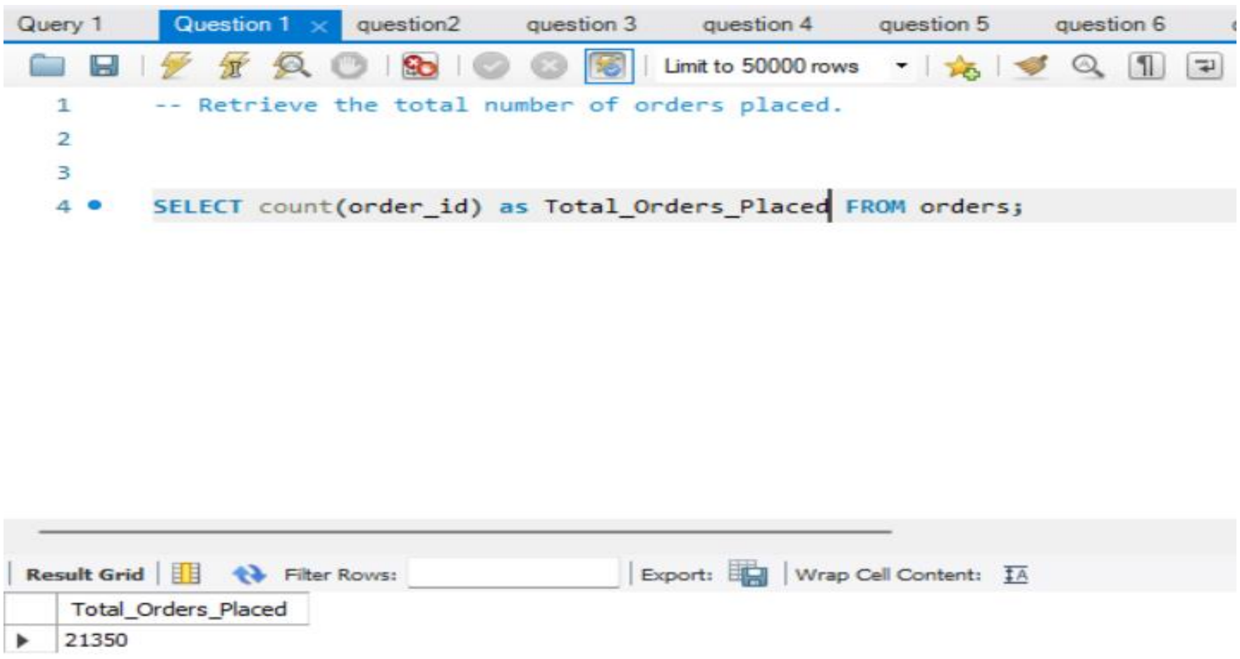
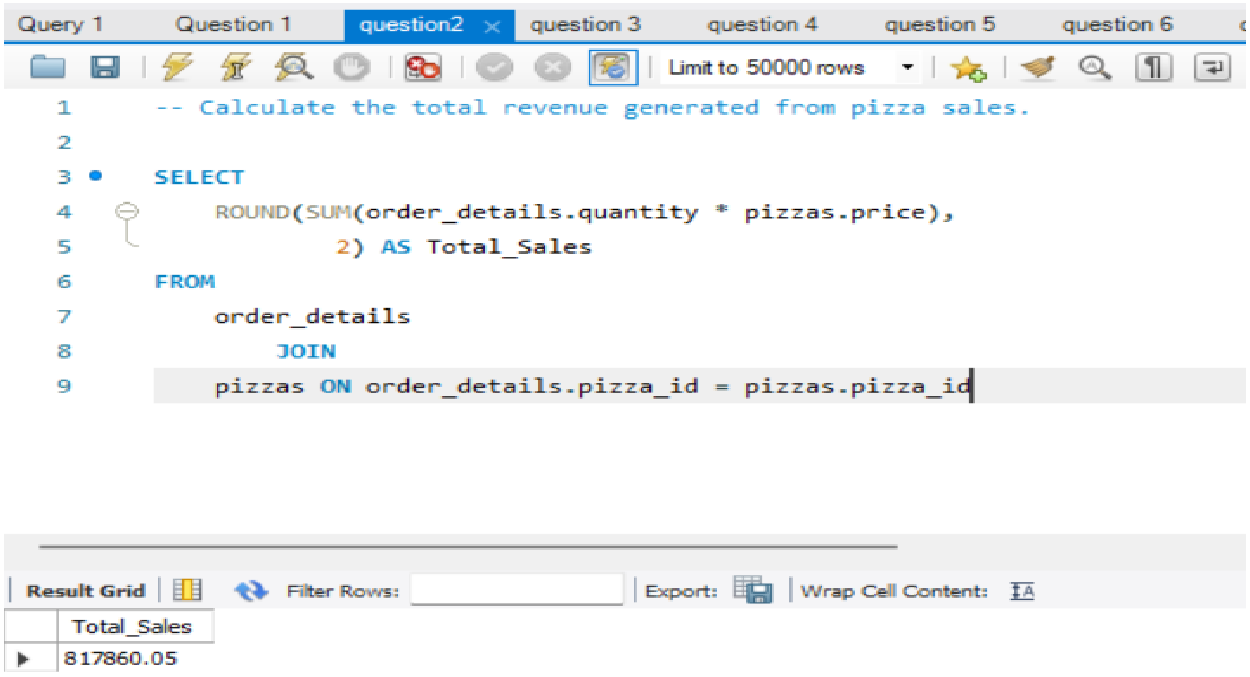
Question 1 With Output:-



```
-- Retrieve the total number of orders placed.


SELECT count(order_id) as Total_Orders_Placed FROM orders;
```

```
Total_Orders_Placed
21350
```

