Pizza Sales Data Ad-hoc Analysis Using SQL

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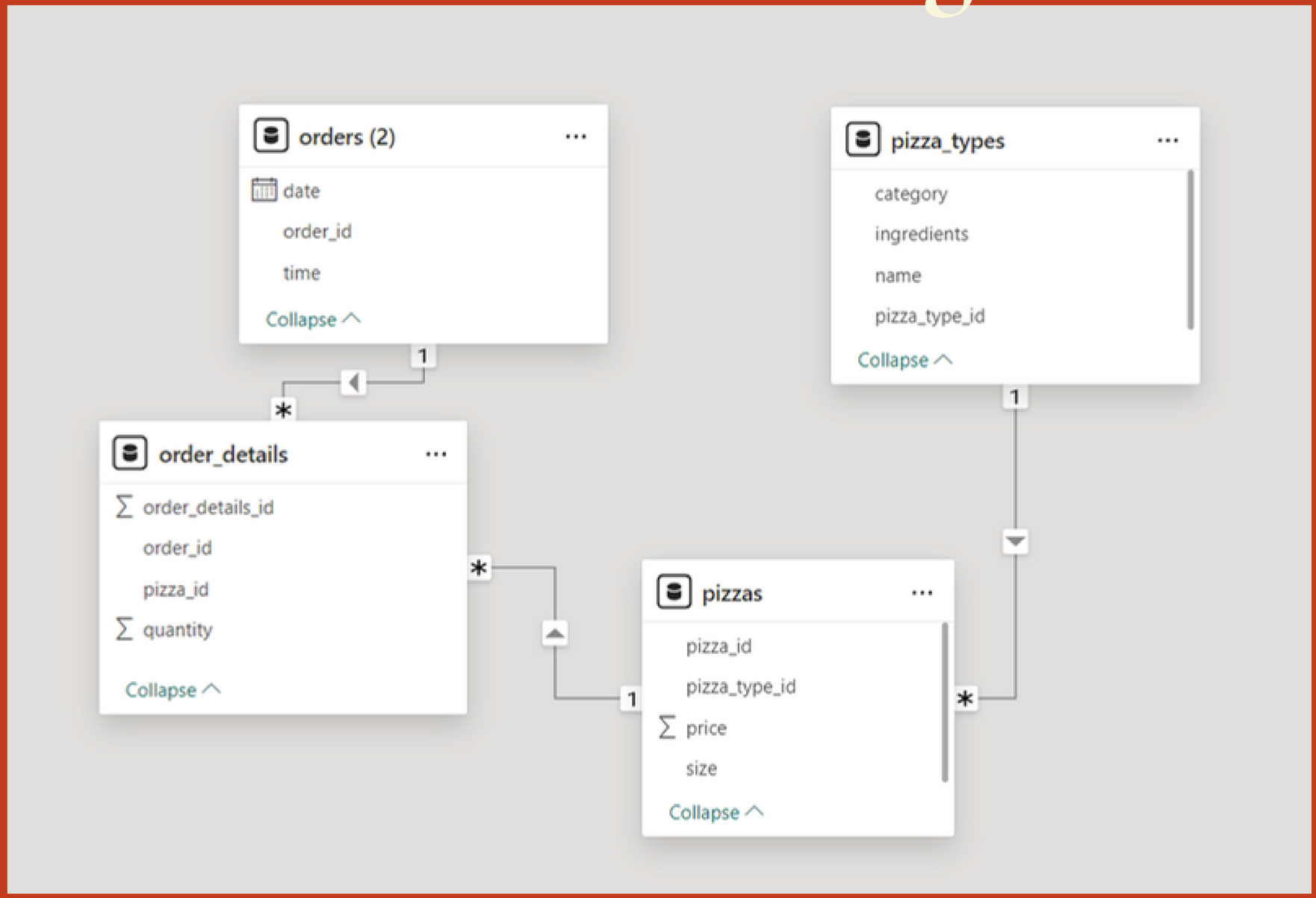
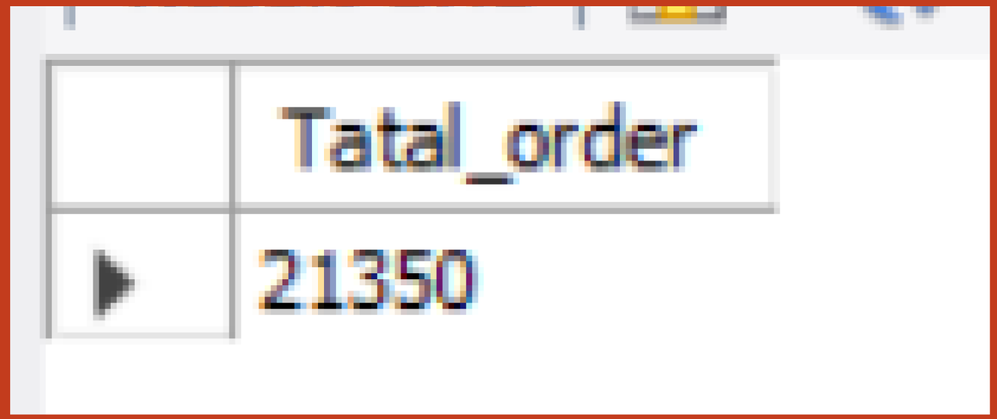
Data Modeling



Retrieve the total number of orders placed.

