SQL PROJECT
ON
PIZZA SALES ANALYSIS

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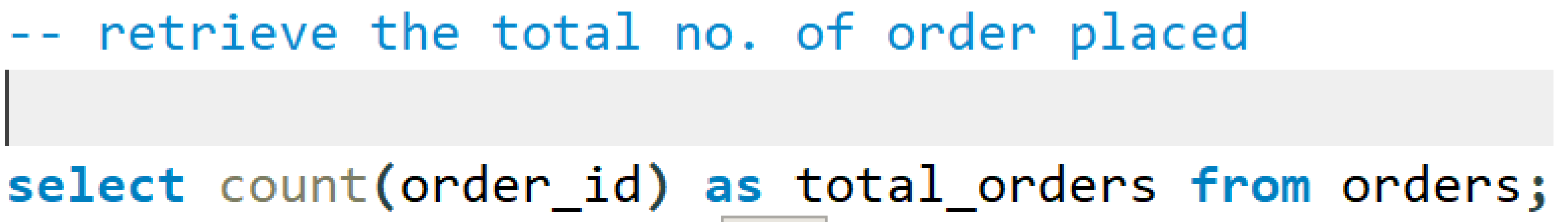
ABOUT PROJECT

"This project focuses on analyzing a pizza store's sales data to extract valuable business insights. Using advanced SQL techniques such as **joins**, **window functions**, **aggregate functions**, and **subqueries**, I was able to uncover trends in customer behavior, identify top-selling products, and assess the store's operational efficiency. This analysis helps in understanding sales patterns, peak order times, and customer preferences, which can inform better business decisions."

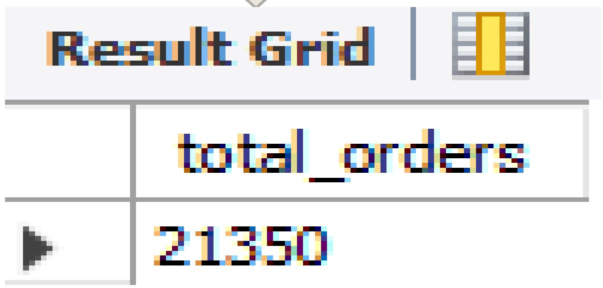
PROBLEMS

THE PROBLEMS ARE DIVIDED IN TO THREE PART WHICH ARE BASIC PROBLEM, INTERMEDIATE PROBLEM AND ADVANCED PROBLEM

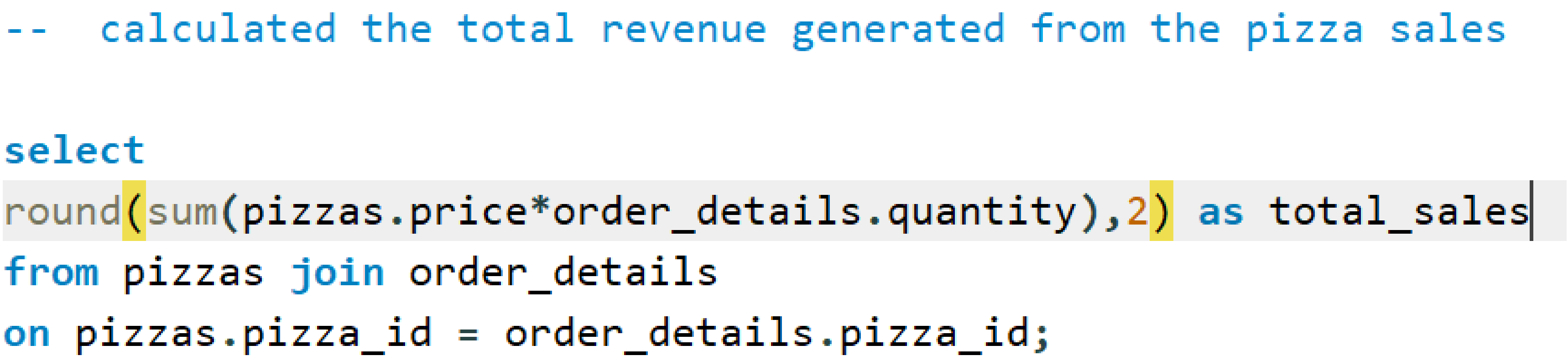
BASIC PROBLEMS and THEIR SOLUTIONS



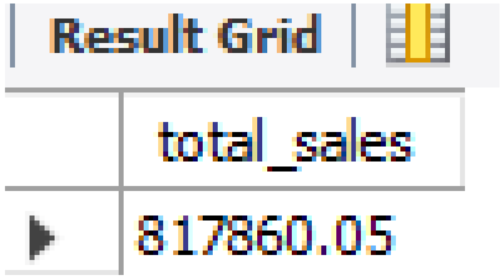
```
-- retrieve the total no. of order placed

select count(order_id) as total_orders from orders;
```