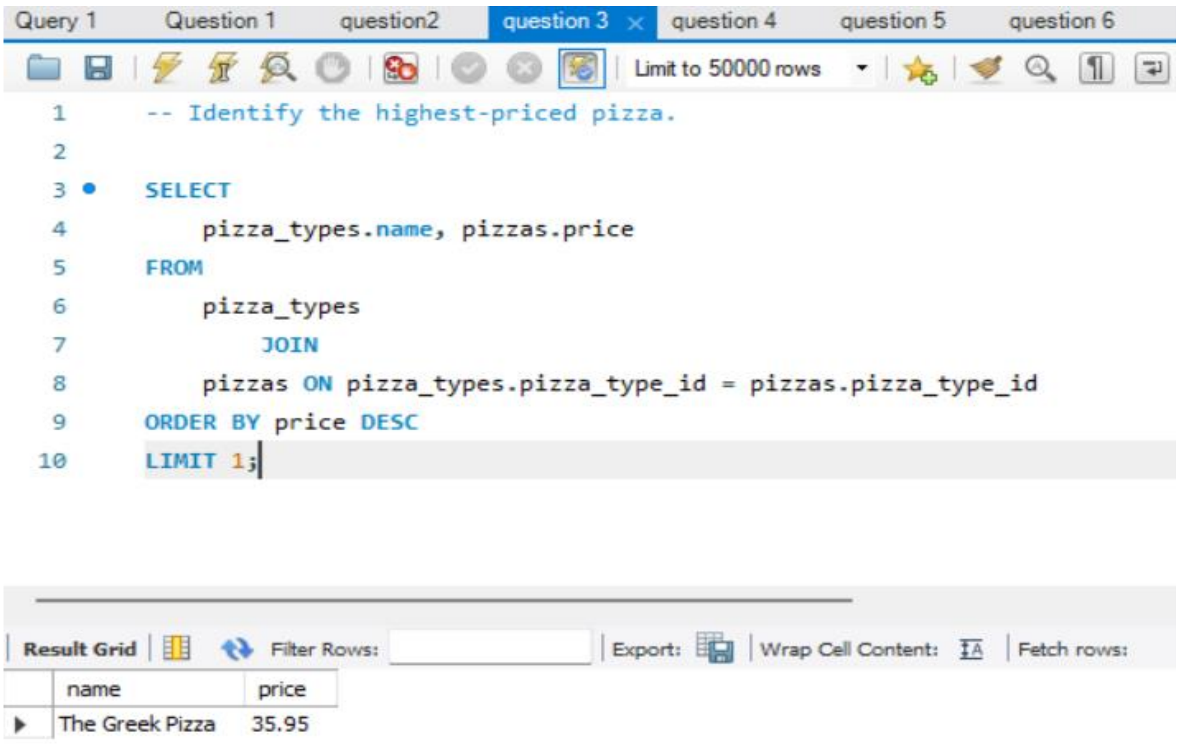
Question 2 With Output:-



```
-- 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 order_details.pizza_id = pizzas.pizza_id
```

```
Total_Sales
817860.05
```

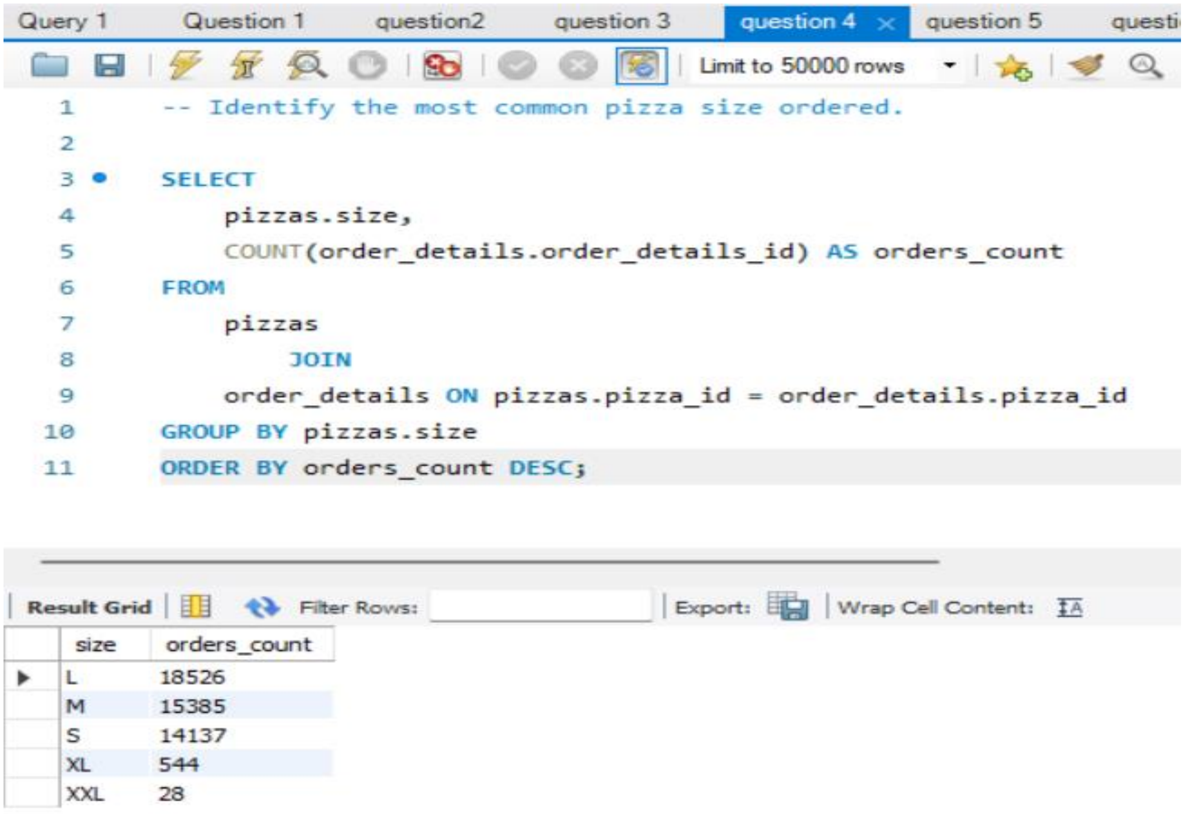
Question 3 With Output:-



```
-- 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 price DESC
LIMIT 1;
```