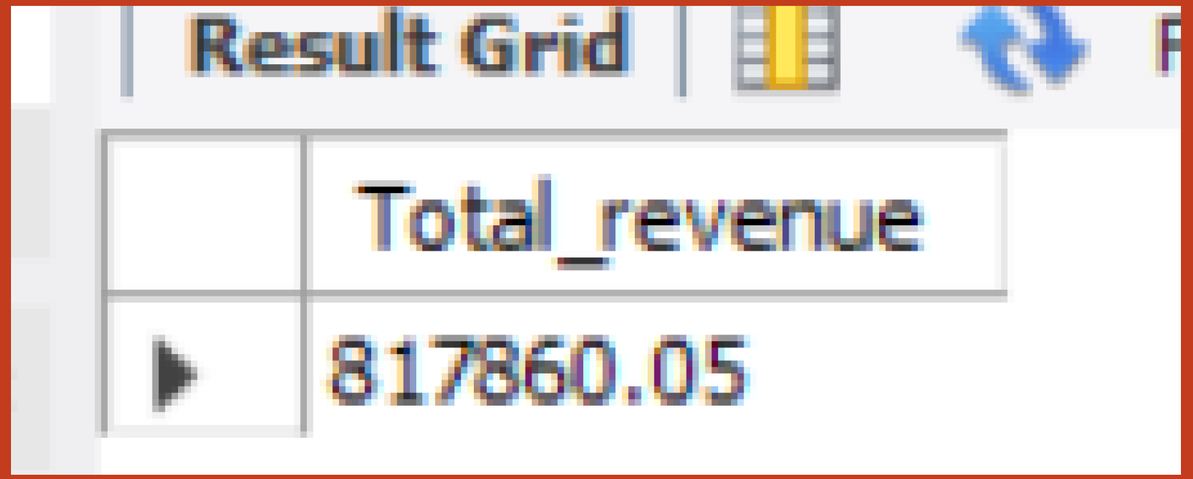
```sql
SELECT
    COUNT(order_id) AS Tatal_order
FROM
    orders;
```



	Tatal_order
▶	21350

Calculate the total revenue generated from pizza sales.

```sql
SELECT
    ROUND(SUM(order_details.quantity * pizzas.price),
            2) AS Total_revenue
FROM
    order_details
        INNER JOIN
    pizzas USING (pizza_id);
```



Identify the highest-priced pizza.

```sql
SELECT
    name, price
FROM
    pizza_types
        INNER JOIN
    pizzas USING (pizza_type_id)
ORDER BY price DESC
LIMIT 1;
```

Result Grid | Filter Rows:

name	price
The Greek Pizza	35.95

Identify the most common pizza size ordered.

```sql
SELECT
    size, COUNT(size) AS s
FROM
    pizzas
        INNER JOIN
    order_details USING (pizza_id)
GROUP BY size
ORDER BY s DESC
LIMIT 1;
```

size	s
L	18526

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

```sql
SELECT
    name, SUM(quantity) AS total_q
FROM
    pizzas
        INNER JOIN
    order_details USING (pizza_id)
        INNER JOIN
    pizza_types USING (pizza_type_id)
GROUP BY name
ORDER BY total_q DESC
LIMIT 5;
```

Result Grid | Filter Rows:

name	total_q
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.

```sql
SELECT
    category, SUM(quantity) AS total_quantity
FROM
    pizza_types
        INNER JOIN
    pizzas USING (pizza_type_id)
        INNER JOIN
    order_details USING (pizza_id)
GROUP BY category;
```

category	total_quantity
Classic	14888
Veggie	11649
Supreme	11987
Chicken	11050

Determine the distribution of orders by hour of the day.

```sql
with abc as(select *,(case when "08:00:00"<order_time and order_time<="09:00:00" then "08-09"
when "09:00:00"<order_time and order_time<="10:00:00" then "09-10"
when "10:00:00"<order_time and order_time<="11:00:00" then "10-11"
when "11:00:00"<order_time and order_time<="12:00:00" then "11-12"
when "12:00:00"<order_time and order_time<="13:00:00" then "12-13"
when "13:00:00"<order_time and order_time<="14:00:00" then "13-14"
when "14:00:00"<order_time and order_time<="15:00:00" then "14-15"
when "15:00:00"<order_time and order_time<="16:00:00" then "15-16"
when "16:00:00"<order_time and order_time<="17:00:00" then "16-17"
when "17:00:00"<order_time and order_time<="18:00:00" then "17-18"
when "18:00:00"<order_time and order_time<="19:00:00" then "18-19"
when "19:00:00"<order_time and order_time<="20:00:00" then "19-20"
when "20:00:00"<order_time and order_time<="21:00:00" then "20-21"
when "21:00:00"<order_time and order_time<="22:00:00" then "21-22"
when "22:00:00"<order_time and order_time<="23:00:00" then "22-23"
else "23-24" end) as time_status
from orders)
select time_status,count(order_id) as total_order from abc group by time_status order by time_status;
```

time_status	total_order
09-10	1
10-11	8
11-12	1233
12-13	2518
13-14	2457
14-15	1471
15-16	1467
16-17	1920
17-18	2336
18-19	2400
19-20	2009
20-21	1641
21-22	1198
22-23	663
23-24	28

