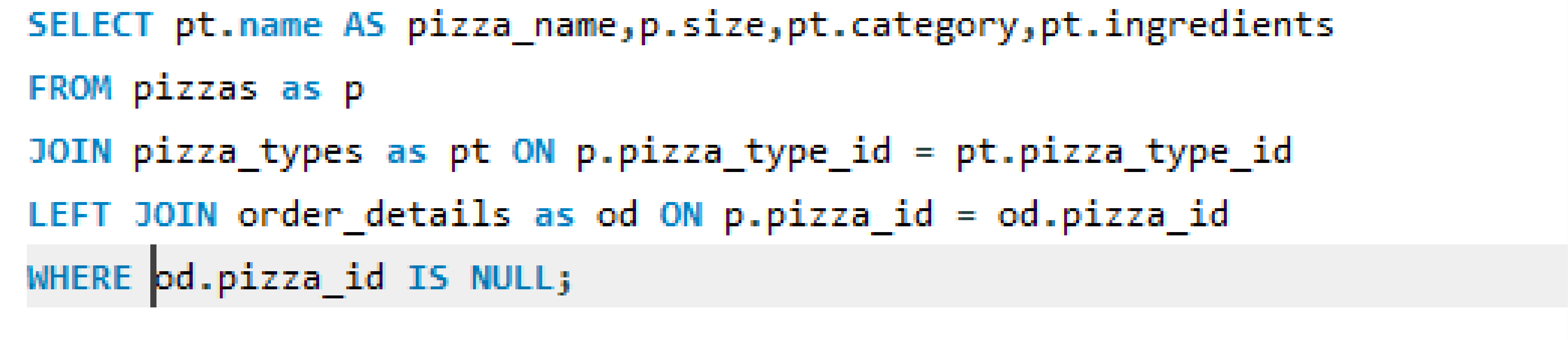
Output:



	order_id	total_bill
▶	1096	285.15

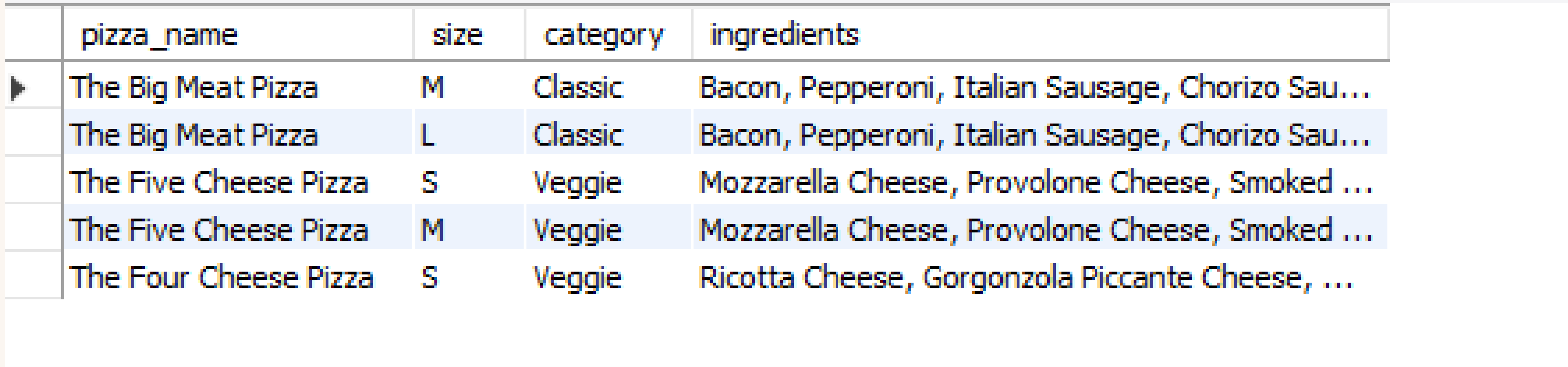
12.List all pizzas that have never been ordered.