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

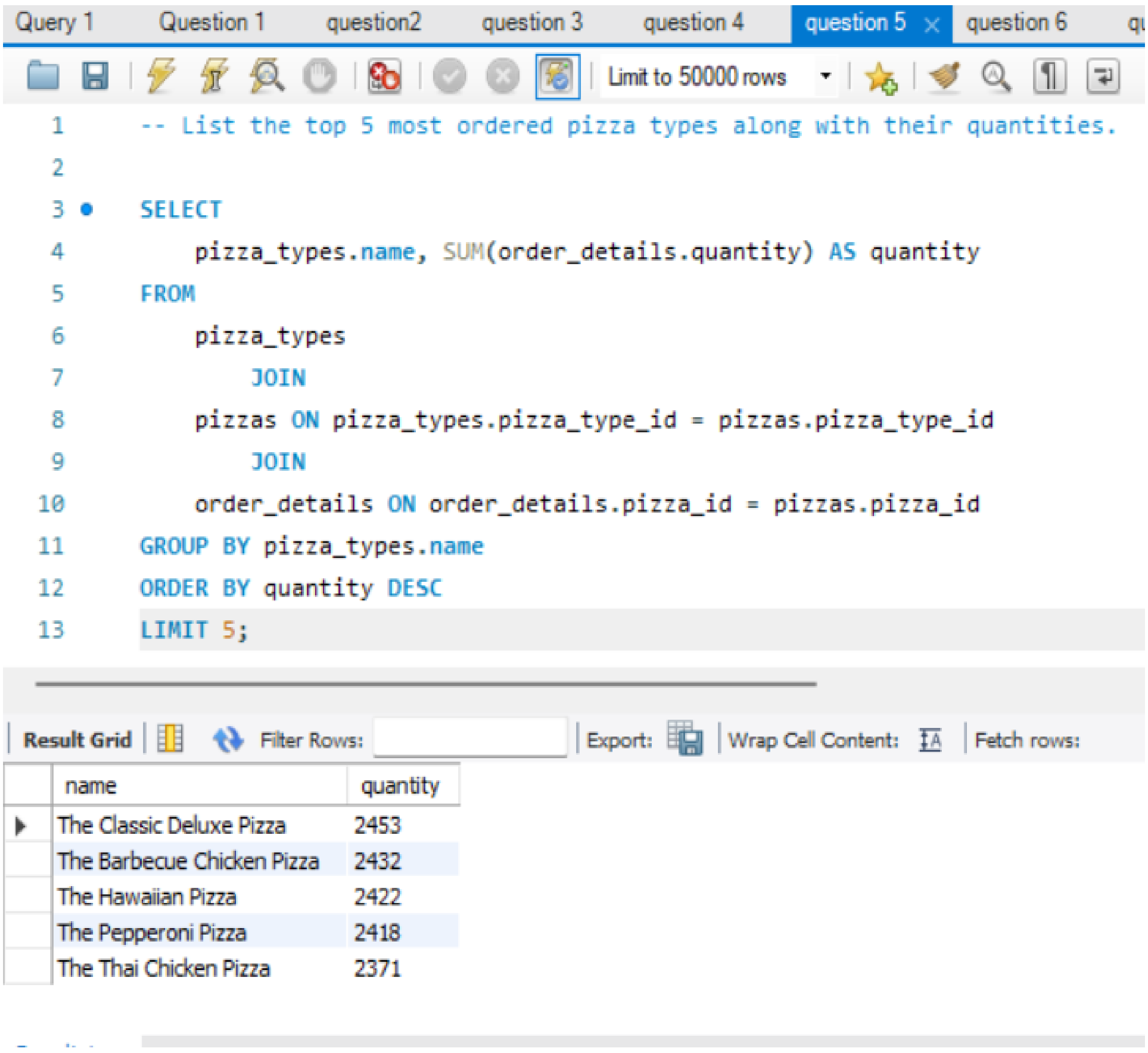
Question 4 With Output:-



```
-- Identify the most common pizza size ordered.

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