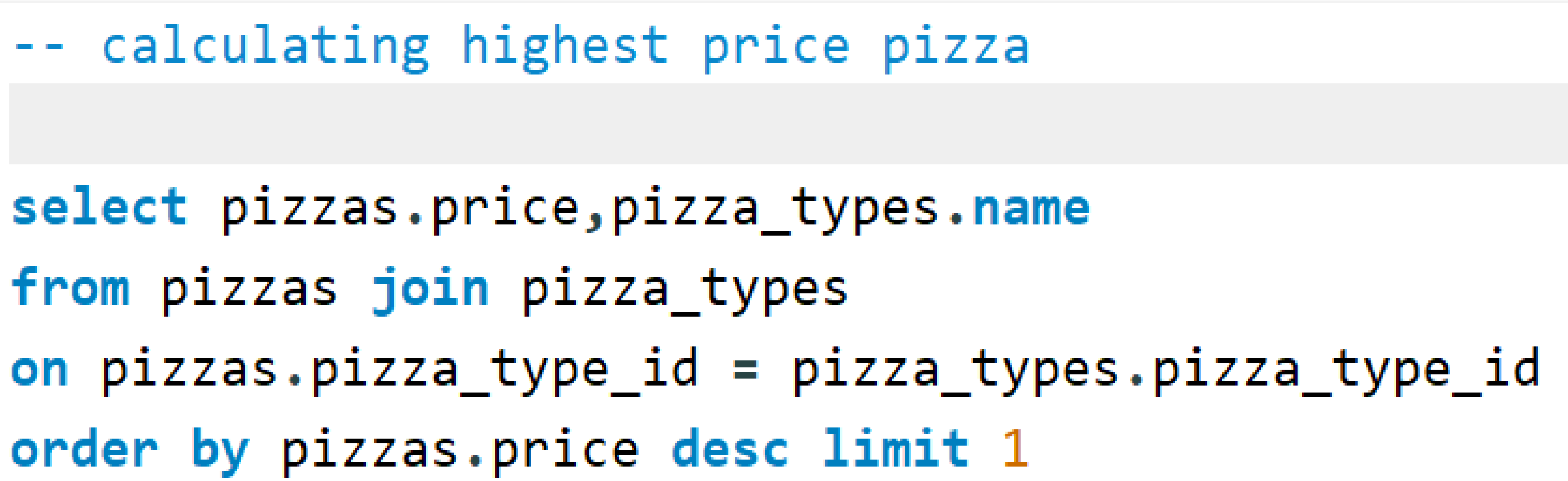
```
   total_orders
▶  21350
```



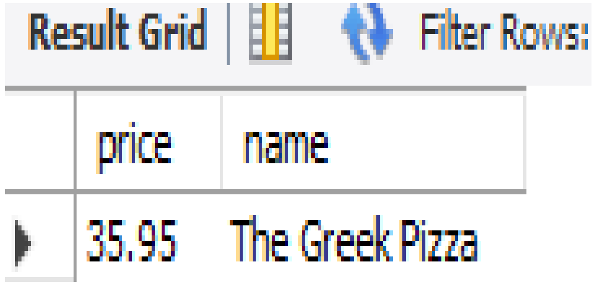
```sql
--  calculated the total revenue generated from the pizza sales

select
round(sum(pizzas.price*order_details.quantity),2) as total_sales
from pizzas join order_details
on pizzas.pizza_id = order_details.pizza_id;
```



