Ingoude Company

SALES REPORT IN SQL

27 September, 2024

INTRODUCTION

In today's competitive food industry, data-driven decisions are essential for businesses to thrive. This project focuses on analyzing pizza orders data using SQL to gain insights into customer preferences. The primary goal is to help the business optimize its menu, improve inventory management, and enhance overall profitability.

The dataset includes details such as pizza types, order quantities ,revenue. Through this analysis, we identify key patterns, including the best-selling pizzas, peak Revenue periods. This report aims to provide actionable recommendations to the business, leveraging SQL queries extract meaningful insights from the data.

Ingoude Company

order_details

order_details_id	order_id	pizza_id	quantity
1	1	hawaiian_m	1
2	2	classic_dlx_m	1
3	2	five_cheese_l	1
4	2	ital_supr_l	1
5	2	mexicana_m	1
6	2	thai_ckn_l	1
7	3	ital_supr_m	1
8	3	prsc_argla_l	1

orders

order_id	order_date	order_time
1	2015-01-01	11:38:36
2	2015-01-01	11:57:40
3	2015-01-01	12:12:28
4	2015-01-01	12:16:31
5	2015-01-01	12:21:30
6	2015-01-01	12:29:36
7	2015-01-01	12:50:37
8	2015-01-01	12:51:37

pizza_type

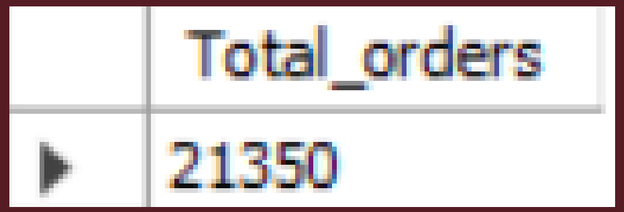
pizza_type_id	name	category	ingredients
bbq_ckn	The Barbecue Chicken Pizza	Chicken	Barbecued Chicken, Red Peppers, Green Peppe...
cali_ckn	The California Chicken Pizza	Chicken	Chicken, Artichoke, Spinach, Garlic, Jalapeno P...
ckn_alfredo	The Chicken Alfredo Pizza	Chicken	Chicken, Red Onions, Red Peppers,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

pizzas

pizza_id	pizza_type_id	size	price
bbq_ckn_s	bbq_ckn	S	12.75
bbq_ckn_m	bbq_ckn	M	16.75
bbq_ckn_l	bbq_ckn	L	20.75
cali_ckn_s	cali_ckn	S	12.75
cali_ckn_m	cali_ckn	M	16.75
cali_ckn_l	cali_ckn	L	20.75

-- Retrieve the total number of orders placed.

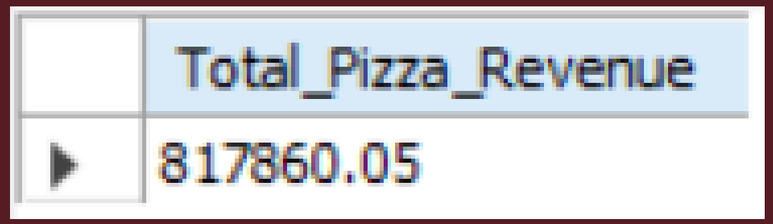
```
select count(order_id) from orders;
```



	Total_orders
▶	21350

-- Calculate the total revenue generated from pizza sales.

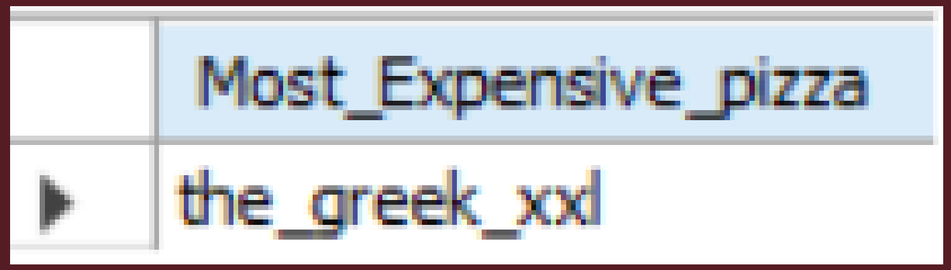
```
SELECT
ROUND(SUM(quantity * price), 2) AS Total_Pizza_Sale
FROM
order_details
JOIN
pizzas ON order_details.pizza_id = pizzas.pizza_id;
```



Total_Pizza_Revenue
817860.05

-- Identify the highest-priced pizza.

