PIZZA SALES ANALYSIS USING SQL

HELLO !

Hello, my name is Arpit Awasthi, and in this project, I utilized SQL queries ranging from basic to advanced levels to solve questions related to pizza sales. The aim was to uncover meaningful insights and trends that would aid in making informed business decisions and optimizing future sales strategies.

Arpit Awasthi

QUESTIONS RELATED TO PIZZA SALES

Basic:

1) Retrieve the total number of orders placed.
2) Calculate the total revenue generated from pizza sales.
3) Identify the highest-priced pizza.
4) Identify the most common pizza size ordered.
5) List the top 5 most ordered pizza types along with their quantities.

Intermediate:

6)Join the necessary tables to find the total quantity of each pizza category ordered.
7)Determine the distribution of orders by hour of the day.
8)Join relevant tables to find the category-wise distribution of pizzas.
9)Group the orders by date and calculate the average number of pizzas ordered per day.
10)Determine the top 3 most ordered pizza types based on revenue.

Advanced:

11)Calculate the percentage contribution of each pizza type to total revenue.
12)Analyze the cumulative revenue generated over time.
13)Determine the top 3 most ordered pizza types based on revenue for each pizza category.

RETRIEVE THE TOTAL NUMBER OF ORDERS PLACED

```sql
SELECT
    COUNT(*) AS Total_orders
FROM
    orders;
```

OUTPUT

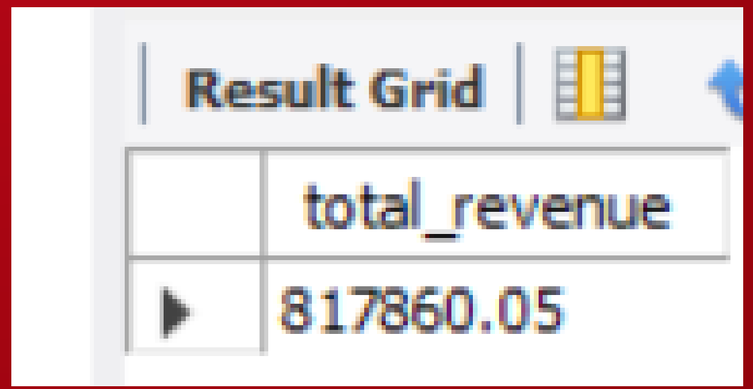
Result Grid

	Total_orders
▶	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
        JOIN
    pizzas ON order_details.pizza_id = pizzas.pizza_id;
```

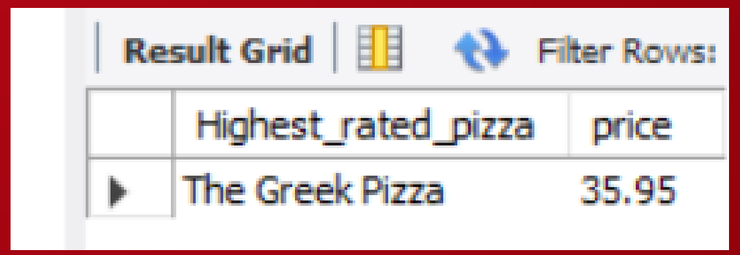
OUTPUT



IDENTIFY THE HIGHEST-PRICED PIZZA

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

OUTPUT

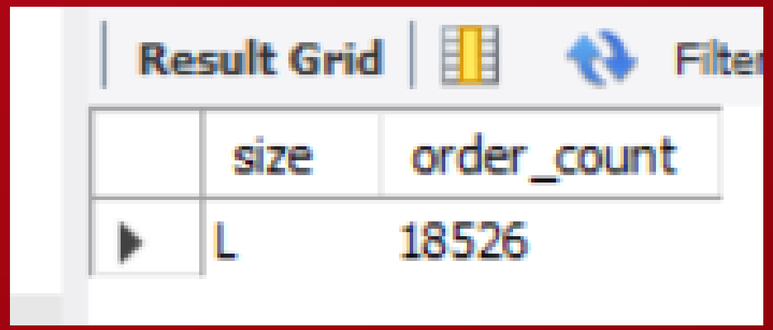


	Highest_rated_pizza	price
▶	The Greek Pizza	35.95

IDENTIFY THE MOST COMMON PIZZA SIZE ORDERED

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

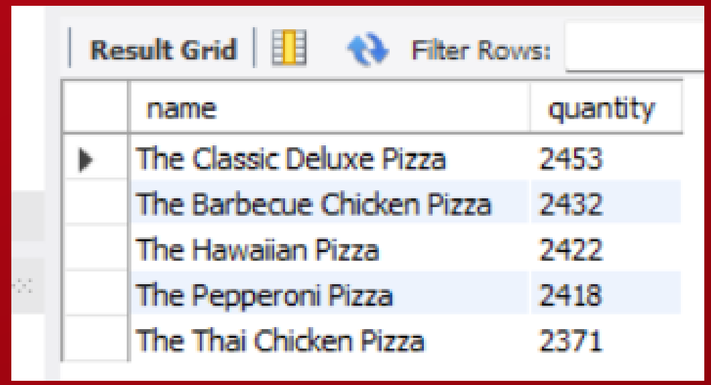
OUTPUT



LIST THE TOP 5 MOST ORDERED PIZZA TYPES ALONG WITH THEIR QUANTITIES