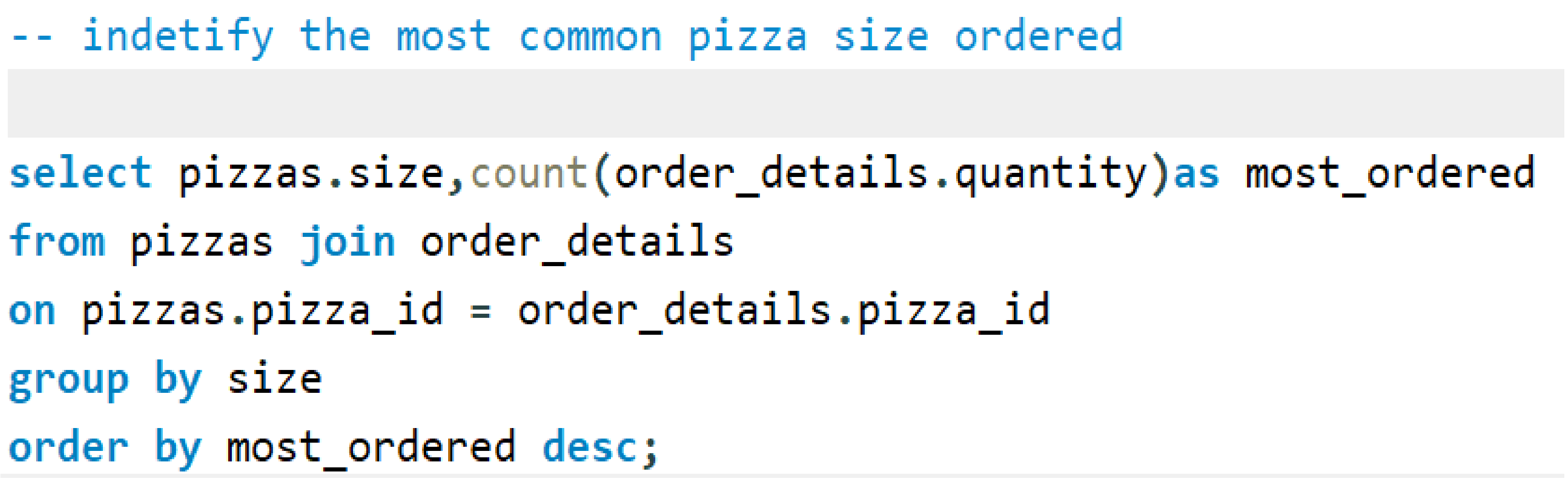
```
total_sales
817860.05
```



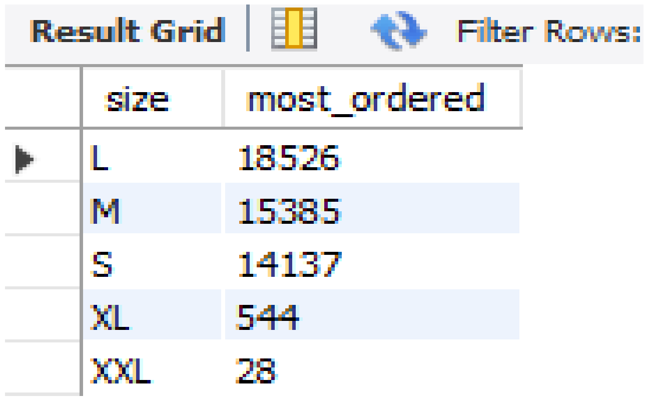
```sql
-- calculating highest price pizza

select pizzas.price,pizza_types.name
from pizzas join pizza_types
on pizzas.pizza_type_id = pizza_types.pizza_type_id
order by pizzas.price desc limit 1
```



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

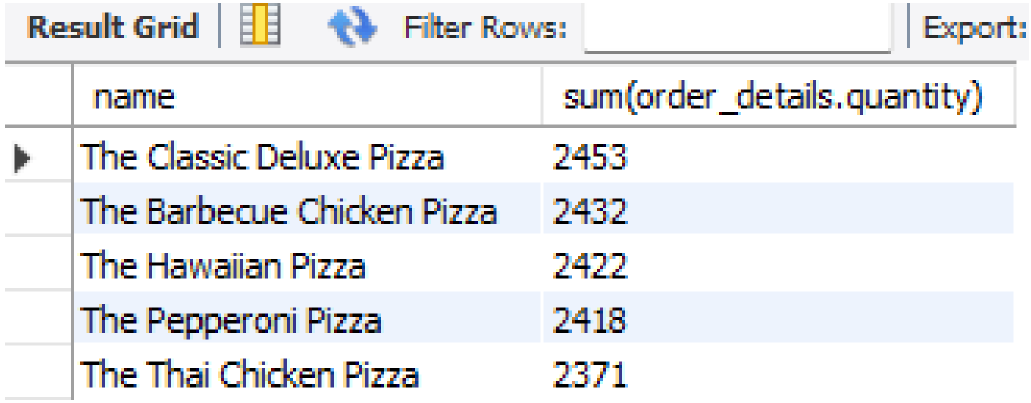


```sql
-- indetify the most common pizza size ordered

select pizzas.size,count(order_details.quantity)as most_ordered
from pizzas join order_details
on pizzas.pizza_id = order_details.pizza_id
group by size
order by most_ordered desc;
```