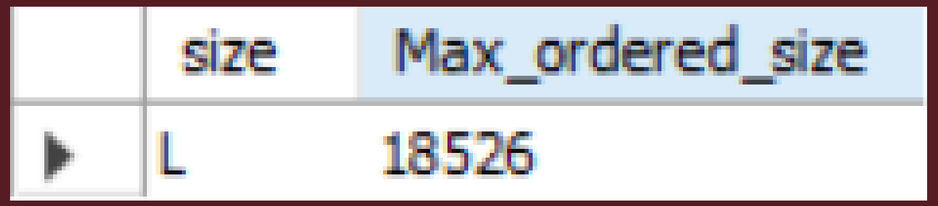
```
select pizza_id as "Most_Expensive_pizza" from pizzas order by price desc limit 1 ;
```



Most_Expensive_pizza
the_greek_xxl

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

SELECT
pizzas.size,
COUNT(order_details.order_details_id) AS Max_ordered_size
FROM
order_details
JOIN
pizzas ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizzas.size
ORDER BY COUNT(order_details.order_details_id) DESC
LIMIT 1;
```



size	Max_ordered_size
L	18526

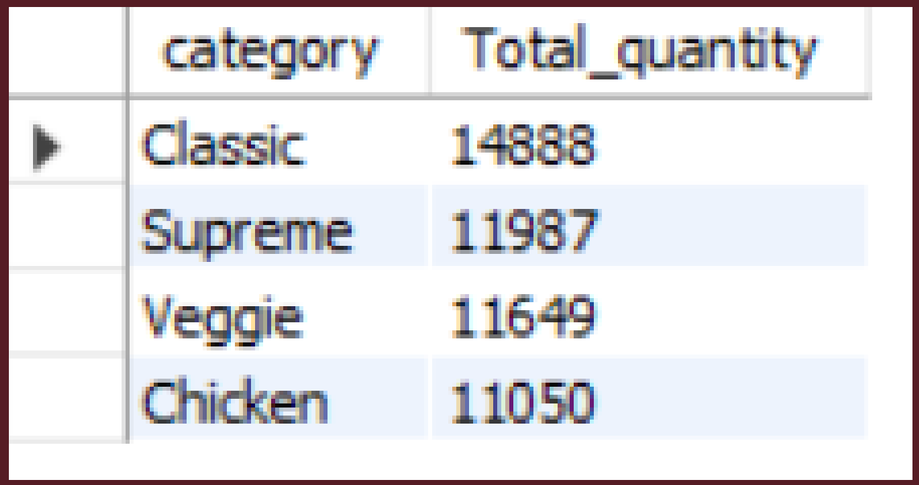
-- List the top 5 most ordered pizza types along with their quantities.