```
size  orders_count
L     18526
M     15385
S     14137
XL    544
XXL   28
```

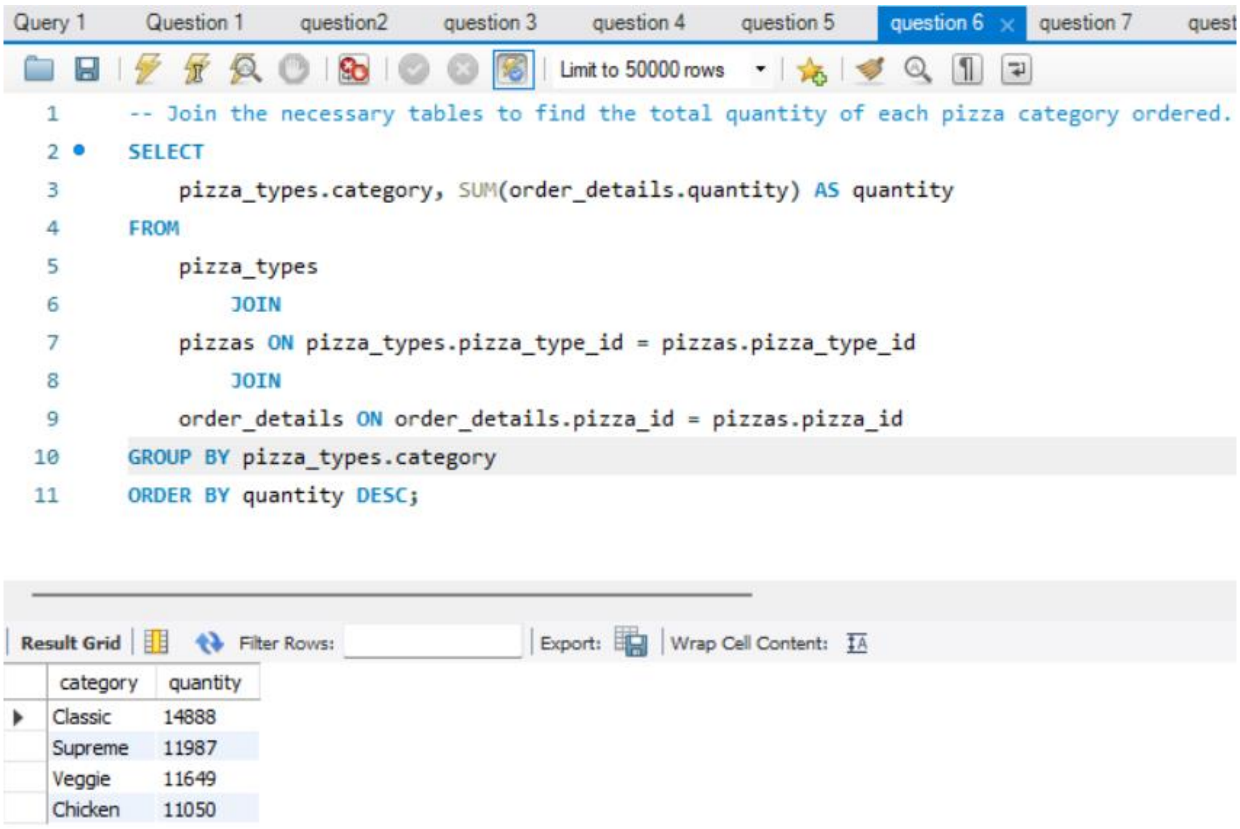
Question 5 With Output:-



```sql
-- 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

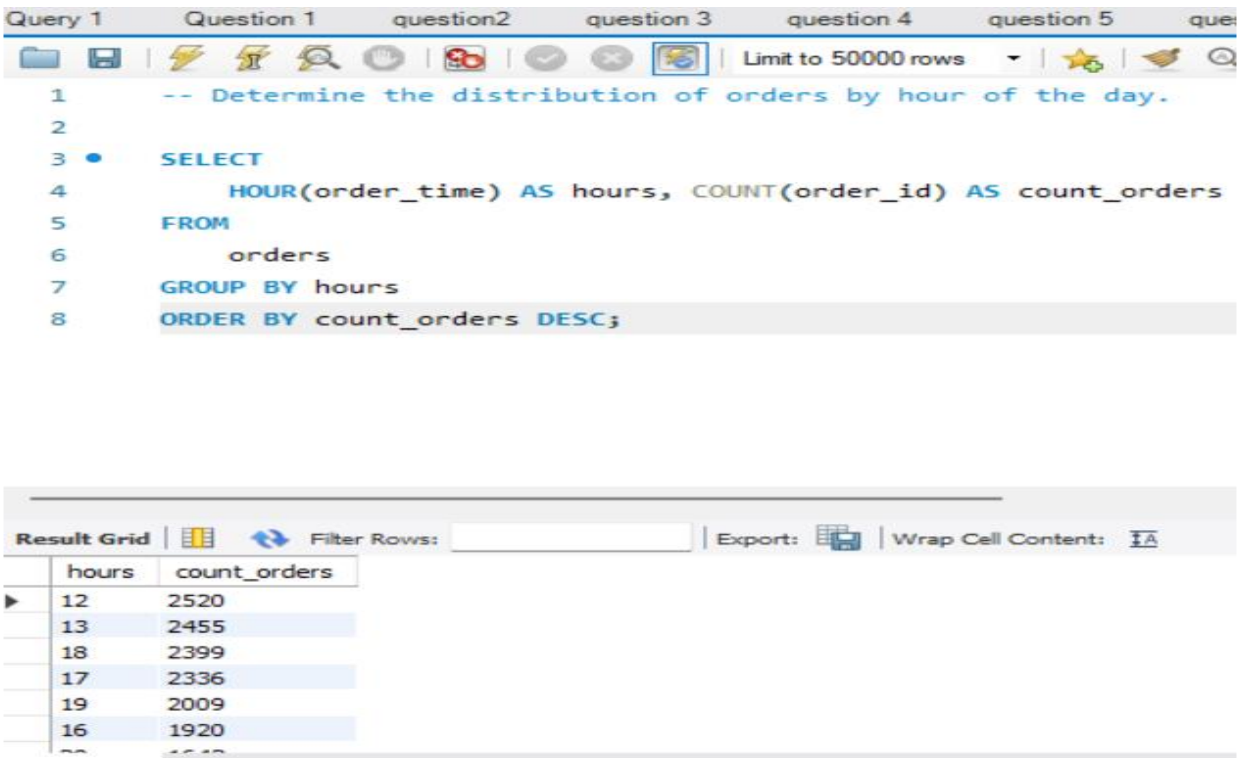
Question 6 With Output:-



```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
```