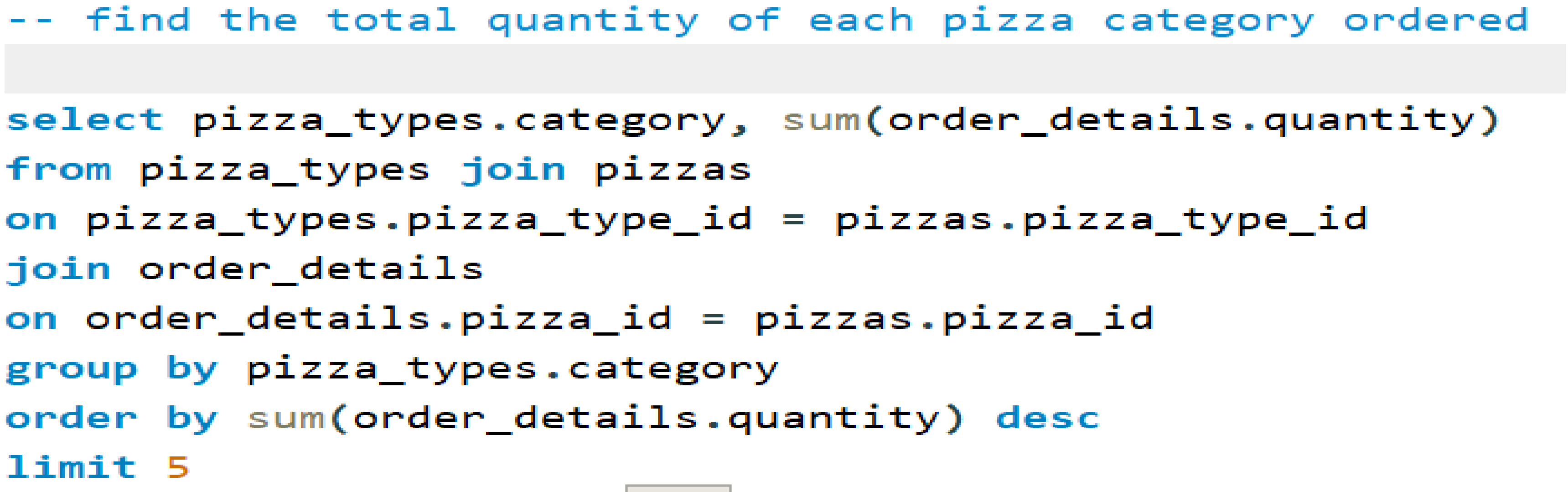
size	most_ordered
L	18526
M	15385
S	14137
XL	544
XXL	28