```
SELECT
pizza_types.name,sum(quantity) as `Max Quantity`
FROM
order_details
JOIN
pizzas ON order_details.pizza_id = pizzas.pizza_id join pizza_types
on pizzas.pizza_type_id = pizza_types.pizza_type_id
group by pizza_types.name order by `Max Quantity` desc limit 5;
```

name	Max Quantity
The Classic Deluxe Pizza	2453
The Barbecue Chicken Pizza	2432
The Hawaiian Pizza	2422
The Pepperoni Pizza	2418
The Thai Chicken Pizza	2371

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

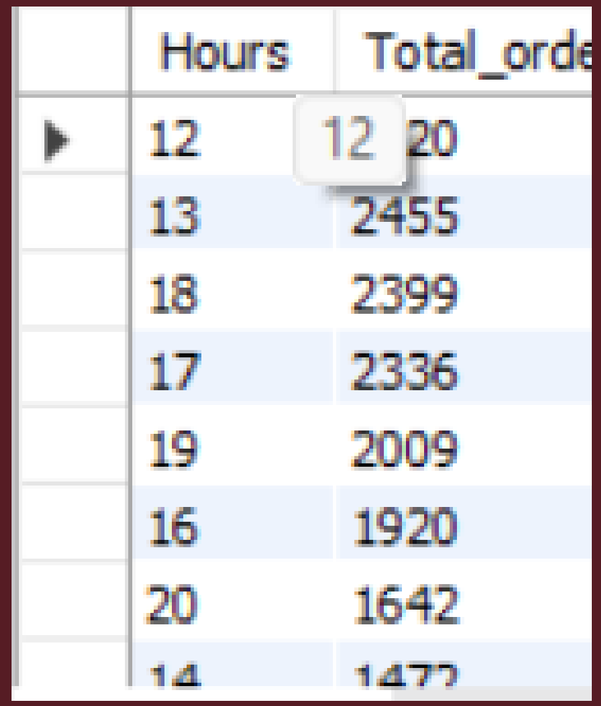
```
SELECT
category, SUM(quantity) AS Total_quantity
FROM
orders
JOIN
order_details ON orders.order_id = order_details.order_id
JOIN
pizzas ON order_details.pizza_id = pizzas.pizza_id
JOIN
pizza_types ON pizza_types.pizza_type_id = pizzas.pizza_type_id
GROUP BY pizza_types.category
ORDER BY Total_quantity DESC;
```



category	Total_quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