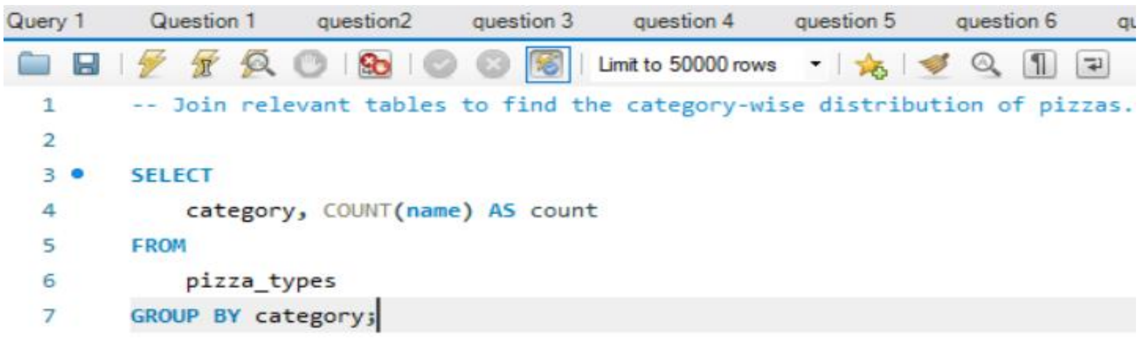
Question 7 With Output:-



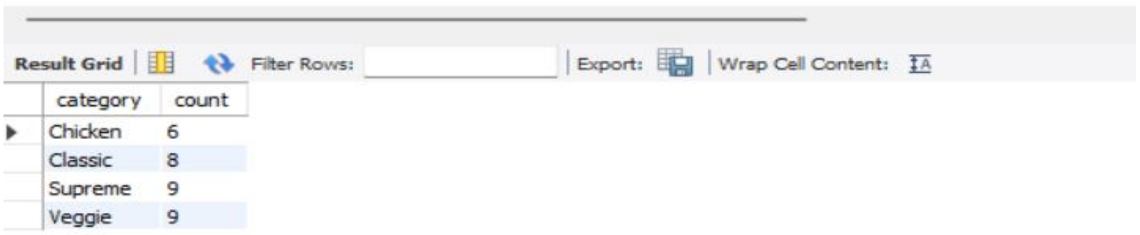
```sql
-- Determine the distribution of orders by hour of the day.

SELECT
    HOUR(order_time) AS hours, COUNT(order_id) AS count_orders
FROM
    orders
GROUP BY hours
ORDER BY count_orders DESC;
```

```
hours  count_orders
12     2520
13     2455
18     2399
17     2336
19     2009
16     1920
```

```
Question 8 With Output:-
```

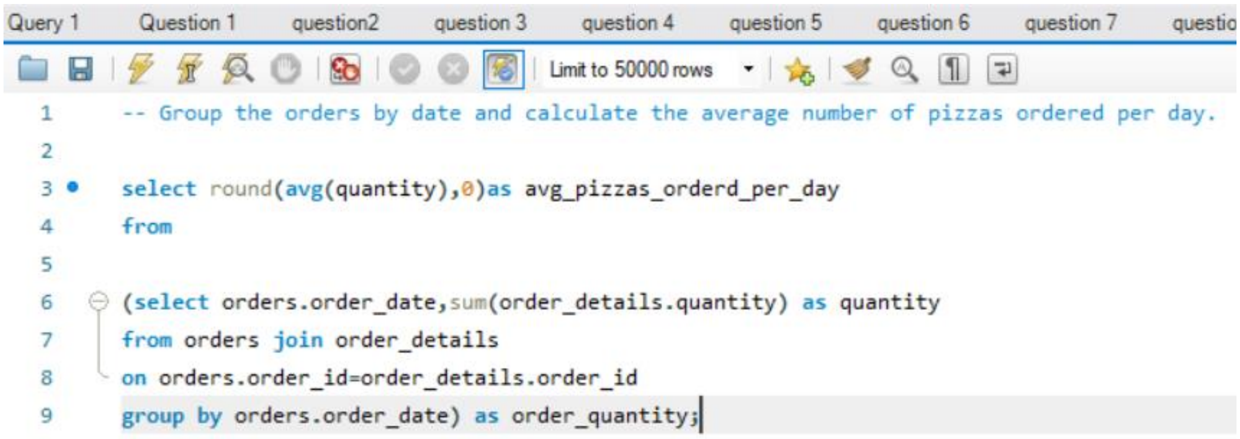


```sql
-- Join relevant tables to find the category-wise distribution of pizzas.

SELECT
    category, COUNT(name) AS count
FROM
    pizza_types
GROUP BY category;
```

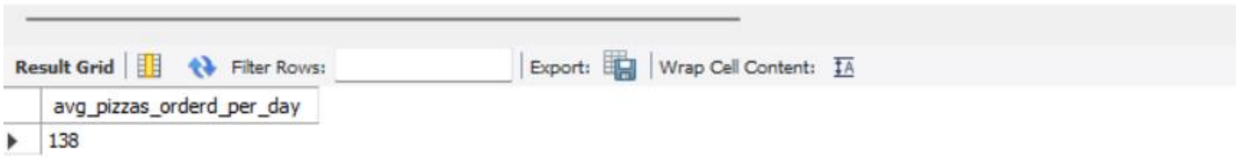


category	count
Chicken	6
Classic	8
Supreme	9
Veggie	9

```
Question 9 With Output:-
```