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

select pizza_types.name,sum(order_details.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 sum(order_details.quantity) desc limit 5
```

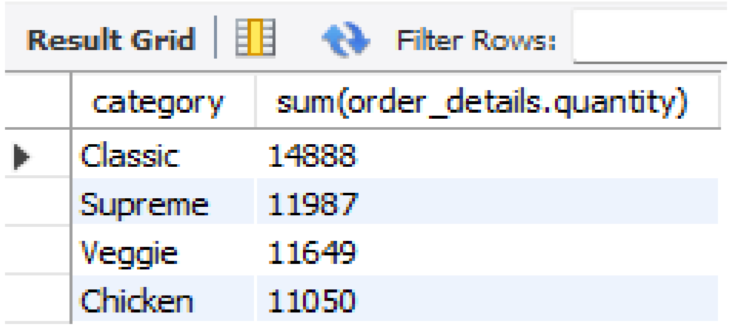


name	sum(order_details.quantity)
The Classic Deluxe Pizza	2453
The Barbecue Chicken Pizza	2432
The Hawaiian Pizza	2422
The Pepperoni Pizza	2418
The Thai Chicken Pizza	2371

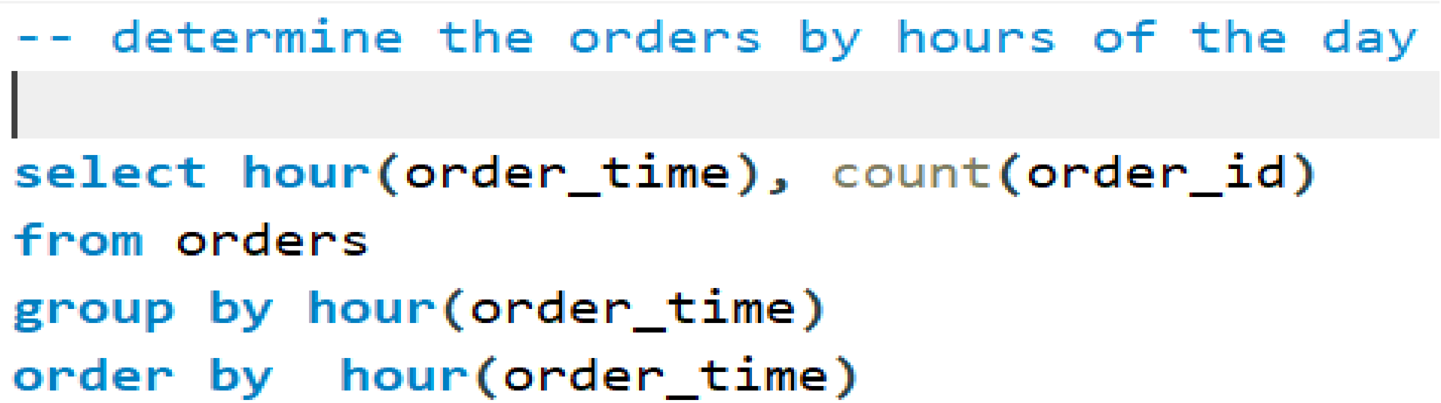
INTERMEDIATE PROBLEMS AND THEIR SOLUTIONS



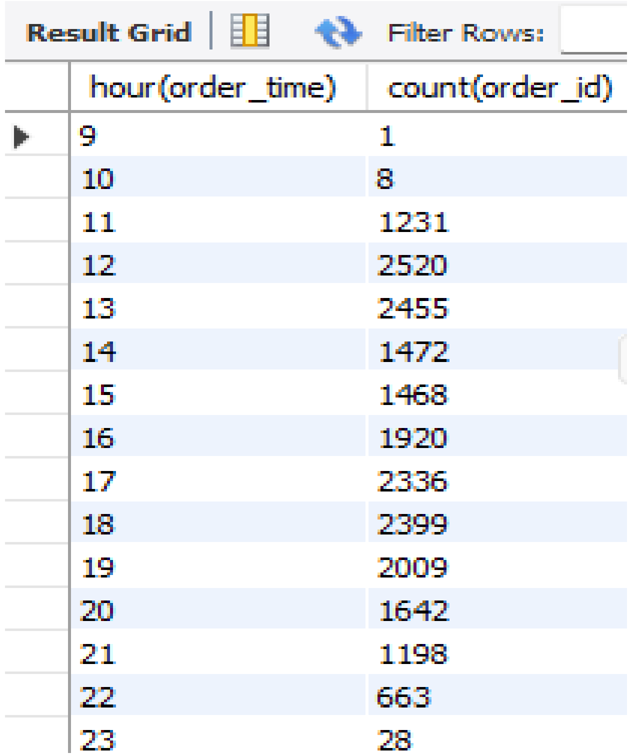
```
-- find the total quantity of each pizza category ordered

select pizza_types.category, sum(order_details.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 sum(order_details.quantity) desc
limit 5
```



category	sum(order_details.quantity)
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

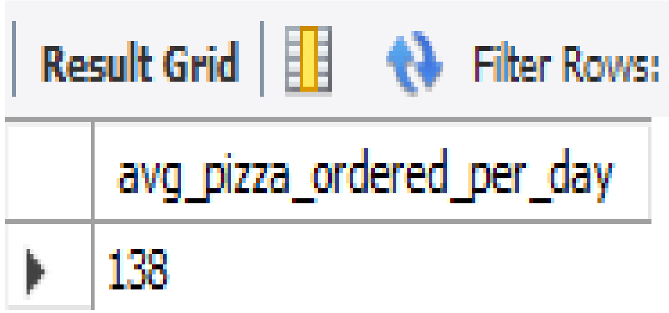