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

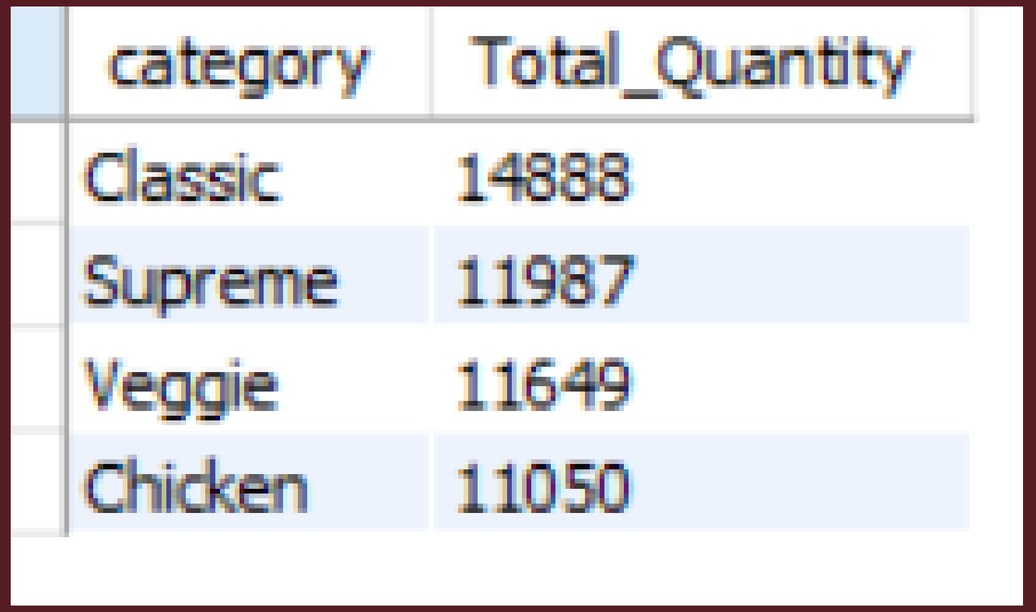
```
SELECT
HOUR(order_time) AS Hours, COUNT(order_id) AS Total_order
FROM
 orders
GROUP BY HOUR(order_time)
ORDER BY Total_order DESC;
```



Hours	Total_orde
12	20
13	2455
18	2399
17	2336
19	2009
16	1920
20	1642
14	1472

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

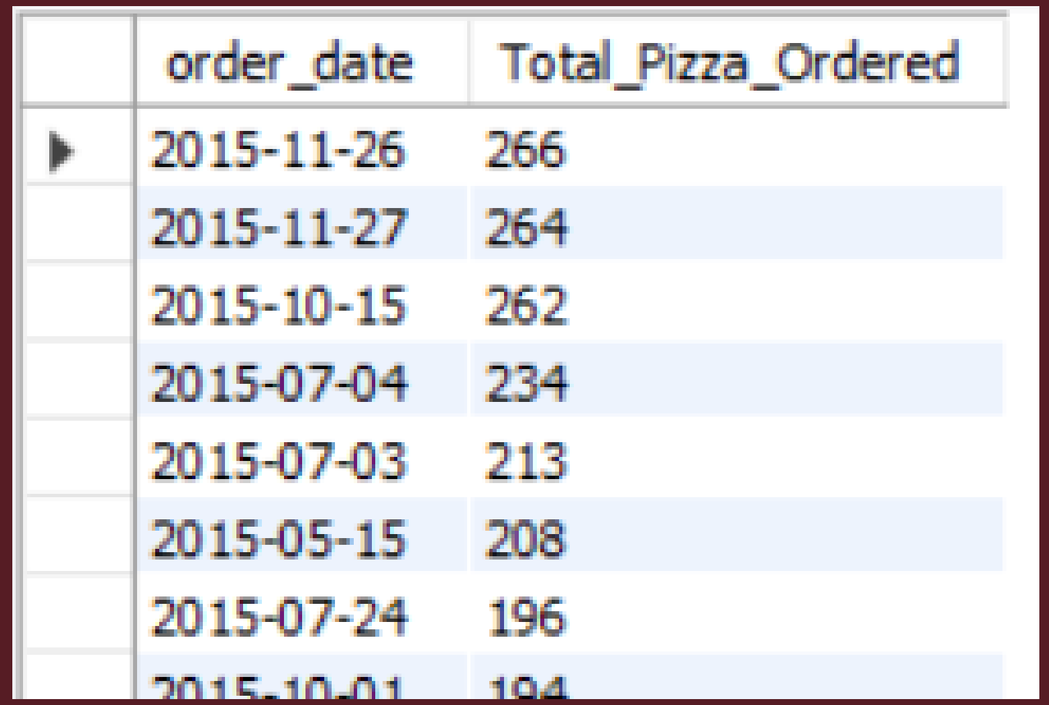
```
SELECT
category,sum(quantity) as "Total_Quantity"
FROM
 orders
   JOIN
order_details ON orders.order_id = order_details.order_id
JOIN
pizzas ON order_details.pizza_id = pizzas.pizza_id
JOIN
pizza_types ON pizza_types.pizza_type_id = pizzas.pizza_type_id
group by pizza_types.category order by Total_Quantity desc  ;
```



category	Total_Quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

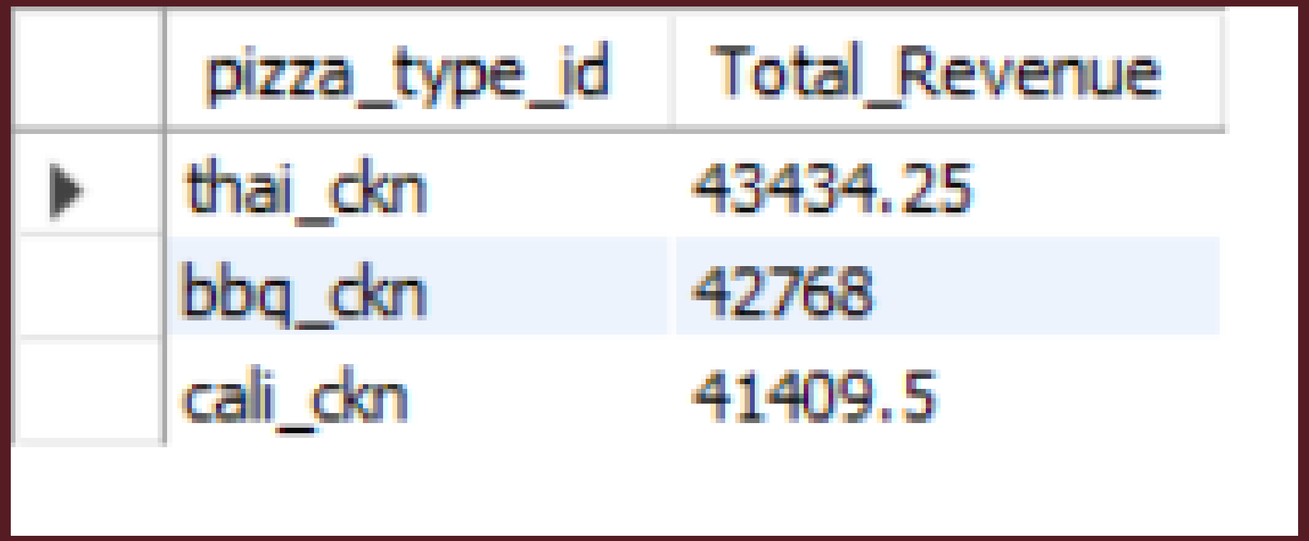
-- Group the orders by date and calculate the average number of pizzas ordered per day.