```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;
```

OUTPUT



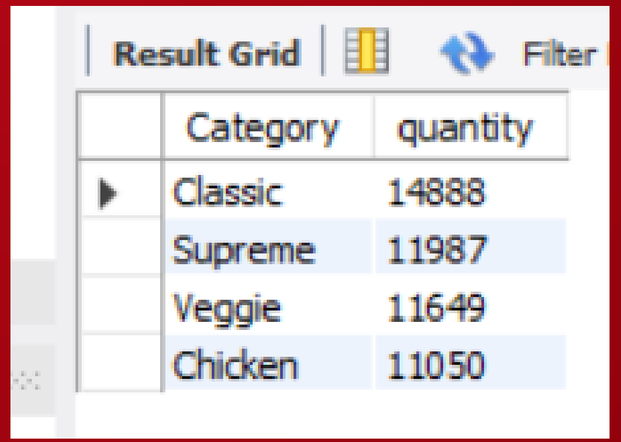
Result Grid | Filter Rows:

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

JOIN THE NECESSARY TABLES TO FIND THE TOTAL QUANTITY OF EACH PIZZA CATEGORY ORDERED

```sql
SELECT
    pizza_types.category AS 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 Category
ORDER BY quantity DESC;
```

OUTPUT

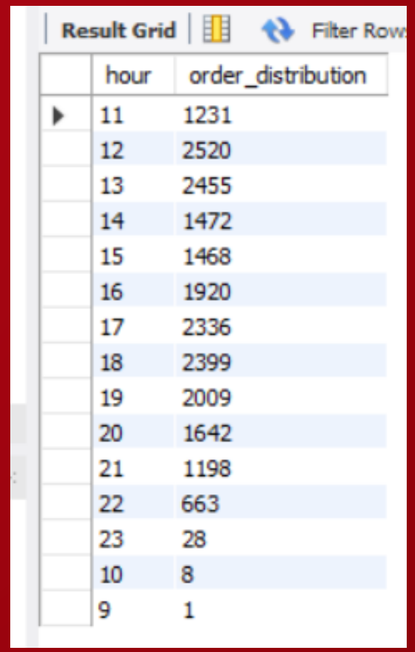


Category	quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

DETERMINE THE DISTRIBUTION OF ORDERS BY HOUR OF THE DAY

```sql
SELECT
    HOUR(order_time) AS hour,
    COUNT(order_id) AS order_distribution
FROM
    orders
GROUP BY HOUR(order_time);
```

OUTPUT



Result Grid | Filter Row

hour	order_distribution
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

FIND THE CATEGORY-WISE DISTRIBUTION OF PIZZAS