```
-- determine the orders by hours of the day

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

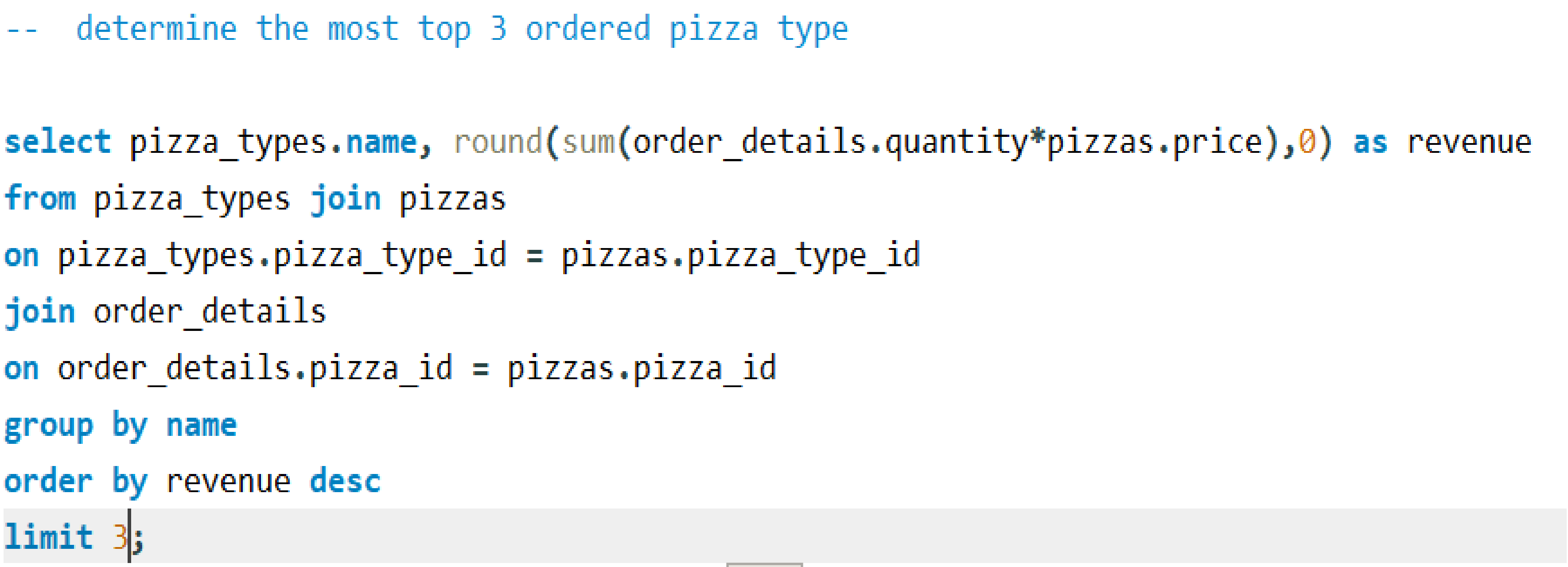


hour(order_time)	count(order_id)
9	1
10	8
11	1231
12	2520
13	2455
14	1472
15	1468
16	1920
17	2336
18	2399
19	2009
20	1642
21	1198
22	663
23	28

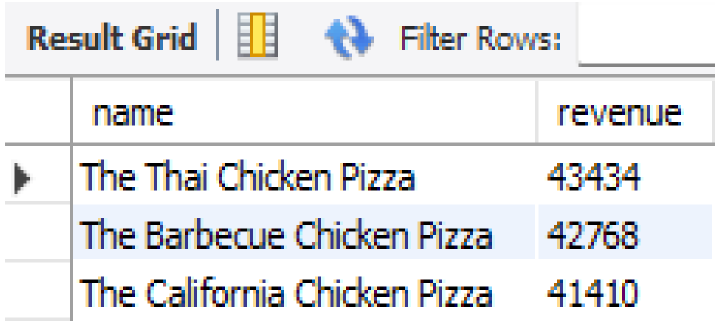
```sql
-- group the orders by the date and calculate the average number of pizzas ordered
-- per day

select round(avg(quantity),0)as avg_pizza_ordered_per_day from
(select orders.order_date as 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
order by quantity) as daily_totals;
```



```
avg_pizza_ordered_per_day
138
```

