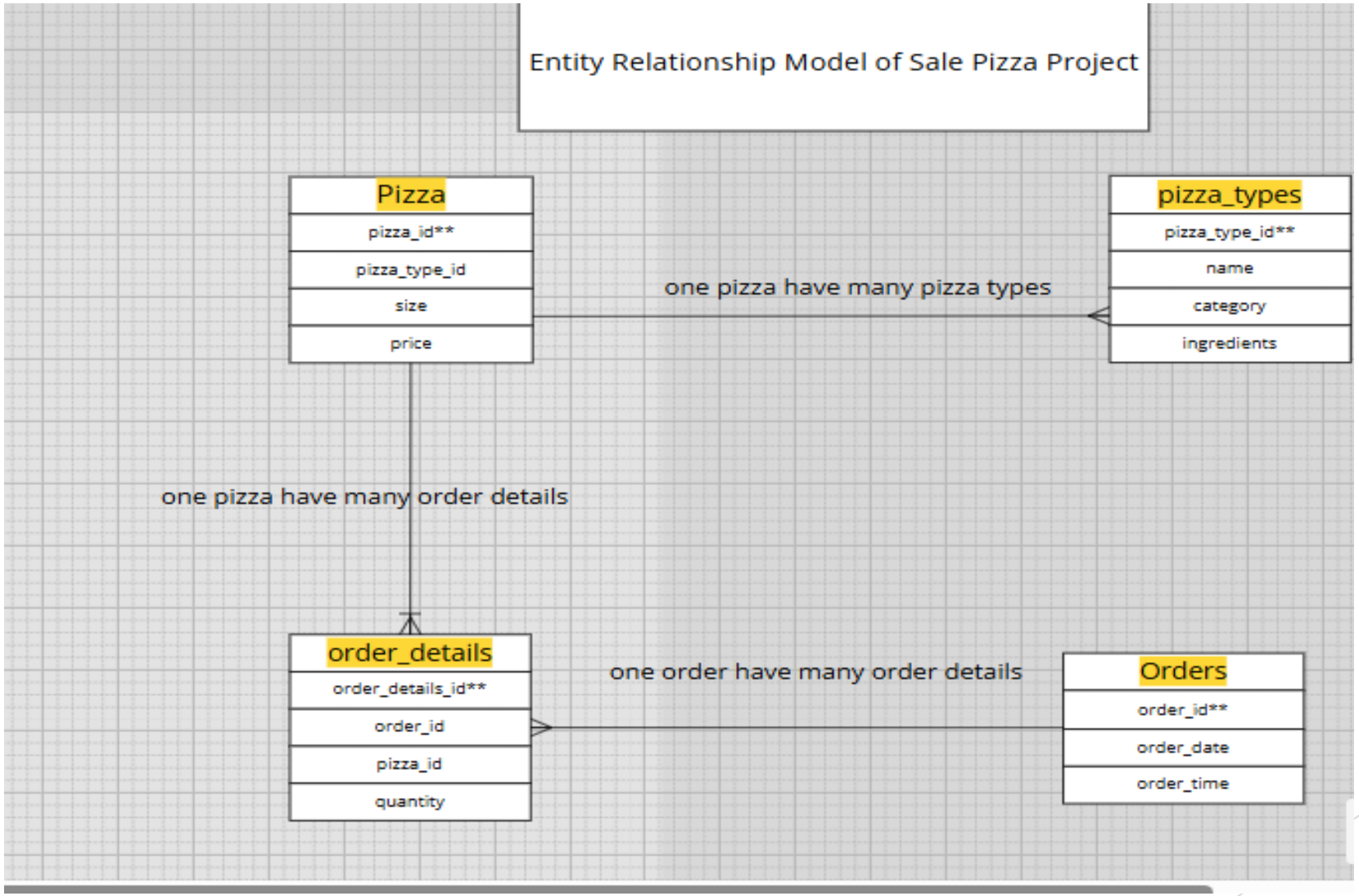
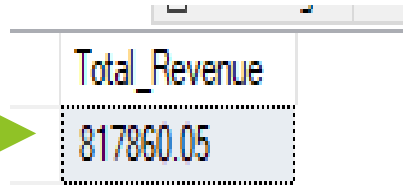

