Pizza Sales Project

This project analyzes pizza sales data to gain insights into customer preferences, sales trends, and opportunities for optimization.

by Bhaskar Singh

Exploratory Data Analysis

1 **Sales Volume**

We examine the overall sales volume to understand the popularity of different pizza types, sizes, and toppings.

2 **Order Frequency**

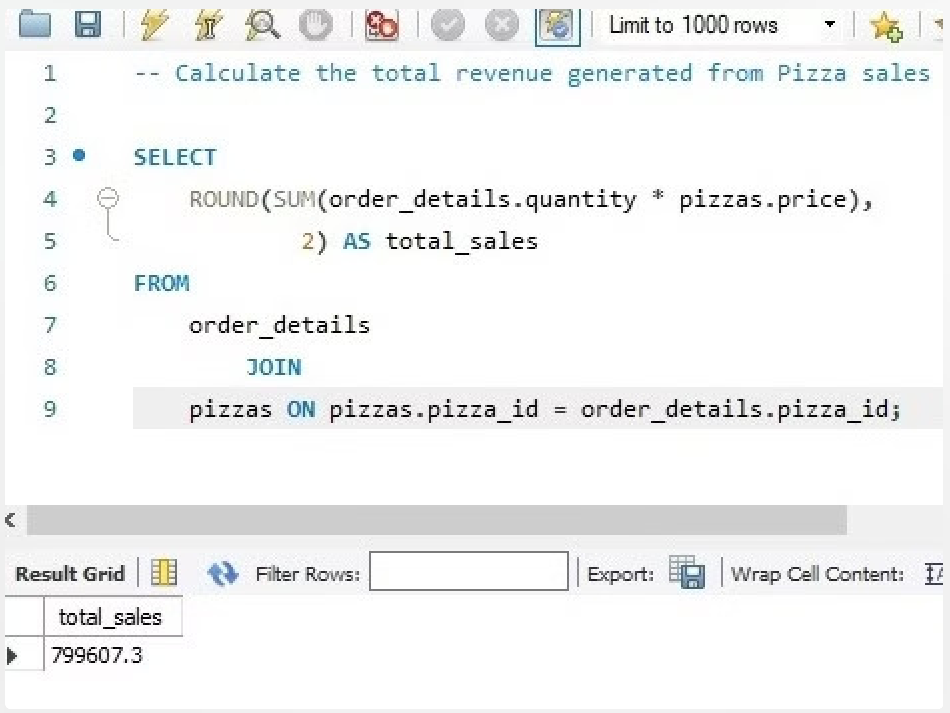
We explore patterns in customer order frequency, such as peak hours, days of the week, and seasonal variations.

3 **Sales Trends**

We investigate trends in sales over time to identify growth opportunities and potential challenges.

Pizza Sales Analysis

Overall Revenue



```
-- 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
799607.3
```

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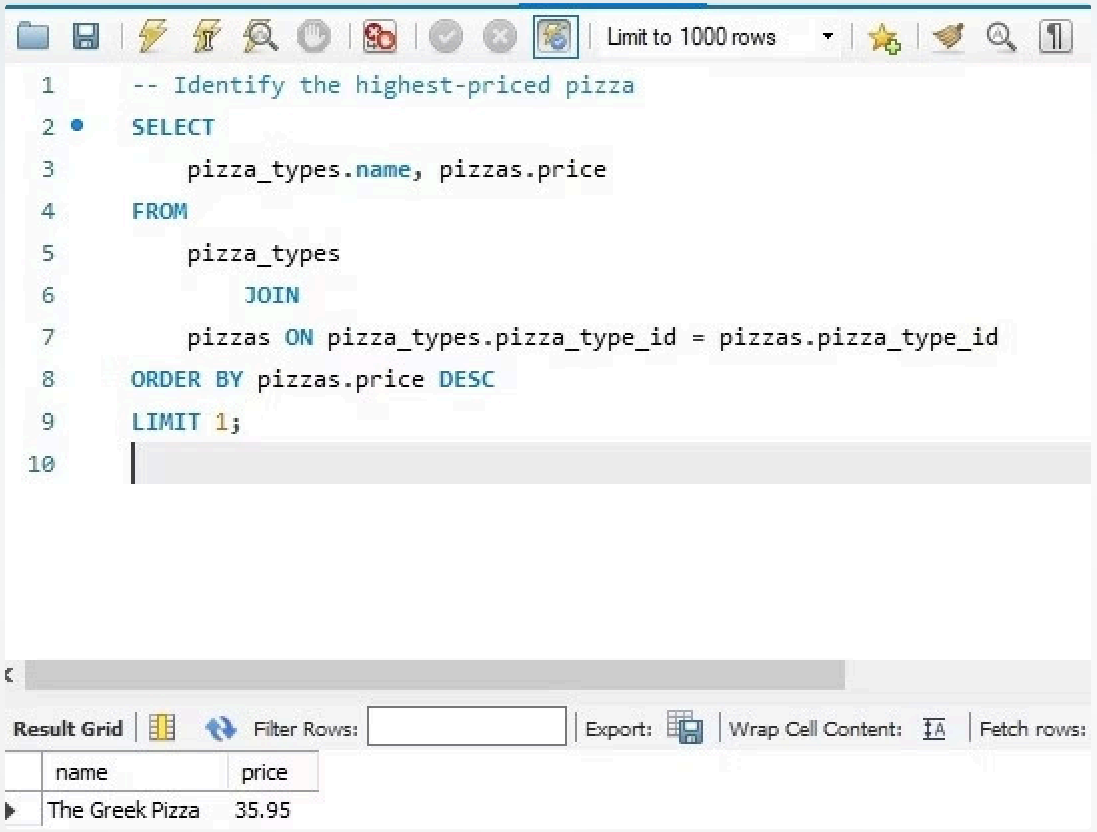
Pizza Sales Analysis