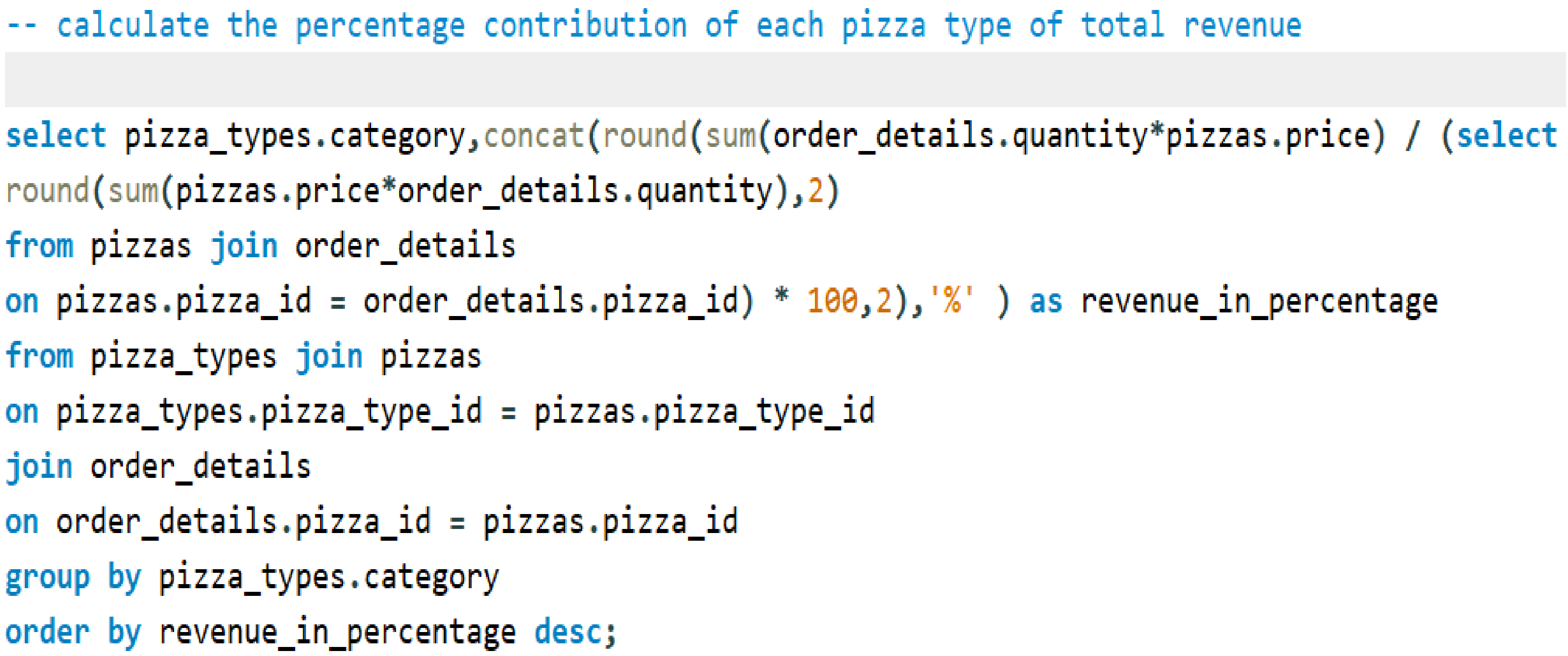


```
--  determine the most top 3 ordered pizza type

select pizza_types.name, round(sum(order_details.quantity*pizzas.price),0) 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 name
order by revenue desc
limit 3;
```

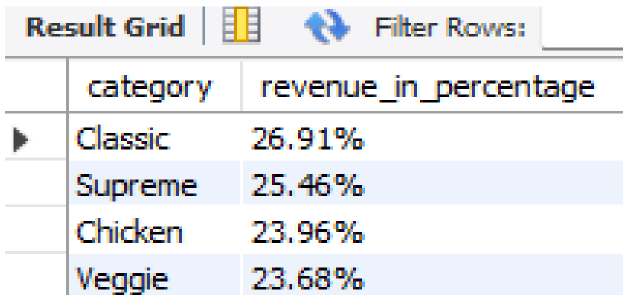


name	revenue
The Thai Chicken Pizza	43434
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41410