Entity Relationship Model of Sale Pizza Project
Pizza
pizza_id**
pizza_type_id
size
price
one pizza have many pizza types
pizza_types
pizza_type_id**
name
category
ingredients
one pizza have many order details
order_details
order_details_id**
order_id
pizza_id
quantity
one order have many order details
Orders
order_id**
order_date
order_time

Q1; Retrieve the total number of orders placed.

```
SELECT COUNT(*)
FROM orders;
```

Q2; Calculate the total revenue generated from pizza sales.

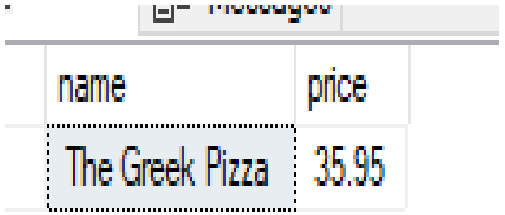
```
SELECT
ROUND(SUM(price*quantity),2) Total_Revenue
FROM pizza p JOIN
order_details od ON
p.pizza_id=od.pizza_id;
```



Total_Revenue
817860.05

Q3; Identify the highest-priced pizza.

```
SELECT TOP 1 name,round(price,2) price
FROM pizza p JOIN
pizza_types pt ON
P.pizza_type_id=pt.pizza_type_id
ORDER BY price DESC;
```



name	price
The Greek Pizza	35.95

Q4; Identify the most common pizza size ordered.

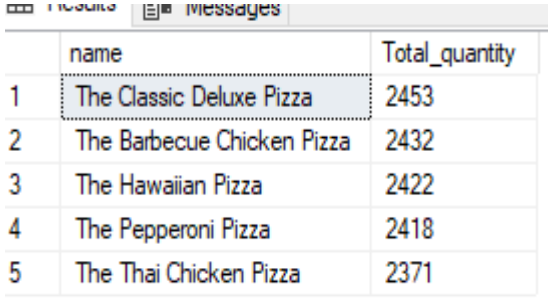
```
SELECT  P.size,COUNT(od.order_details_id) total_count from
pizza p JOIN  order_details od ON
p.pizza_id=od.pizza_id
GROUP BY P.size
ORDER BY total_count DESC;
```

Results | Messages

	size	total_count
1	L	18526
2	M	15385
3	S	14137
4	XL	544
5	XXL	28

Q5;List the top 5 most ordered pizza types along with their quantities.

```
SELECT TOP 5 name,
SUM(quantity)Total_quantity FROM pizza_types pt
JOIN pizza p ON p.pizza_type_id=pt.pizza_type_id
JOIN order_details od ON p.pizza_id=od.pizza_id
GROUP BY name
ORDER BY Total_quantity DESC;
```



Results Messages

	name	Total_quantity
1	The Classic Deluxe Pizza	2453
2	The Barbecue Chicken Pizza	2432
3	The Hawaiian Pizza	2422
4	The Pepperoni Pizza	2418
5	The Thai Chicken Pizza	2371

Q6;Join the necessary tables to find the total quantity of each pizza category ordered.

```
SELECT category,
SUM(quantity) quantity
FROM pizza_types
pt JOIN pizza P ON
P.pizza_type_id=pt.pizza_type_id
JOIN order_details od
ON p.pizza_id=od.pizza_id
GROUP BY category
ORDER BY quantity DESC;
```

Results | Messages

	category	quantity
1	Classic	14888
2	Supreme	11987
3	Veggie	11649
4	Chicken	11050

Q7;Determine the distribution of orders by hour of the day.

```
SELECT DATEPART(HOUR,time)
Hourly_distribution,
COUNT(order_id) Number_of_orders
        FROM orders
    GROUP BY DATEPART(HOUR,time)
    ORDER BY Number_of_orders  DESC ;
```

Results | Messages

	Hourly_distribution	Number_of_orders
1	12	2520
2	13	2455
3	18	2399
4	17	2336
5	19	2009
6	16	1920
7	20	1642
8	14	1472
9	15	1468
10	11	1231
11	21	1198
12	22	663
13	23	28
14	10	8
15	9	1

Q8;Join relevant tables to find the category-wise distribution of pizzas.