Highest priced Pizza



```sql
-- 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

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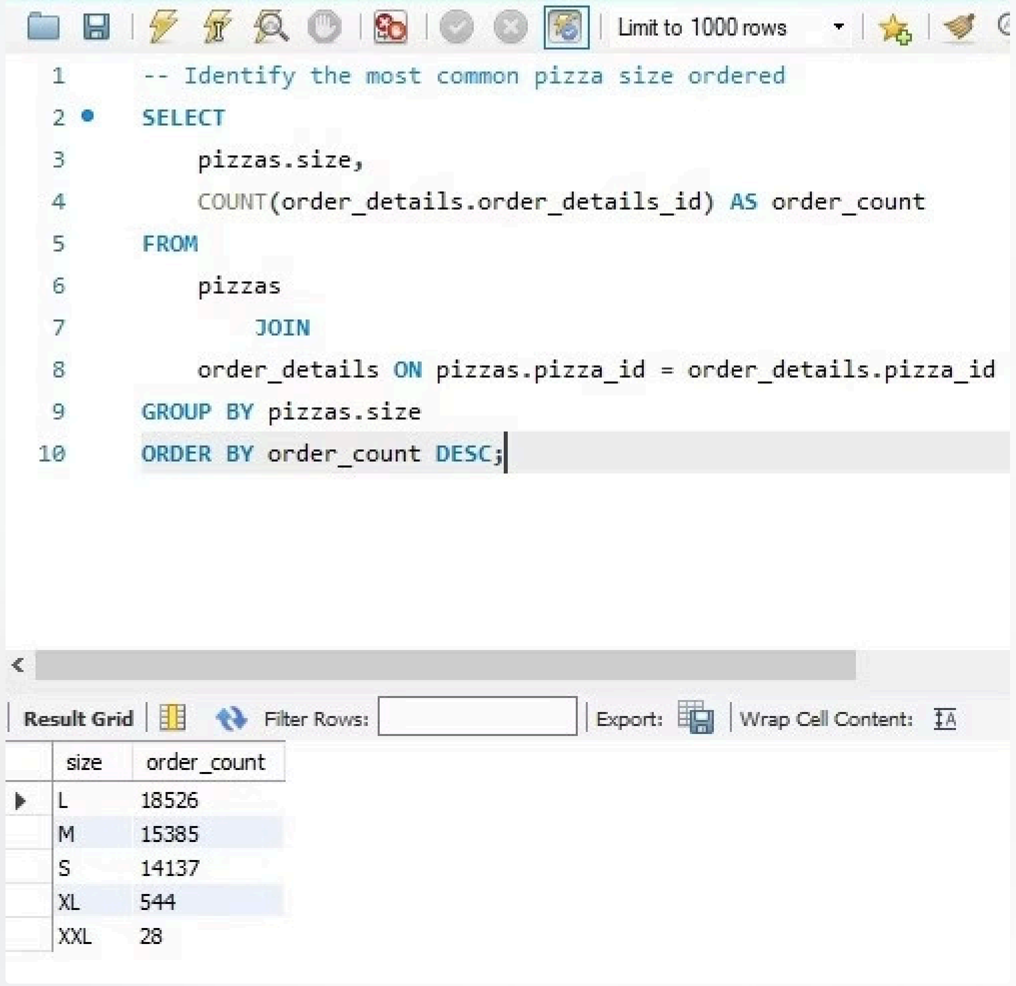
Pizza Sales Analysis

Most Common pizza size ordered

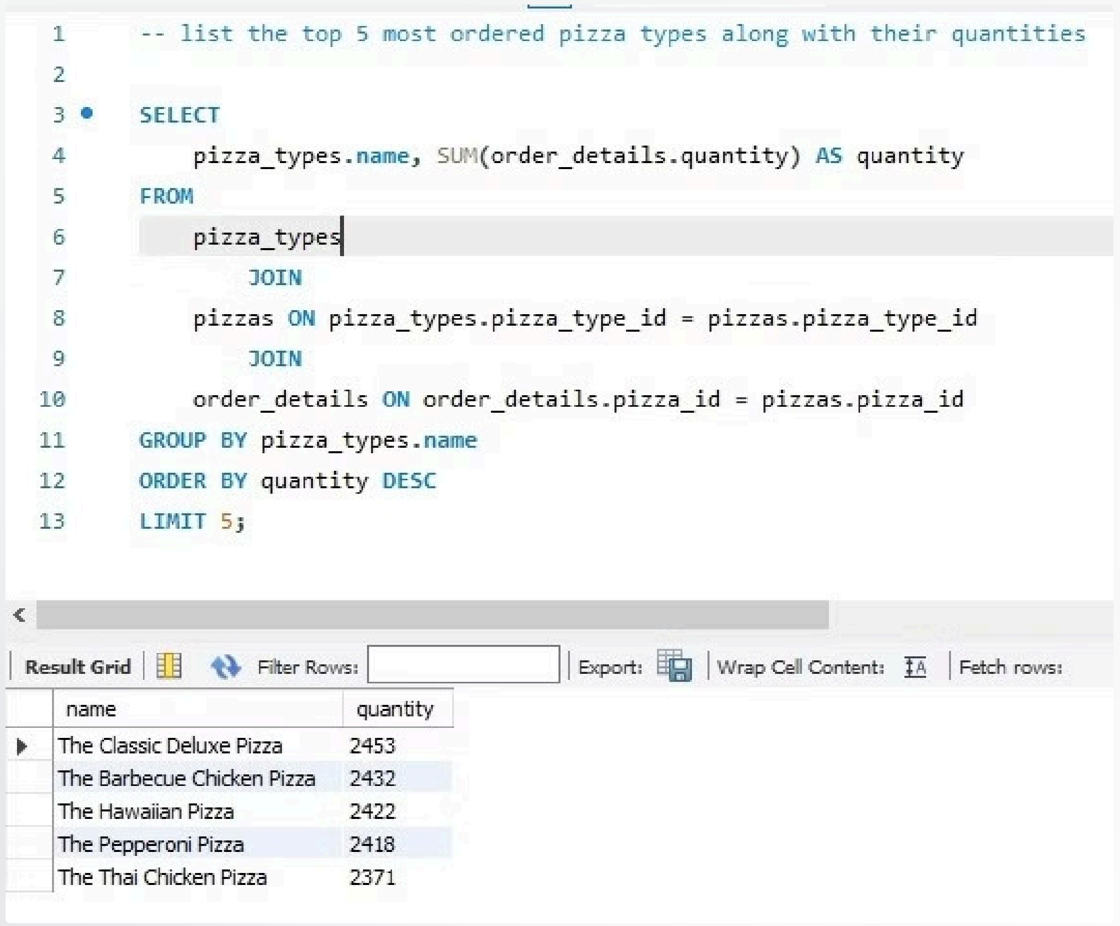