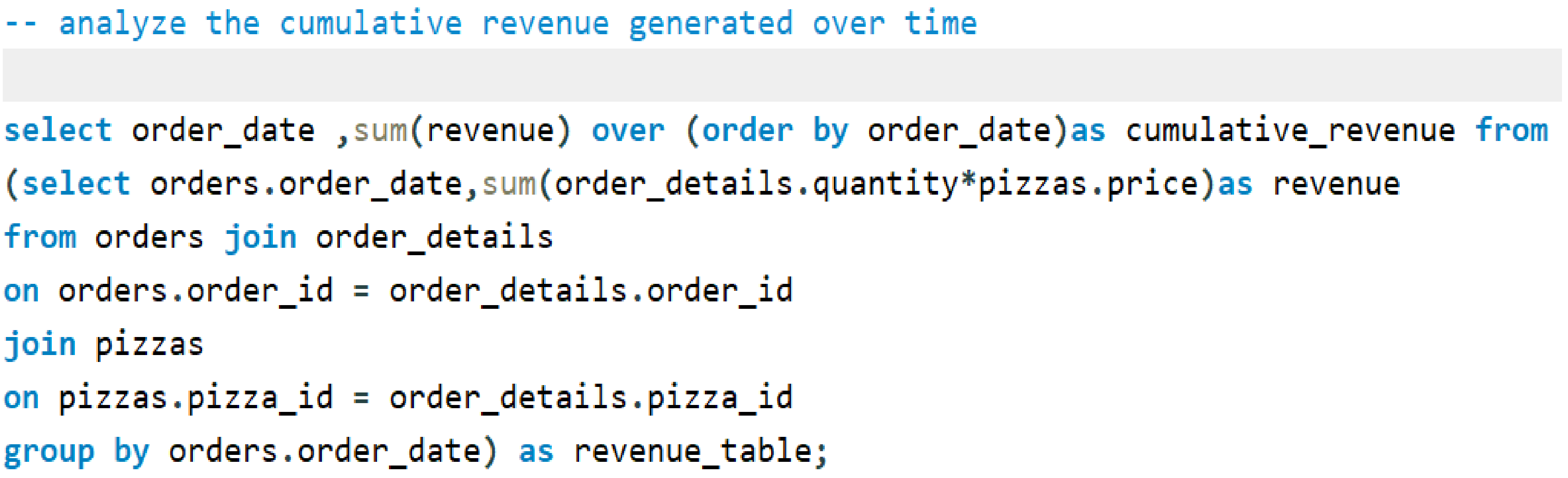
ADVANCED PROBLEMS AND THEIR SOLUTIONS



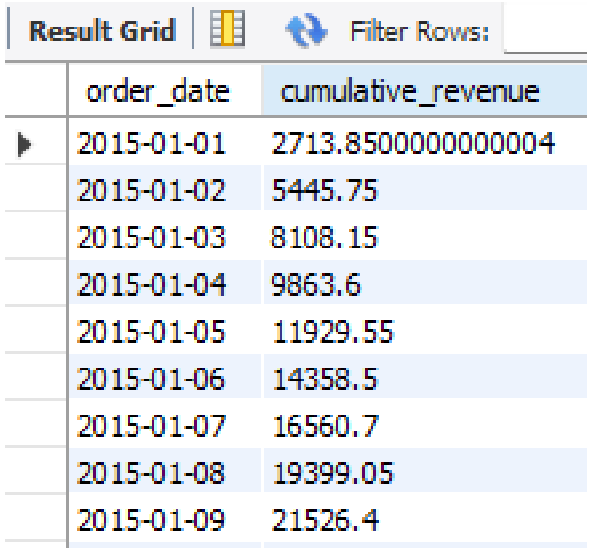
```
-- calculate the percentage contribution of each pizza type of total revenue

select pizza_types.category,concat(round(sum(order_details.quantity*pizzas.price) / (select
round(sum(pizzas.price*order_details.quantity),2)
from pizzas join order_details
on pizzas.pizza_id = order_details.pizza_id) * 100,2),'%' ) as revenue_in_percentage
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_in_percentage desc;
```



category	revenue_in_percentage
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 cumulative_revenue from
(select orders.order_date,sum(order_details.quantity*pizzas.price)as revenue
from orders join order_details
on orders.order_id = order_details.order_id
join pizzas
on pizzas.pizza_id = order_details.pizza_id
group by orders.order_date) as revenue_table;
```



order_date	cumulative_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

CONCLUSION

"Through the use of SQL queries, I was able to determine that the **highest sales occur on weekends**, and the **Margherita pizza is the top seller across all branches**. **Sales are highest on weekends**, Introduce special offers or discounts specifically for weekends (e.g., “Buy One, Get One Free” on pizzas, family meal deals, or free drinks with every order). Promote these through email marketing and social media. Additionally, running total analysis indicates consistent growth in customer orders during seasonal promotions. These insights suggest opportunities for targeted marketing efforts and inventory optimization."

"THANK YOU

FOR REVIEWING MY ANALYSIS OF PIZZA SALES USING SQL!

FEEL FREE TO REACH OUT TO ME FOR MORE DETAILS”.

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