```
SELECT
order_date, SUM(quantity) AS Total_Pizza_Ordered
FROM
order_details
JOIN
orders ON order_details.order_id = orders.order_id
GROUP BY orders.order_date
ORDER BY Total_Pizza_Ordered DESC;
```



order_date	Total_Pizza_Ordered
2015-11-26	266
2015-11-27	264
2015-10-15	262
2015-07-04	234
2015-07-03	213
2015-05-15	208
2015-07-24	196
2015-10-01	194

```
-- Determine the top 3 most ordered pizza types based on revenue.
SELECT
pizzas.pizza_type_id, SUM(quantity * price) AS Total_Revenue
FROM
orders
JOIN
order_details ON orders.order_id = order_details.order_id
JOIN
pizzas ON order_details.pizza_id = pizzas.pizza_id
JOIN
pizza_types ON pizza_types.pizza_type_id = pizzas.pizza_type_id
GROUP BY pizzas.pizza_type_id
ORDER BY Total_Revenue DESC
LIMIT 0 , 3;
```



pizza_type_id	Total_Revenue
thai_ckn	43434.25
bbq_ckn	42768
cali_ckn	41409.5

-- Calculate the percentage contribution of each pizza type to total revenue.

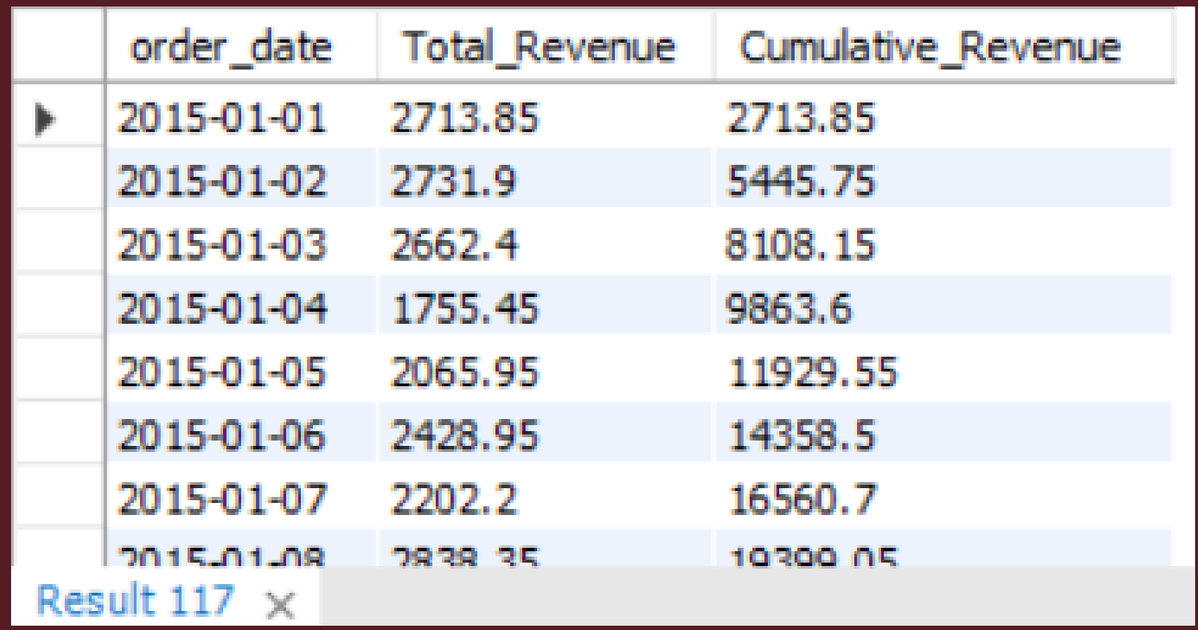
```
set @total_revenue = (SELECT
ROUND(SUM(quantity * price), 2) AS Total_Pizza_Sale
FROM
order_details
JOIN
pizzas ON order_details.pizza_id = pizzas.pizza_id);

SELECT
pizzas.pizza_type_id, SUM(quantity * price)*100/@total_revenue AS Total_Revenue
FROM
 orders
 JOIN
order_details ON orders.order_id = order_details.order_id
JOIN
pizzas ON order_details.pizza_id = pizzas.pizza_id
JOIN
pizza_types ON pizza_types.pizza_type_id = pizzas.pizza_type_id
GROUP BY pizzas.pizza_type_id
ORDER BY Total_Revenue Desc;
```

pizza_type_id	Total_Revenue
thai_ckn	5.310719113863062
bbq_ckn	5.229256521332714
cali_ckn	5.063152308270834
classic_dlx	4.66834148458529
spicy_ital	4.258827656394269
southw_ckn	4.243482732773168
ital_supr	4.093212524563341
hawaiian	3.946060209200828 3

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

select *,sum(Total_Revenue) over ( order by order_date) as Cumulative_Revenue  from
(SELECT
order_date,round(sum(quantity*price),2) as Total_Revenue
FROM
 orders
   JOIN
order_details ON orders.order_id = order_details.order_id
JOIN
pizzas ON order_details.pizza_id = pizzas.pizza_id
JOIN
pizza_types ON pizza_types.pizza_type_id = pizzas.pizza_type_id group by orders.order_date)t;
```