```sql
-- Identify the most common pizza size ordered
SELECT
    pizzas.size,
    COUNT(order_details.order_details_id) AS order_count
FROM
    pizzas
        JOIN
    order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY pizzas.size
ORDER BY order_count DESC;
```

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

Pizza Sales Analysis

Top 5 most ordered pizza types with their quantities



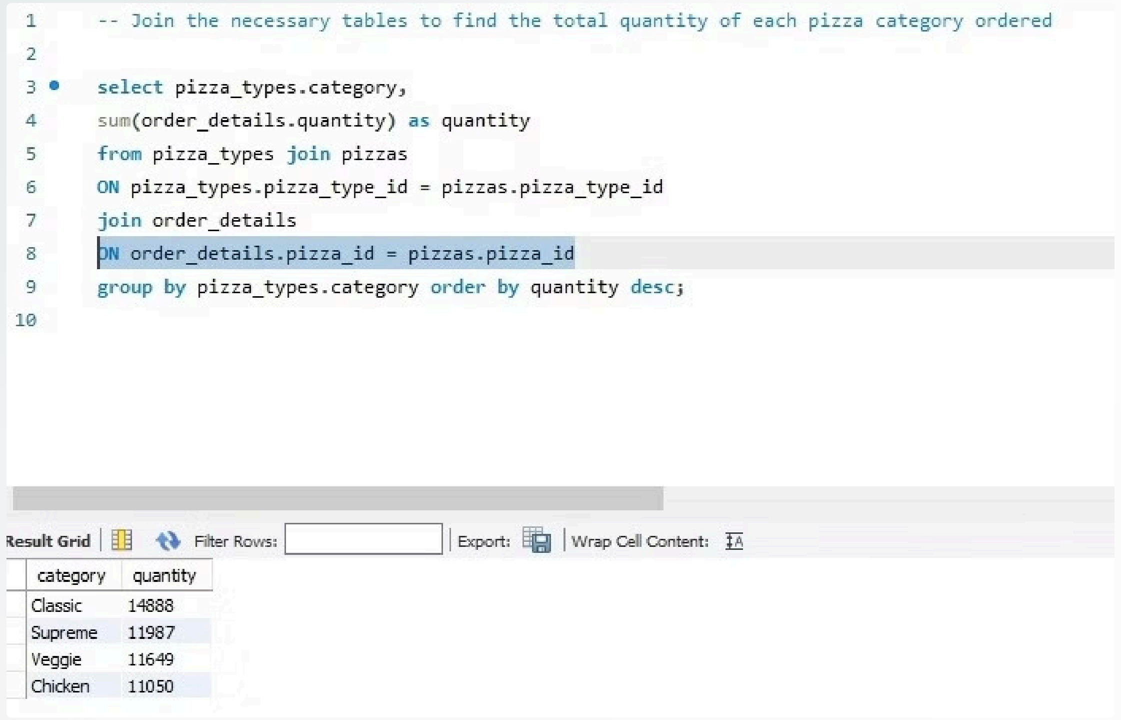
```
-- list the top 5 most ordered pizza types along with their quantities