Query:



```
SELECT pt.name AS pizza_name,p.size,pt.category,pt.ingredients
FROM pizzas as p
JOIN pizza_types as pt ON p.pizza_type_id = pt.pizza_type_id
LEFT JOIN order_details as od ON p.pizza_id = od.pizza_id
WHERE od.pizza_id IS NULL;
```

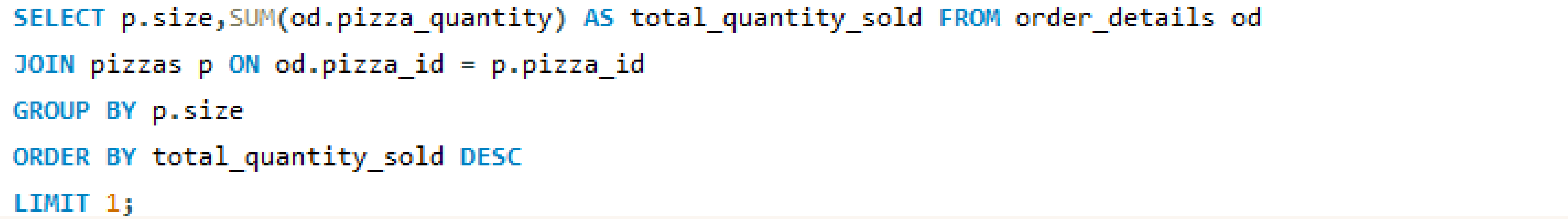
Output:



	pizza_name	size	category	ingredients
▶	The Big Meat Pizza	M	Classic	Bacon, Pepperoni, Italian Sausage, Chorizo Sau...
	The Big Meat Pizza	L	Classic	Bacon, Pepperoni, Italian Sausage, Chorizo Sau...
	The Five Cheese Pizza	S	Veggie	Mozzarella Cheese, Provolone Cheese, Smoked ...
	The Five Cheese Pizza	M	Veggie	Mozzarella Cheese, Provolone Cheese, Smoked ...
	The Four Cheese Pizza	S	Veggie	Ricotta Cheese, Gorgonzola Piccante Cheese, ...

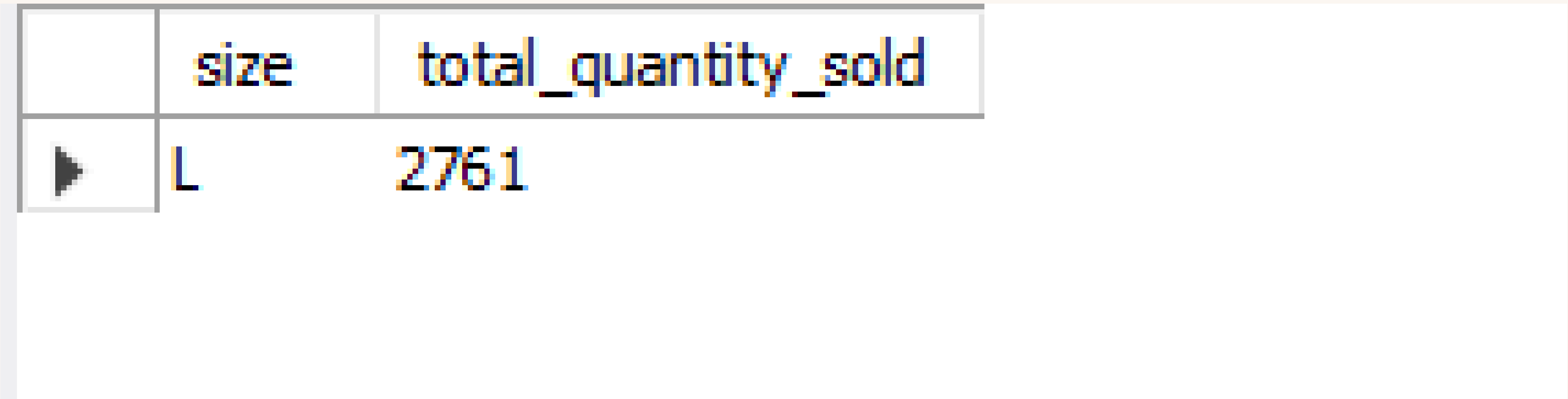
13.Identify the most popular pizza size based on total sales quantity.