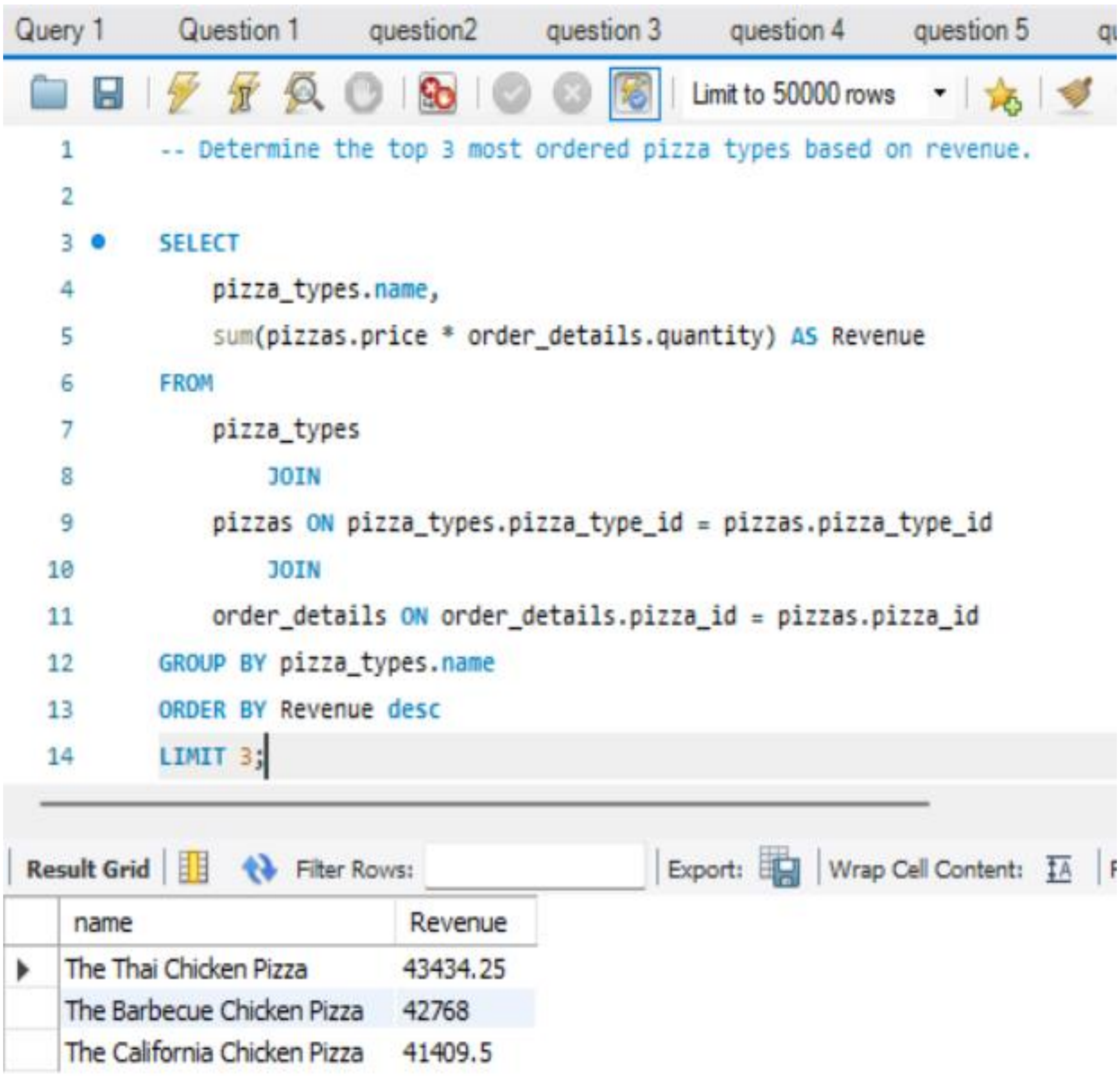


```sql
-- Group the orders by date and calculate the average number of pizzas ordered per day.

select round(avg(quantity),0)as avg_pizzas_orderd_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_pizzas_orderd_per_day
138

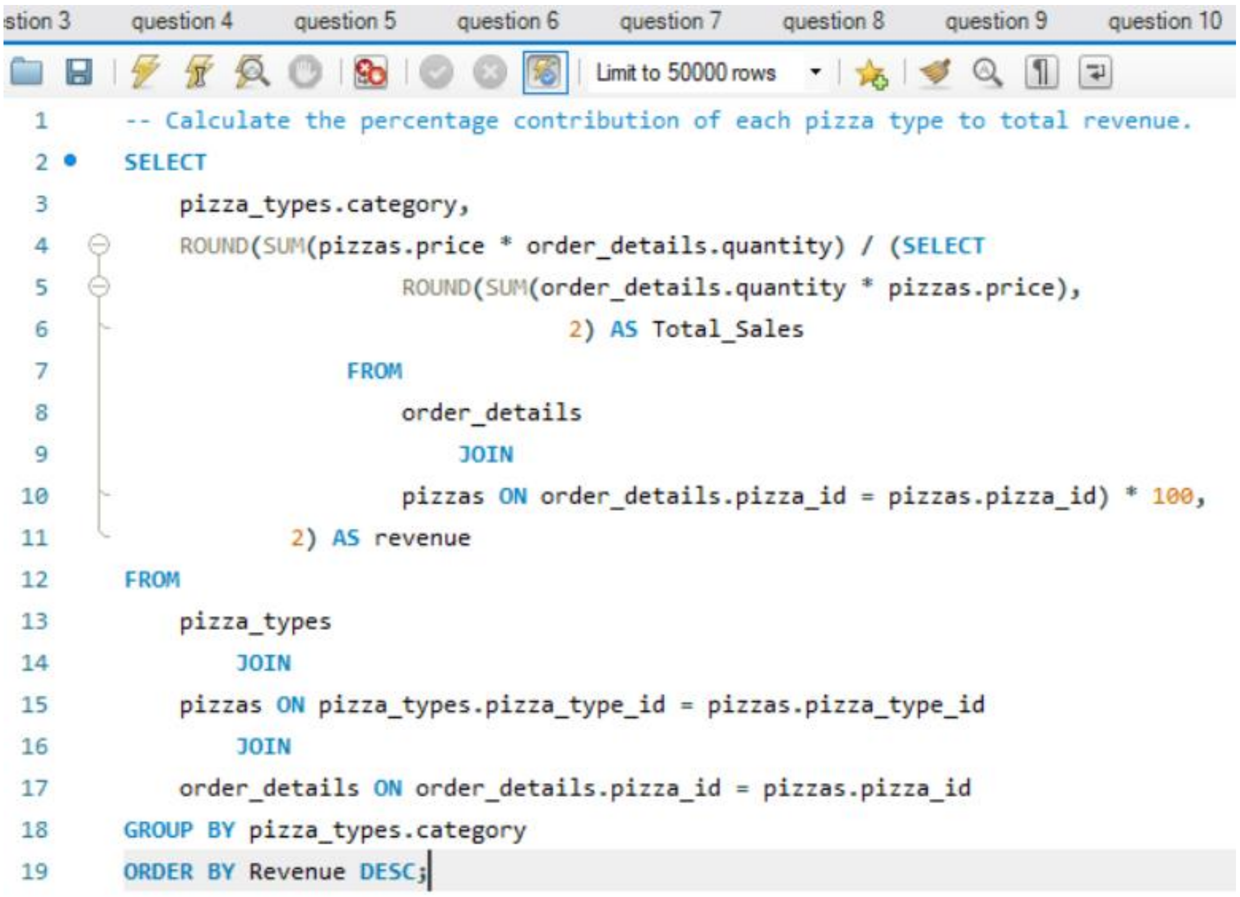
Question 10 With Output:-



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

SELECT
    pizza_types.name,
    sum(pizzas.price * order_details.quantity) 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;
```