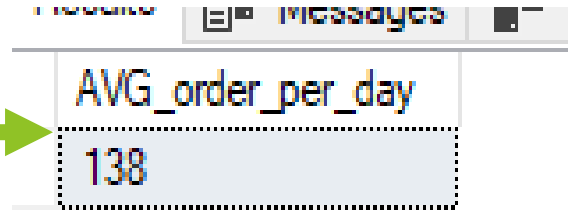
```
SELECT category,
COUNT(name) number_of_pizza_types
FROM pizza_types
GROUP BY category;
```

Results | Messages | Client Statis

	category	number_of_pizza_types
1	Chicken	6
2	Classic	8
3	Supreme	9
4	Veggie	9

Q9;Group the orders by date and calculate the average number of pizzas ordered per day.

```
SELECT AVG(quantity)
AVG_order_per_day FROM(
SELECT date
,sum(quantity) quantity FROM orders o
JOIN
order_details od ON o.order_id=od.order_id
GROUP BY date) a;
```



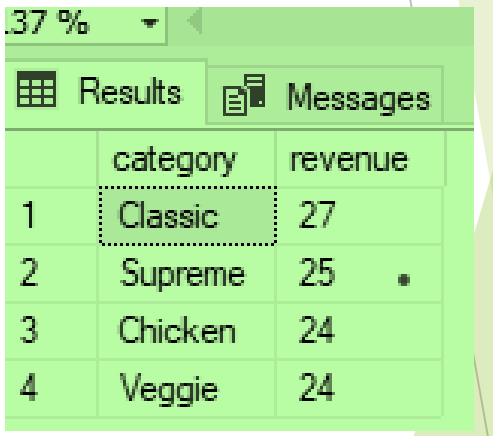
Q10;Determine the top 3 most ordered pizza types based on revenue.

```sql
SELECT TOP 3
name,SUM(price*quantity) Revenue
FROM pizza_types pt
JOIN pizza p ON P.pizza_type_id=pt.pizza_type_id
JOIN order_details od ON p.pizza_id=od.pizza_id
GROUP BY name
ORDER BY Revenue DESC;
```

	name	Revenue
1	The Thai Chicken Pizza	43434.25
2	The Barbecue Chicken Pizza	42768
3	The California Chicken Pizza	41409.5

Q11;Calculate the percentage contribution of each pizza type against total revenue.

