In this presentation, I'll be showcasing the solutions to 13 questions that I executed it in MySQL. Each question and its corresponding solution are presented in the slides.

This project involves analyzing the Pizza Sales data of a restaurant.
I hope you find the insights and results as engaging as I did.

Highlights:

- Objective: To analyze and derive insights from the restaurant's Pizza Sales data.
- Scope: Addressing 13 different queries to extract meaningful information from the database.
- Tools Used: MySQL for database querying and PowerPoint for presenting the results.

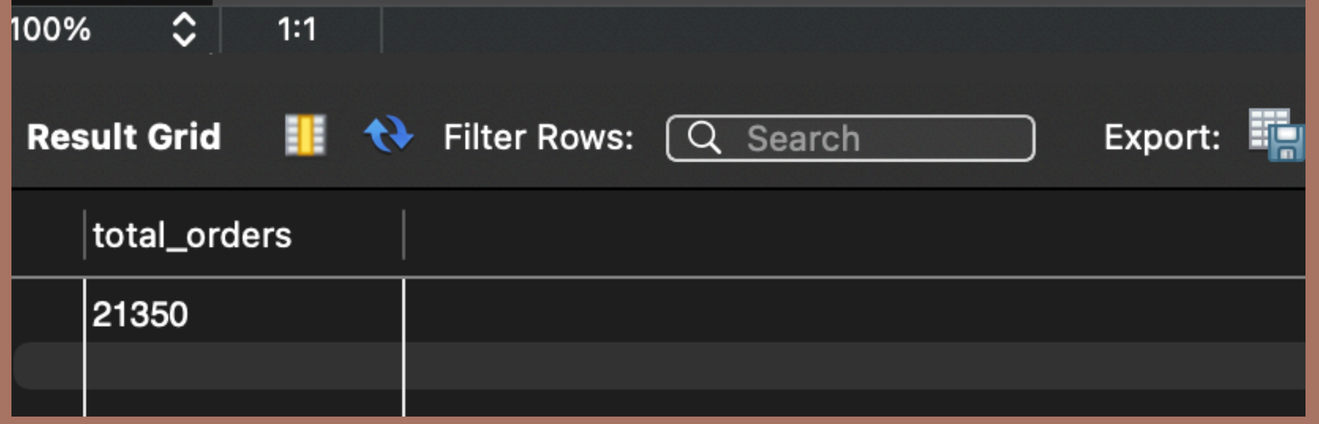
Please follow along and enjoy the journey through my first SQL project!

Retrieve the total number of orders placed.

Solution :

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


Output:



Calculate the total revenue generated from pizza sales.

Solution :

```sql
SELECT
    ROUND(SUM(od.quantity * pi.price), 2) AS total_revenue
FROM
    order_details od
        JOIN
    pizzas pi ON pi.pizza_id = od.pizza_id
```


100% 1:3

Result Grid Filter Rows: Search Export:

Output:

total_revenue
817860.05

Identify the highest-priced pizza.

Solution :

```sql
SELECT
    pizza_types.name, pizzas.price
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
ORDER BY pizzas.price DESC
LIMIT 1;
```


Output:

00% 8:10

Result Grid | Filter Rows: Search | Export: | Fetch rows:

name	price
The Greek Pizza	35.95

Identify the most common pizza size ordered.

Solution :

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

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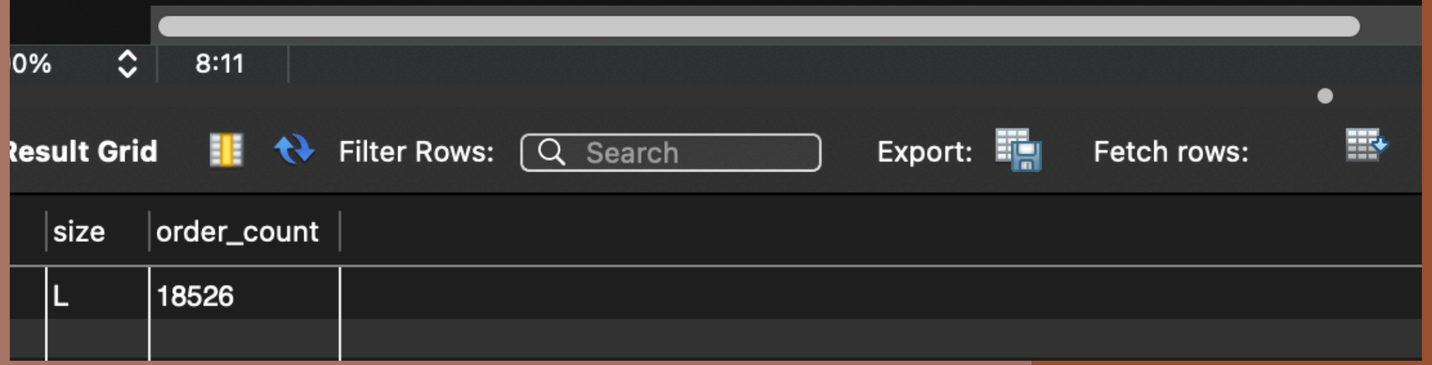
Output:



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

Solution :

```sql
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;
```

100% 8:13

Result Grid | Filter Rows: Search | Export: | Fetch rows:

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

Output:

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

Solution :

```sql
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;
```

100% 23:14

Result Grid Filter Rows: Search Export:

category	quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

Output:

Determine the distribution of orders by hour of the day.