```sql
SELECT
    category, COUNT(pizza_type_id) AS pizza_count
FROM
    pizza_types
GROUP BY category;
```

OUTPUT

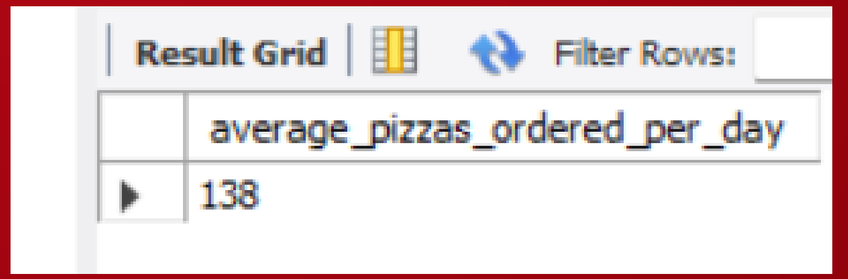
Result Grid | Filter Rc

	category	pizza_count
▶	Chicken	6
	Classic	8
	Supreme	9
	Veggie	9

GROUP THE ORDERS BY DATE AND CALCULATE THE AVERAGE NUMBER OF PIZZAS ORDERED PER DAY

```sql
SELECT
    ROUND(AVG(quantity), 0) AS average_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 order_date) AS a;
```

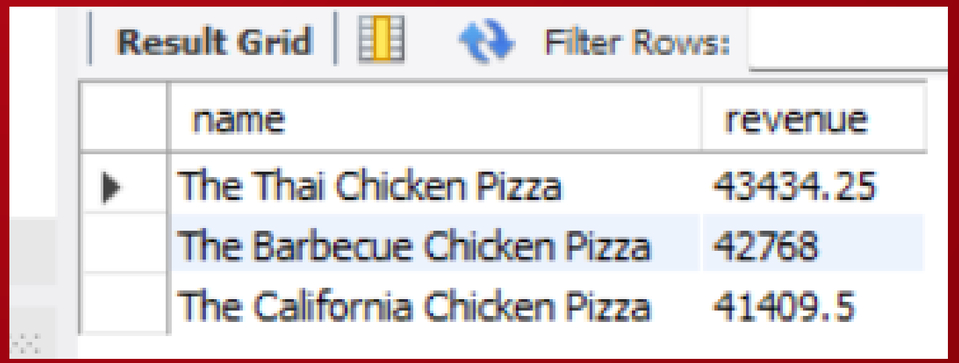
OUTPUT



DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE

```sql
SELECT
    pizza_types.name,
    ROUND(SUM(order_details.quantity * pizzas.price),
            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.name
ORDER BY revenue DESC
LIMIT 3;
```

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

```sql
SELECT
    pizza_types.category,
    ROUND((SUM(order_details.quantity * pizzas.price) / (SELECT
    ROUND(SUM(order_details.quantity * pizzas.price),
            2) AS total_revenue
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

Result Grid | Filte

	category	revenue
▶	Classic	26.91
	Supreme	25.46
	Chicken	23.96
	Veggie	23.68

ANALYZE THE CUMULATIVE REVENUE GENERATED OVER TIME

```sql
select order_date, SUM(revenue) over(order by order_date) as cumulative_revenue
from
(SELECT orders.order_date , SUM(order_details.quantity * pizzas.price) as revenue
from orders join order_details on orders.order_id = order_details.order_id join pizzas on pizzas.pizza_id = order_details.pizza_id group by orders.order_date) as total_revenue;
```

OUTPUT

Result Grid | Filter Rows:

order_date	cumulative_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
2015-01-17	39001.75000000001
2015-01-18	40978.600000000006
2015-01-19	43365.75000000001
2015-01-20	45763.65000000001
2015-01-21	47804.20000000001
2015-01-22	50300.90000000001
2015-01-23	52724.600000000006

DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE FOR EACH PIZZA CATEGORY

```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,ROUND(SUM(order_details.quantity * pizzas.price),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,pizza_types.name
ORDER BY revenue DESC) as a) as b
where rn <=3;
```

OUTPUT

Result Grid | Filter Rows:

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	32265.7
The Mexicana Pizza	26780.75
The Five Cheese Pizza	26066.5

THANK YOU!