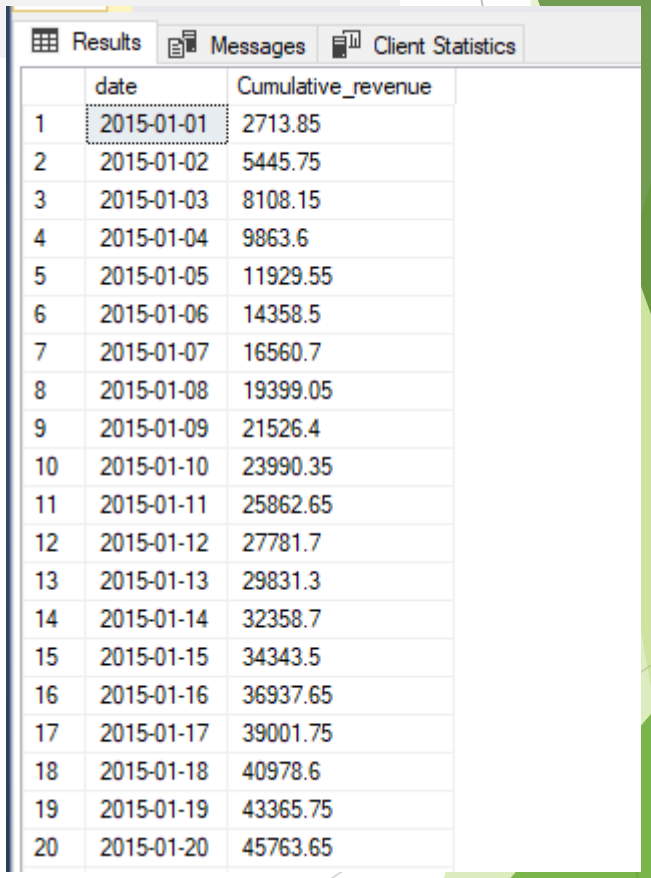
```
SELECT category,ROUND((SUM(quantity*price)/(SELECT
SUM(quantity*price)
FROM pizza p JOIN order_details od ON
p.pizza_id=od.pizza_id)),2)*100  revenue
FROM pizza_types pt
JOIN pizza p
ON p.pizza_type_id=pt.pizza_type_id
JOIN order_details od ON od.pizza_id=p.pizza_id
GROUP BY category
ORDER BY revenue DESC;
```



	category	revenue
1	Classic	27
2	Supreme	25
3	Chicken	24
4	Veggie	24

Q12;Analyze the cumulative revenue generated over time.

```
SELECT date ,SUM(revenue)
OVER (ORDER BY date) Cumulative_revenue
FROM(
SELECT date,ROUND(SUM(quantity*price),2) revenue FROM
orders o JOIN order_details od
ON o.order_id=od.order_id
JOIN pizza p ON
p.pizza_id=od.pizza_id
GROUP BY date
) a;
```



Results | Messages | Client Statistics

	date	Cumulative_revenue
1	2015-01-01	2713.85
2	2015-01-02	5445.75
3	2015-01-03	8108.15
4	2015-01-04	9863.6
5	2015-01-05	11929.55
6	2015-01-06	14358.5
7	2015-01-07	16560.7
8	2015-01-08	19399.05
9	2015-01-09	21526.4
10	2015-01-10	23990.35
11	2015-01-11	25862.65
12	2015-01-12	27781.7
13	2015-01-13	29831.3
14	2015-01-14	32358.7
15	2015-01-15	34343.5
16	2015-01-16	36937.65
17	2015-01-17	39001.75
18	2015-01-18	40978.6
19	2015-01-19	43365.75
20	2015-01-20	45763.65

Q13;Determine the top 3 most ordered pizza types based on revenue for each pizza category.

```
SELECT category,name,Ranking FROM (
SELECT category,name,revenue,RANK()
OVER(PARTITION BY category ORDER BY revenue DESC) Ranking
FROM
(SELECT category,name,ROUND(SUM(quantity*price),2) revenue
FROM pizza_types pt JOIN pizza p
ON pt.pizza_type_id=p.pizza_type_id
join order_details od ON p.pizza_id=od.pizza_id
GROUP BY category,name) a) b
WHERE Ranking<=3;
```

Results | Messages | Client Statistics

	category	name	Ranking
1	Chicken	The Thai Chicken Pizza	1
2	Chicken	The Barbecue Chicken Pizza	2
3	Chicken	The California Chicken Pizza	3
4	Classic	The Classic Deluxe Pizza	1
5	Classic	The Hawaiian Pizza	2
6	Classic	The Pepperoni Pizza	3
7	Supreme	The Spicy Italian Pizza	1
8	Supreme	The Italian Supreme Pizza	2
9	Supreme	The Sicilian Pizza	3
10	Veggie	The Four Cheese Pizza	1
11	Veggie	The Mexicana Pizza	2
12	Veggie	The Five Cheese Pizza	3