Solution :

```
3 •  SELECT
4        HOUR(order_time) AS hour, COUNT(order_id) AS order_count
5    FROM
6        orders
7    GROUP BY HOUR(order_time);
8
```

100% 26:7

Result Grid Filter Rows: Search Export:

Output:

hour	order_count
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
10	8
9	1

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

Solution :

```
3  SELECT
4      category, COUNT(name)
5  FROM
6      pizza_types
7  GROUP BY category;
```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Result Grid Filter Rows: Search Exp

Output:

category	COUNT(name)
Chicken	6
Classic	8
Supreme	9
Veggie	9

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

Solution :

```sql
SELECT
    ROUND(AVG(quantity), 0) as avg_pizzas_ordered_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;
```


00% 58:4

Result Grid Filter Rows: Search Export:

Output:

avg_pizzas_ordered_per_day
138

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

Solution :

```sql
SELECT
    pizza_types.name,
    SUM(order_details.quantity * pizzas.price) AS revenue
FROM
    pizza_types
        JOIN
    pizzas ON pizzas.pizza_type_id = pizza_types.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;
```

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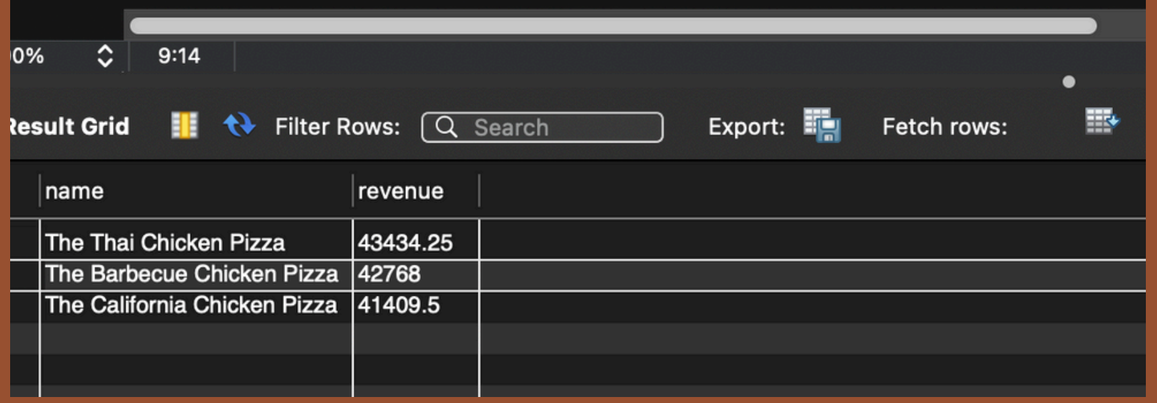
Output:



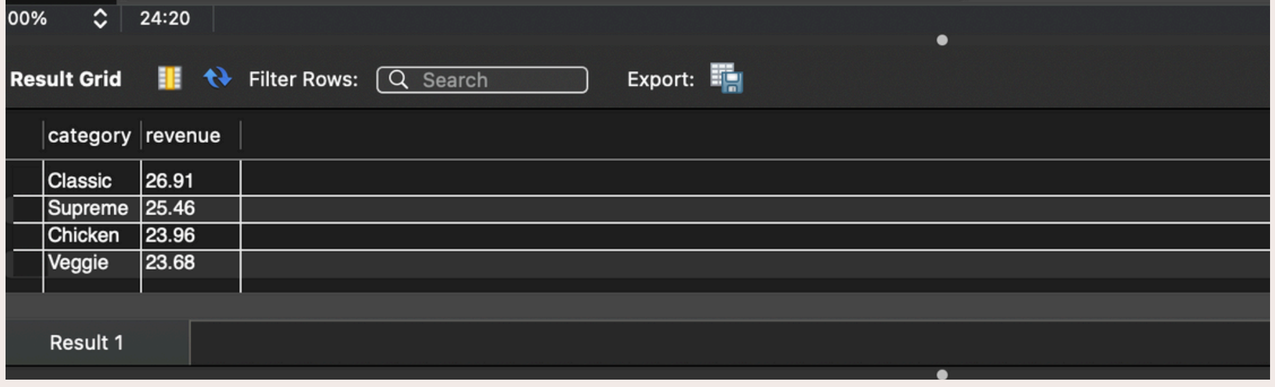
name	revenue
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5

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

Solution :

```sql
SELECT
    pizza_types.category,
    ROUND(SUM(order_details.quantity*pizzas.price) / (SELECT
                    ROUND(SUM(order_details.quantity*pizzas.price),
                                2) AS total_sales
                FROM
                    order_details
                        JOIN
                    pizzas ON pizzas.pizza_id = order_details.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:



Analyze the cumulative revenue generated over time.

Solution :

```sql
select order_date,
sum(revenue) over(order by order_date) as cum_revenue
from
(select orders.order_date, sum(order_details.quantity *  pizzas.price) as revenu
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;
```

Output:

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Result Grid Filter Rows: Search Export:

order_date	cum_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
2015-01-10	23990.350000000002
2015-01-11	25862.65
2015-01-12	27781.7
2015-01-13	29831.300000000003
2015-01-14	32358.700000000004
2015-01-15	34343.50000000001
2015-01-16	36937.65000000001

Result 2

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

Solution :

```sql
select name, revenue from
(select category, name, revenue,
rank() over(partition by category order by revenue desc) as rn
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 rn <=3;
```

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Result Grid Filter Rows: Search Export:

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 Pepperoni Pizza	30161.75
The Spicy Italian Pizza	34831.25
The Italian Supreme Pizza	33476.75
The Sicilian Pizza	30940.5
The Four Cheese Pizza	32265.70000000065
The Mexicana Pizza	26780.75
The Five Cheese Pizza	26066.5

Output:

THANK YOU SO MUCH FOR SPENDING SOME TIME.

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