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

Pizza Sales Analysis

Total quantity of each pizza category ordered



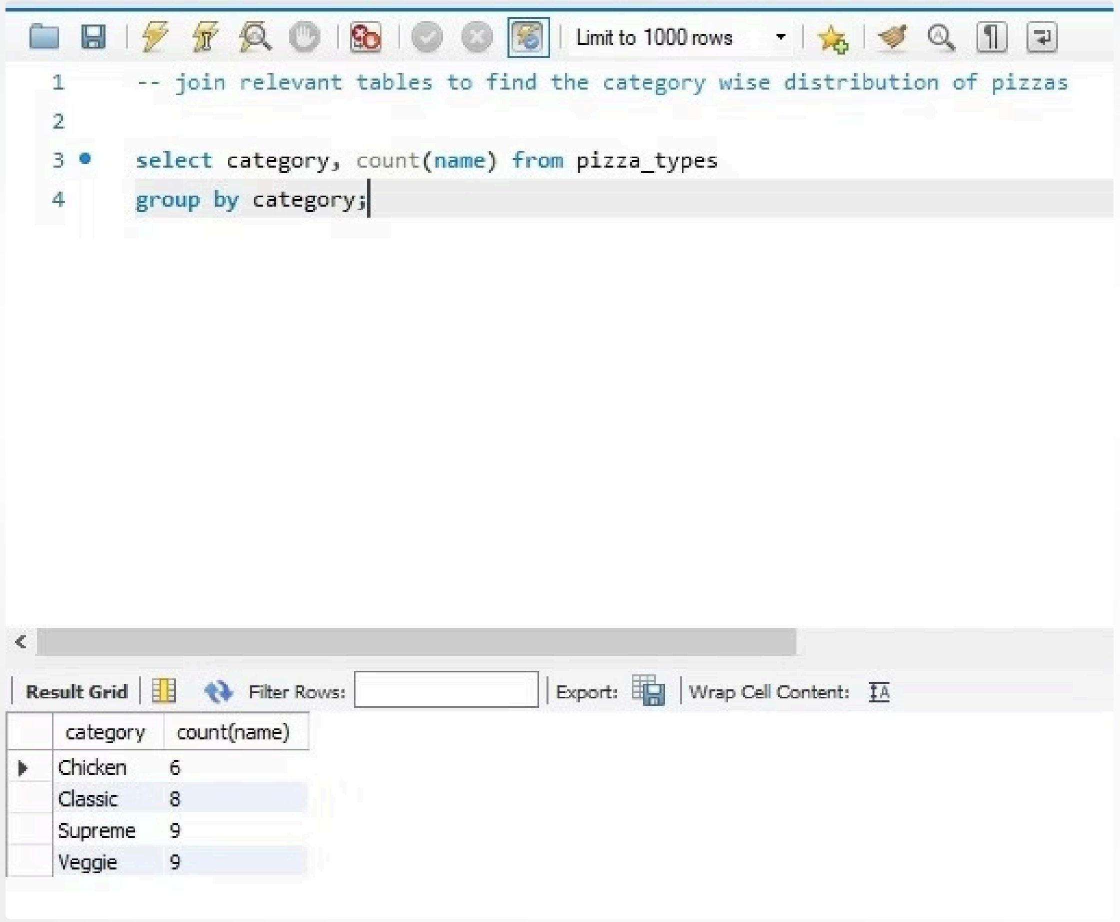
```sql
-- Join the necessary tables to find the total quantity of each pizza category ordered

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

Pizza Sales Analysis

Category wise distribution of pizzas



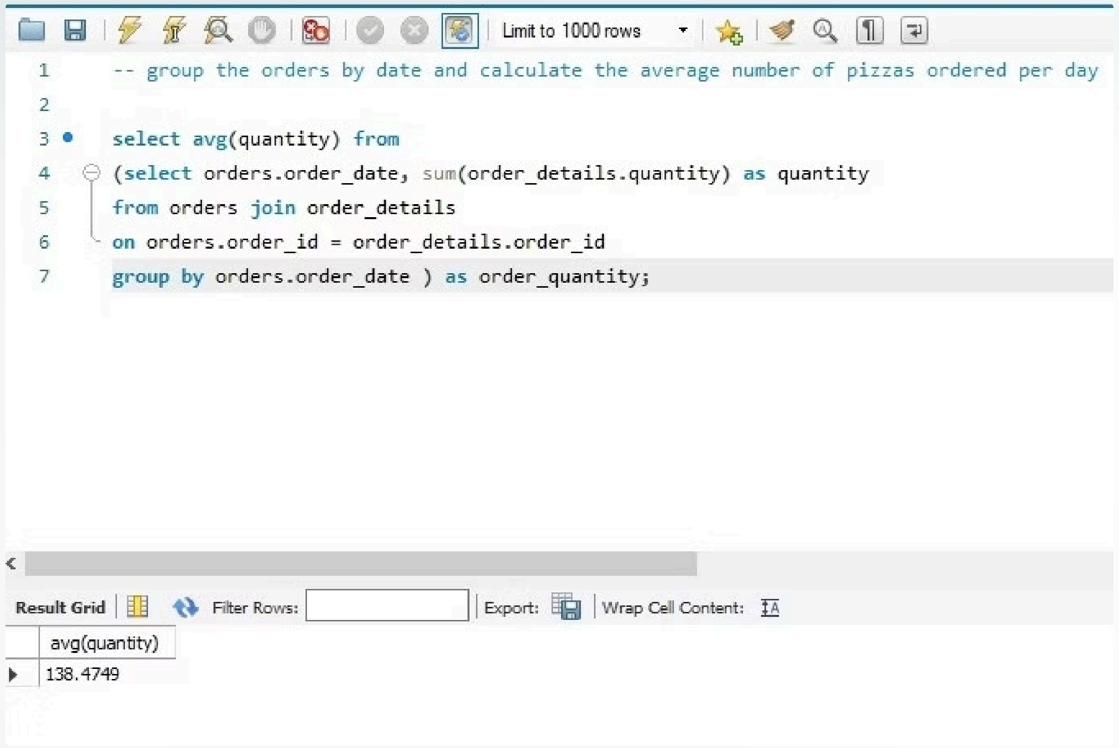
```
-- join relevant tables to find the category wise distribution of pizzas