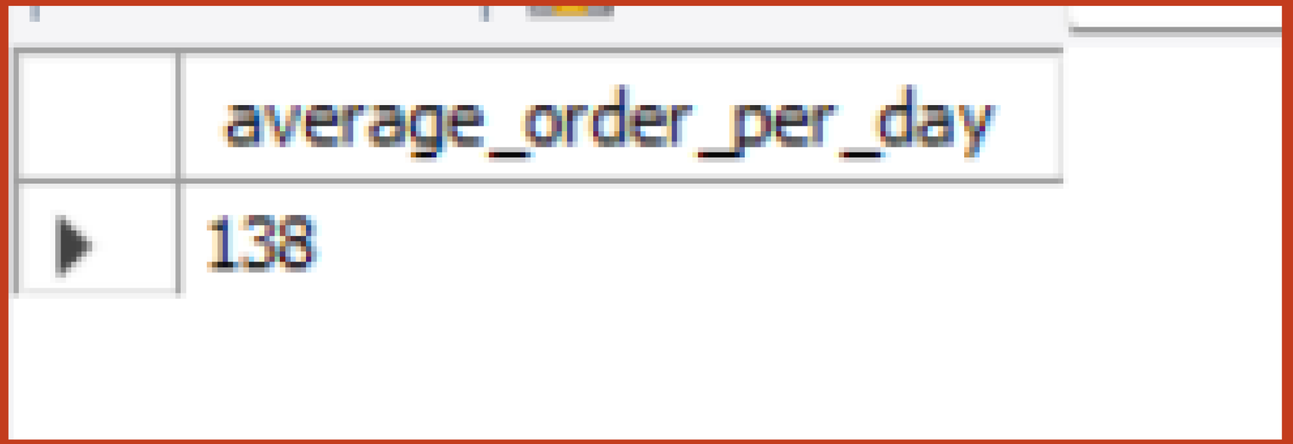
Join relevant tables to find the category-wise distribution of pizzas.

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

	category	total_pizza_
	Chicken	6
	Classic	8
	Supreme	9
	Veggie	9

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

```sql
with abc as(select sum(quantity) as order_day_wise from orders
inner join order_details using(order_id) group by order_date)
select round(avg(order_day_wise)) as average_order_per_day from abc;
```



	average_order_per_day
▶	138

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

```sql
SELECT
    name, ROUND(SUM(quantity * price), 2)
FROM
    pizzas
        INNER JOIN
    pizza_types USING (pizza_type_id)
        INNER JOIN
    order_details USING (pizza_id)
GROUP BY name
ORDER BY SUM(quantity * price) DESC
LIMIT 3;
```

name	ROUND(SUM(quantity * price), 2)
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5

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

```
with abc as(select category,sum(quantity*price) as revenue from pizza_types inner join pizzas
using(pizza_type_id) inner join order_details using(pizza_id) group by category)
select category,round(revenue*100/(select sum(revenue) from abc),2)  as percent_by_pizza_type from abc ;
```

category	percent_by_pizza_type
Classic	26.91
Veggie	23.68
Supreme	25.46
Chicken	23.96

Analyze the cumulative revenue generated over time.

```
with abc as(select order_date,sum(quantity*price) as revenue from  orders inner join
 order_details using(order_id) inner join pizzas using(pizza_id) group by order_date)
select order_date,round(sum(revenue) over(order by order_date),2) as cum_revenue from abc;
```

order_date	cum_revenue
2015-01-01	2713.85
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
2015-01-10	23990.35
2015-01-11	25862.65
2015-01-12	27781.7
2015-01-13	29831.3
2015-01-14	32358.7
2015-01-15	34343.5

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

```sql
with abc as (select category,name,round(sum(quantity*price),2)
 as revenue,row_number() over(partition by category order by
 sum(quantity*price) desc  ) as num from pizza_types inner join
pizzas using(pizza_type_id) inner join order_details using(pizza_id) group by category,name )
select category,name,revenue from abc where num<=3  ;
```

category	name	revenue
Chicken	The Thai Chicken Pizza	43434.25
Chicken	The Barbecue Chicken Pizza	42768
Chicken	The California Chicken Pizza	41409.5
Classic	The Classic Deluxe Pizza	38180.5
Classic	The Hawaiian Pizza	32273.25
Classic	The Pepperoni Pizza	30161.75
Supreme	The Spicy Italian Pizza	34831.25
Supreme	The Italian Supreme Pizza	33476.75
Supreme	The Sicilian Pizza	30940.5
Veggie	The Four Cheese Pizza	32265.7
Veggie	The Mexicana Pizza	26780.75
Veggie	The Five Cheese Pizza	26066.5

Thank you