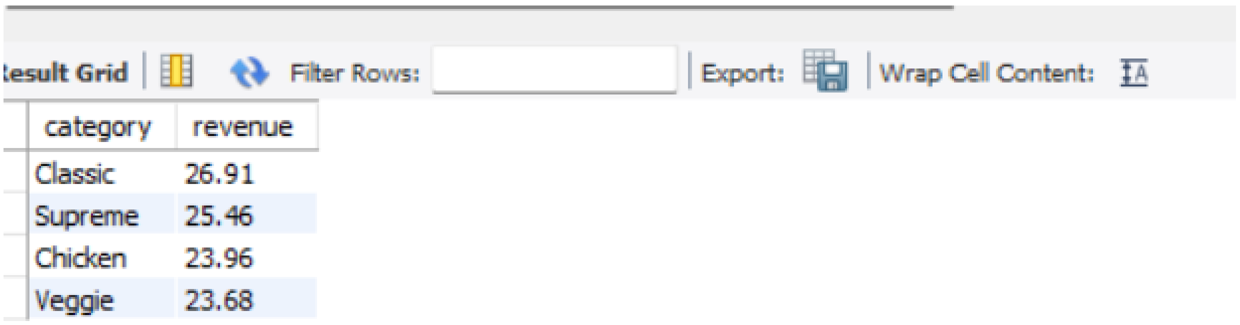
name	Revenue
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5

Question 11 solution:-



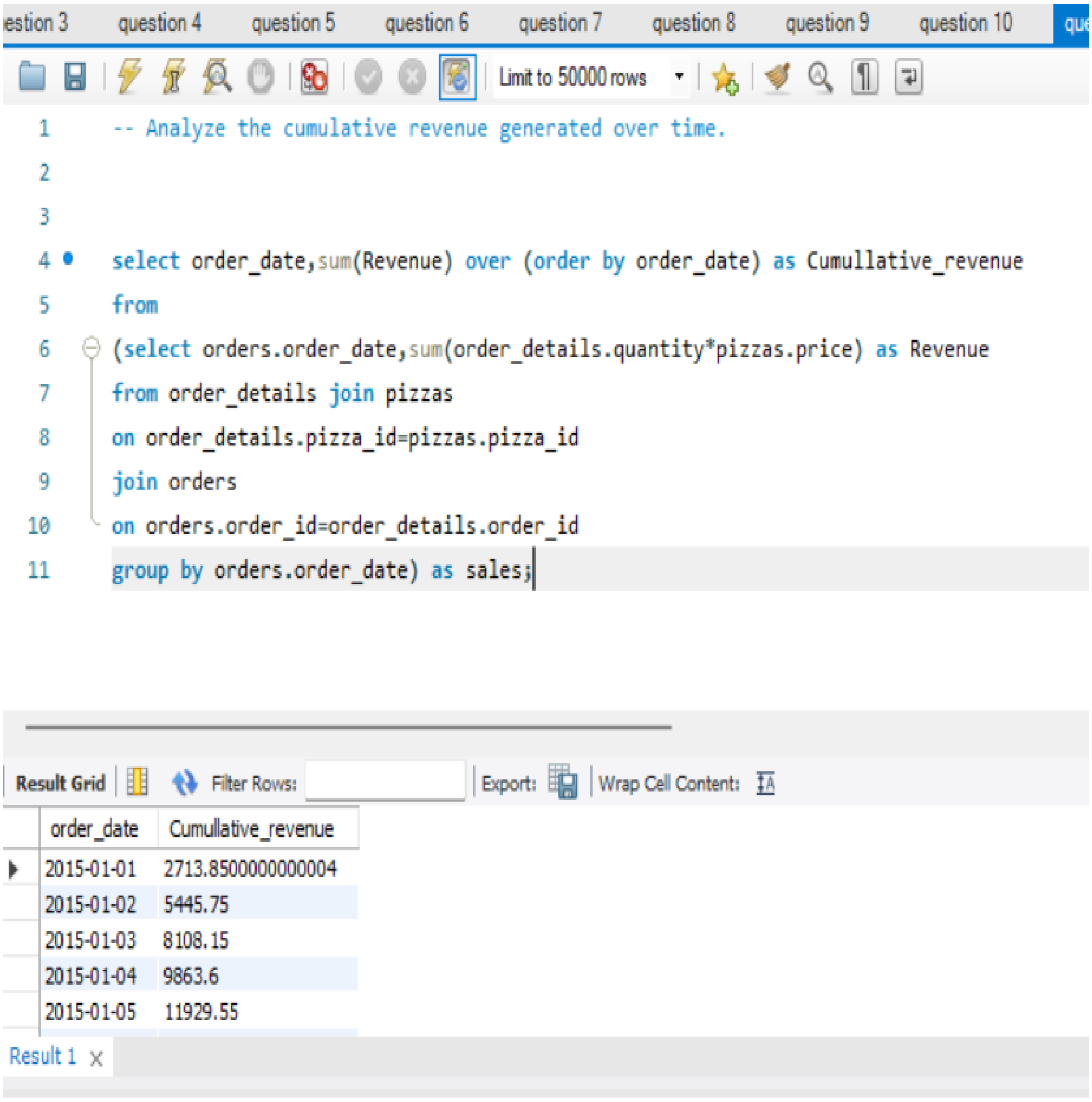
```
-- Calculate the percentage contribution of each pizza type to total revenue.
SELECT
    pizza_types.category,
    ROUND(SUM(pizzas.price * order_details.quantity) / (SELECT
                    ROUND(SUM(order_details.quantity * pizzas.price),
                                2) AS Total_Sales
                FROM
                    order_details
                        JOIN
                    pizzas ON order_details.pizza_id = pizzas.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;
```