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

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

Pizza Sales Analysis

Average number of Pizzas ordered per day



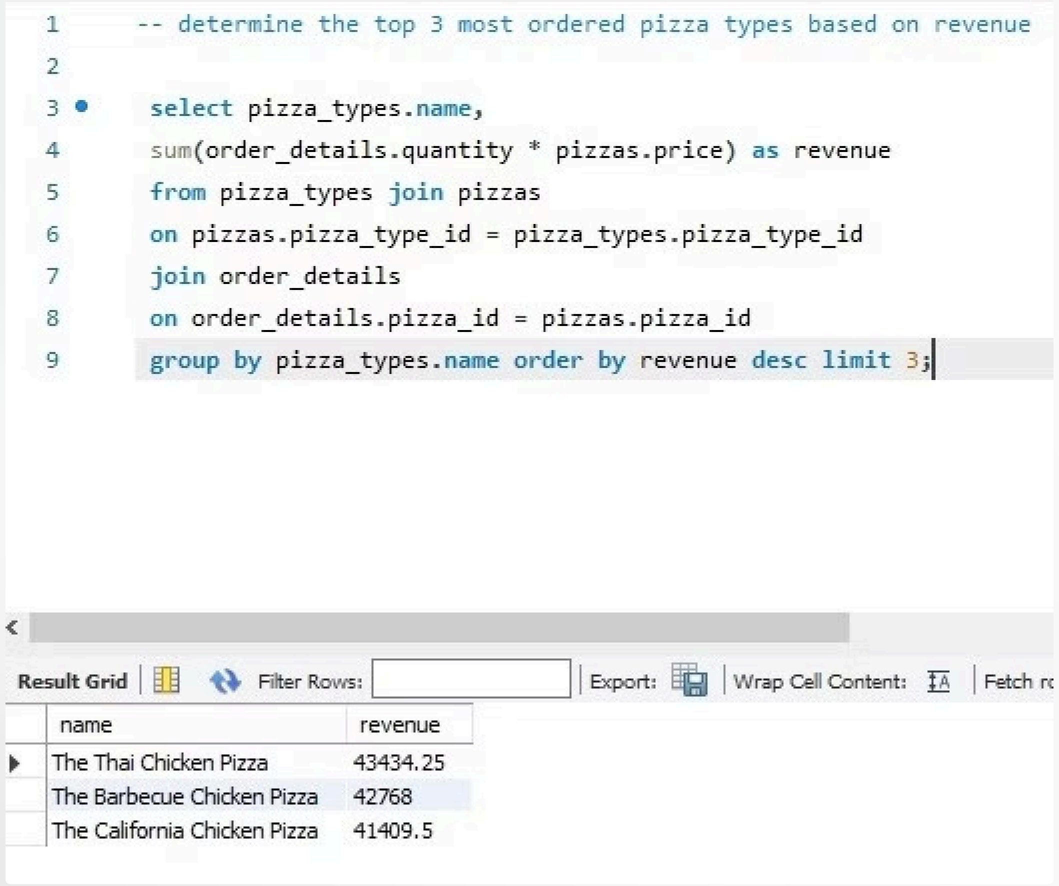
```sql
-- group the orders by date and calculate the average number of pizzas ordered per day

select avg(quantity) 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(quantity)
138.4749
```