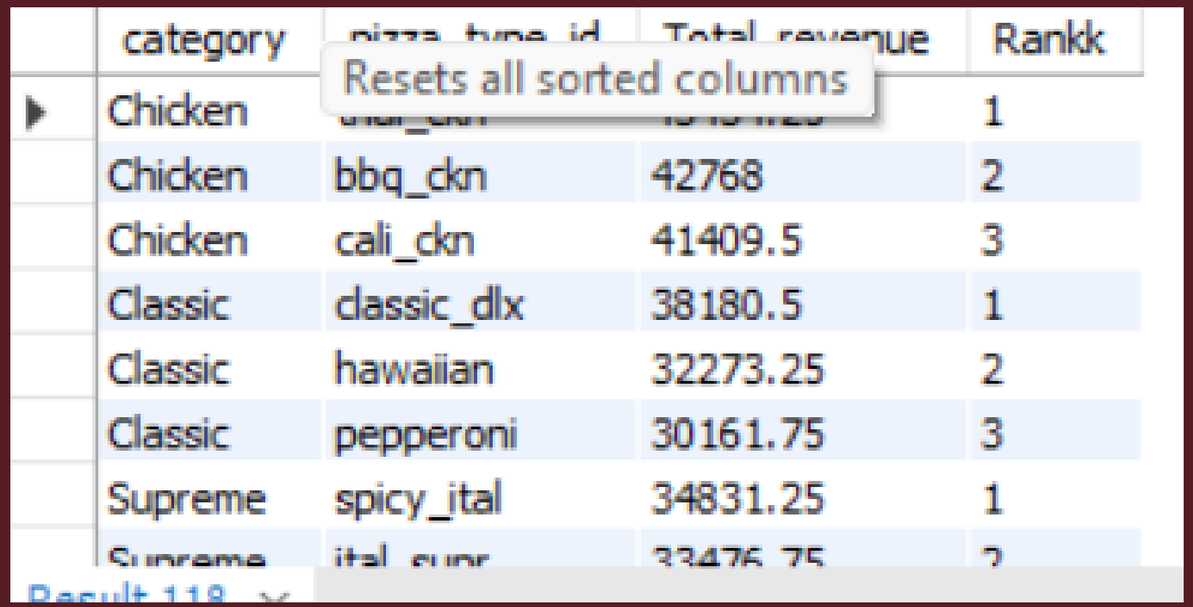


order_date	Total_Revenue	Cumulative_Revenue
2015-01-01	2713.85	2713.85
2015-01-02	2731.9	5445.75
2015-01-03	2662.4	8108.15
2015-01-04	1755.45	9863.6
2015-01-05	2065.95	11929.55
2015-01-06	2428.95	14358.5
2015-01-07	2202.2	16560.7
2015-01-08	2838.35	19399.05

Result 117

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

```
select * from
(select *,dense_rank() over (PARTITION BY category ORDER BY Total_revenue DESC) AS "Rankk" from
(SELECT
category,pizza_types.pizza_type_id,round(sum(quantity*price),2) as "Total_revenue"
FROM
orders
JOIN
order_details ON orders.order_id = order_details.order_id
JOIN
pizzas ON order_details.pizza_id = pizzas.pizza_id
JOIN
pizza_types ON pizza_types.pizza_type_id = pizzas.pizza_type_id
group by pizza_types.category,pizza_types.pizza_type_id)t )t1
where Rankk<4;
```



category	pizza_type_id	Total_revenue	Rankk
Chicken	[illegible]	[illegible]	1
Chicken	bbq_ckn	42768	2
Chicken	cali_ckn	41409.5	3
Classic	classic_dlx	38180.5	1
Classic	hawaiian	32273.25	2
Classic	pepperoni	30161.75	3
Supreme	spicy_ital	34831.25	1
Supreme	ital_supr	33476.75	2

THANK YOU