Output:-



category	revenue
Classic	26.91
Supreme	25.46
Chicken	23.96
Veggie	23.68

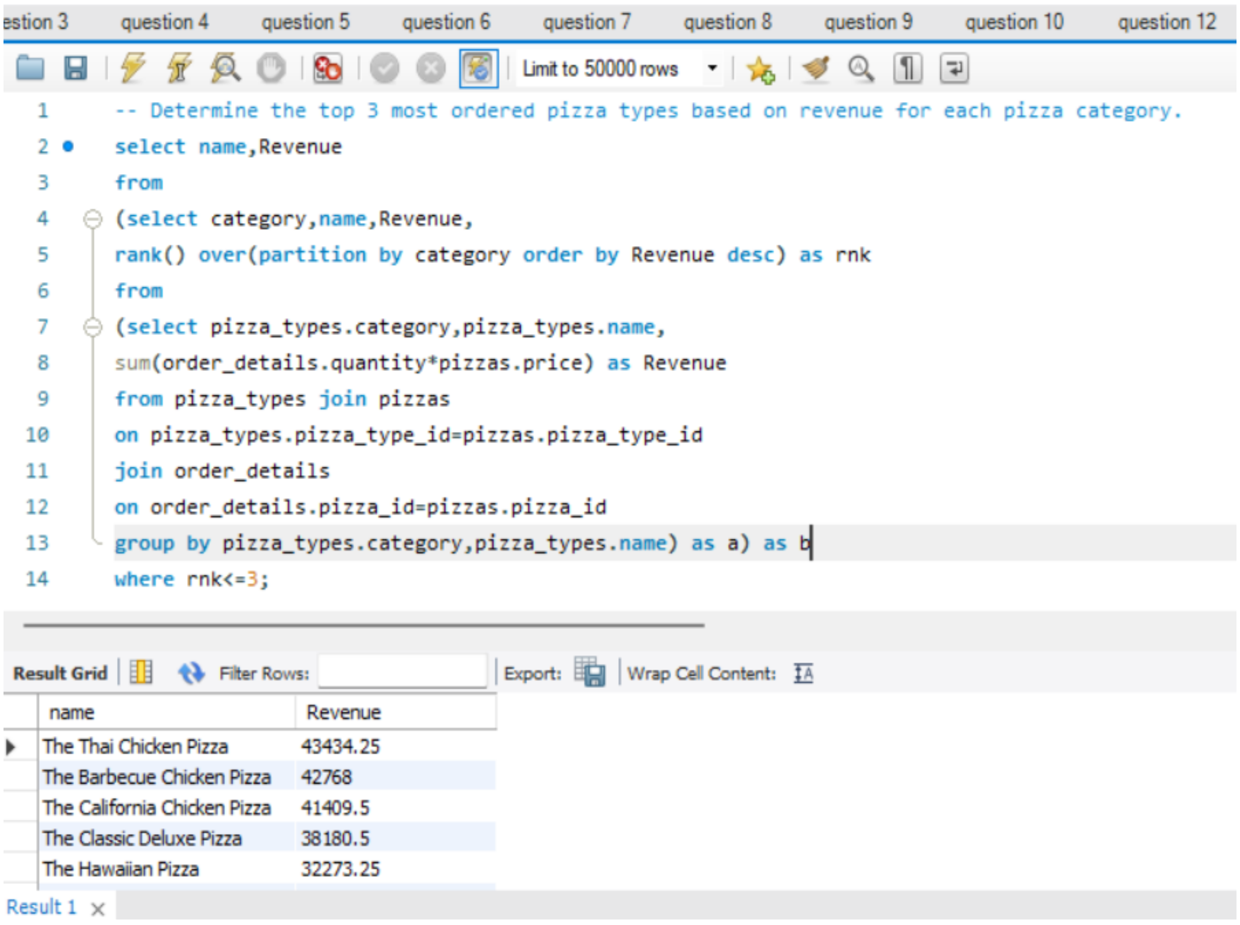
Question 12 With Outpu :-



```sql
-- Analyze the cumulative revenue generated over time.


select order_date,sum(Revenue) over (order by order_date) as Cumullative_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	Cumullative_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

Question 13 With Output :-



```
-- 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 rnk
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 rnk<=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 END---