Pizza Sales Analysis

3 most ordered pizza types based on revenue



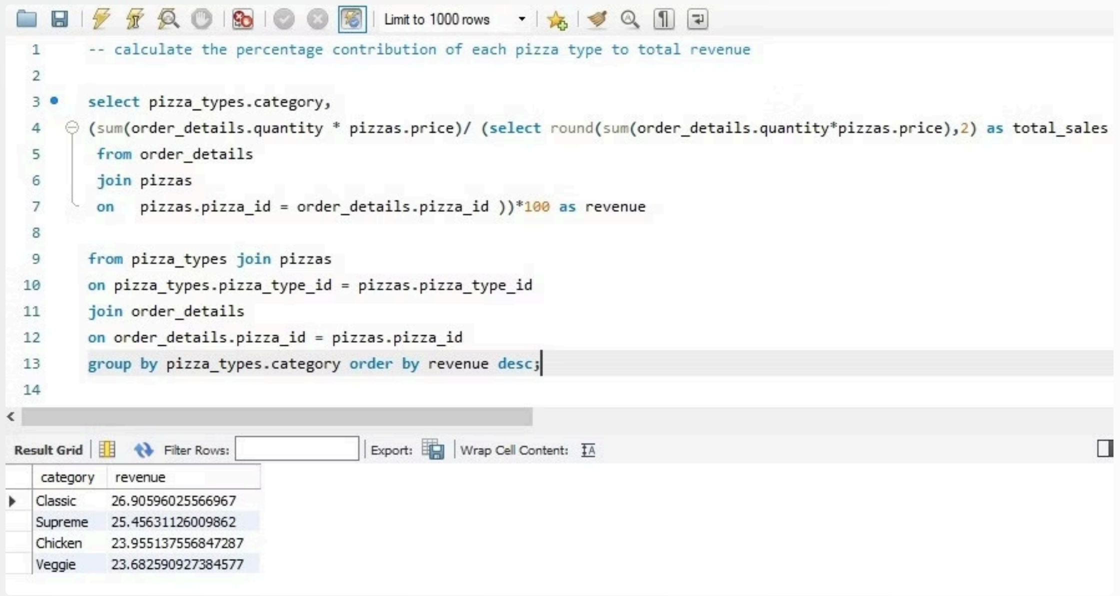
```sql
-- determine the top 3 most ordered pizza types based on revenue

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 3;
```

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

Pizza Sales Analysis

Percentage contribution of each pizza type to total revenue


Limit to 1000 rows

```sql
-- calculate the percentage contribution of each pizza type to total revenue

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;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