Query:



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

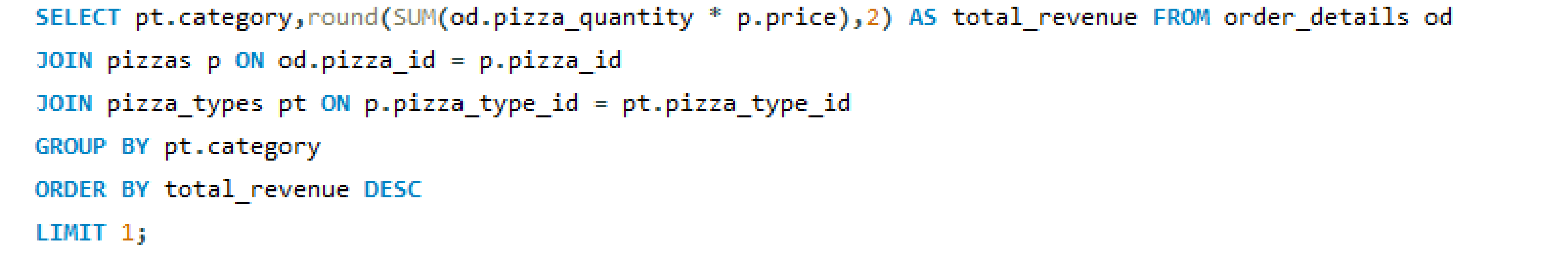
Output:



size	total_quantity_sold
L	2761

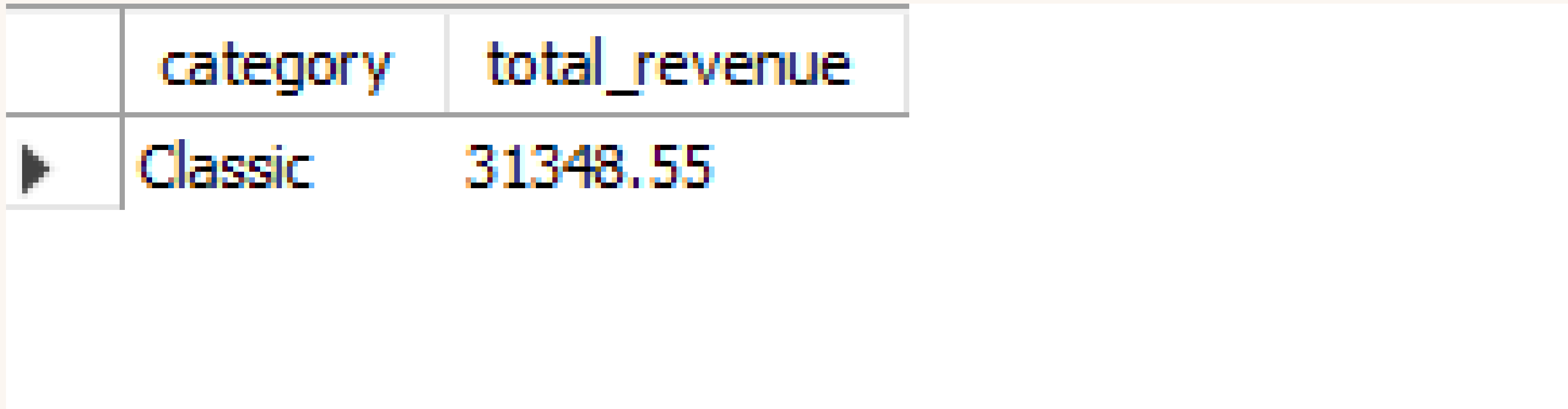
14.Which pizza category (e.g., Classic, Supreme) generated the highest total revenue?

Query:



```
SELECT pt.category,round(SUM(od.pizza_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 p.pizza_type_id = pt.pizza_type_id
GROUP BY pt.category
ORDER BY total_revenue DESC
LIMIT 1;
```

Output:



	category	total_revenue
▶	Classic	31348.55