```
category  revenue
Classic   26.90596025566967
Supreme   25.45631126009862
Chicken   23.955137556847287
Veggie    23.682590927384577
```

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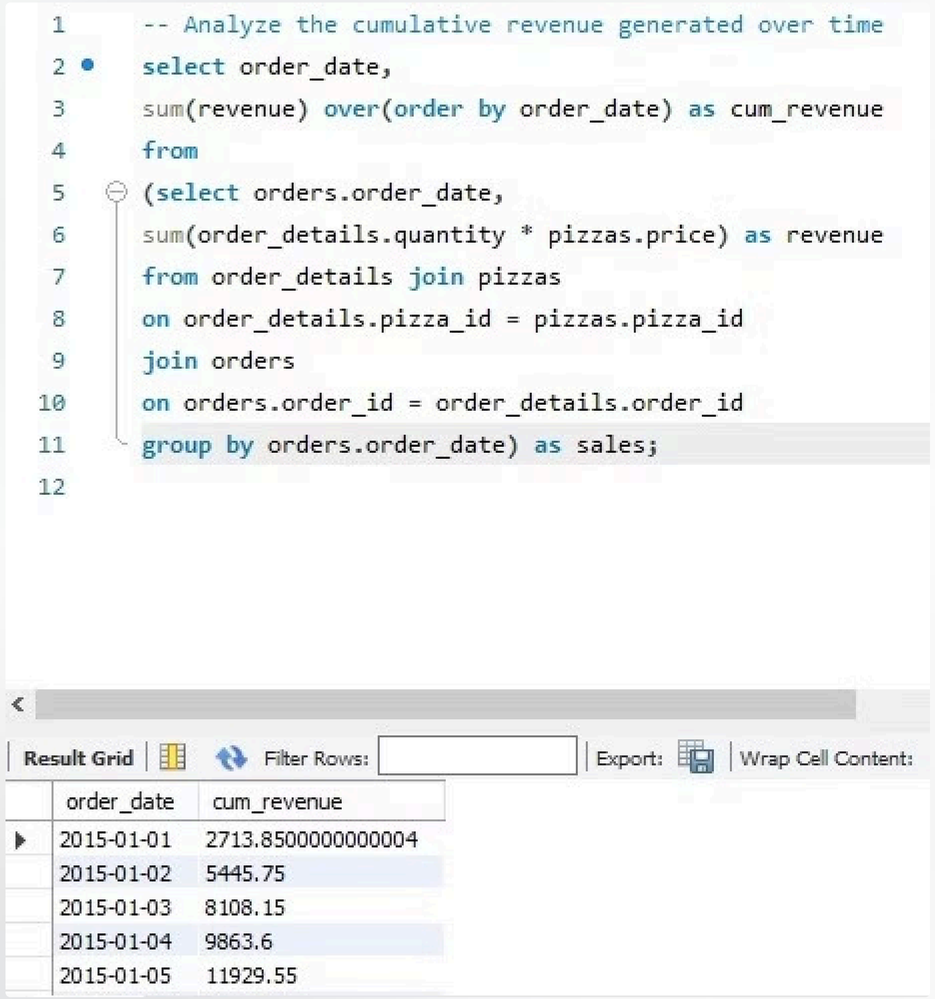
Pizza Sales Analysis

Cumulative revenue generated over time

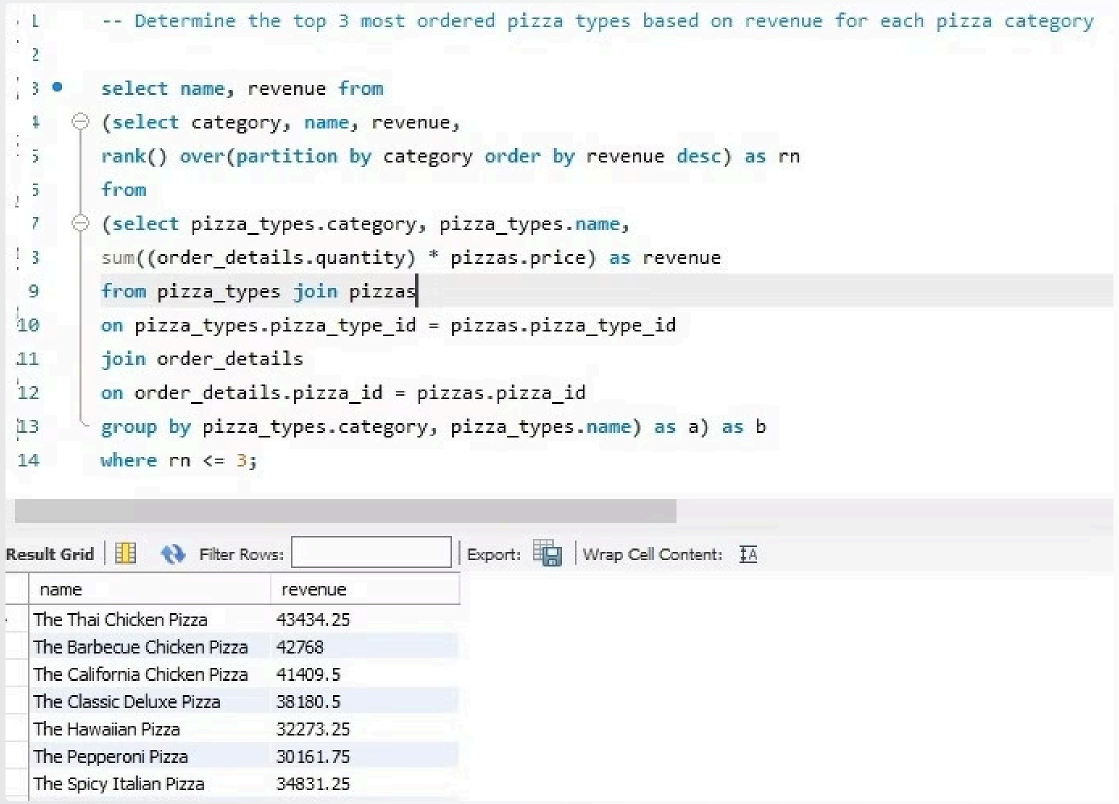


```sql
-- Analyze the cumulative revenue generated over time
select order_date,
sum(revenue) over(order by order_date) as cum_revenue
from
(select orders.order_date,
sum(order_details.quantity * pizzas.price) as revenue
from order_details join pizzas
on order_details.pizza_id = pizzas.pizza_id
join orders
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

Pizza Sales Analysis

Top 3 most ordered pizza types based on revenue for each pizza category



```sql
-- 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

Conclusion and Next Steps

This project provides valuable insights into pizza sales data, revealing customer preferences, sales trends, and areas for improvement. Future steps include incorporating real-time data, implementing inventory management strategies, and refining marketing campaigns for ongoing optimization.