Pizza Sales Report Analysis using SQL

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Project using SQL on MySQL RDBMS

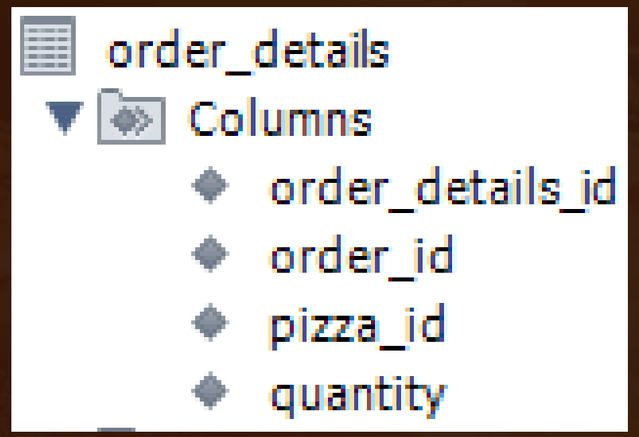
ABOUT DATASET

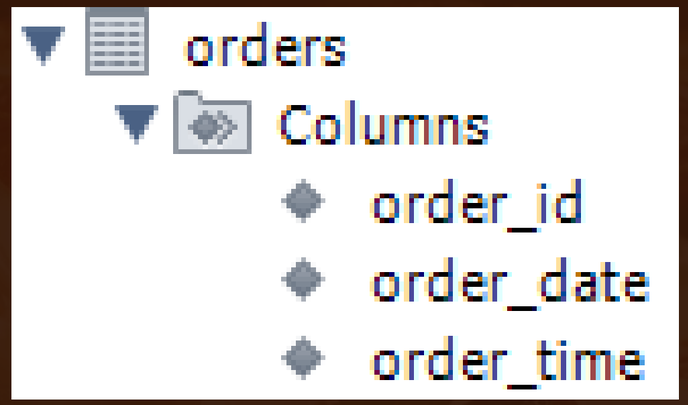
Pizza Sales Dataset

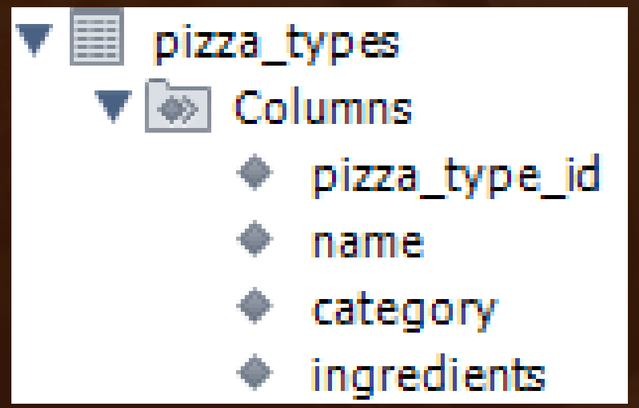
~ Total Tables : order_details, orders, pizza_types, pizzas

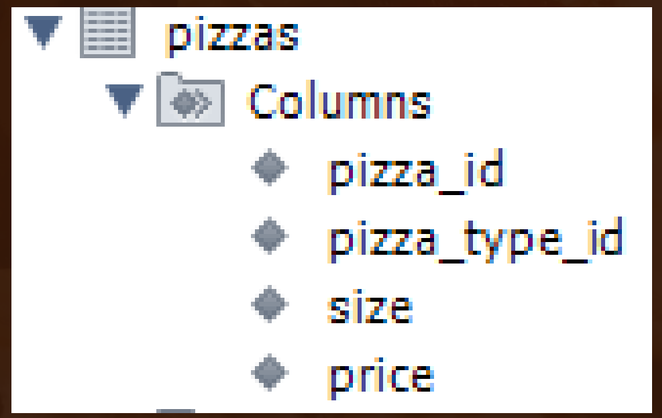
~ Rows : 70,000 + across tables

SCHEMA DIAGRAM



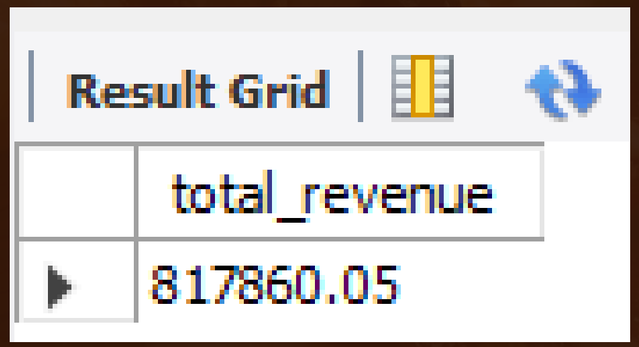






Calculate the total revenue generated from pizza sales.

```
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
```



Identify the highest-priced pizza.

```
SELECT 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 ;
```

Result Grid | Filter Rows:

name	price
The Greek Pizza	35.95

Identify the most common pizza size ordered.

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

Result Grid

	size	orders
▶	L	18526

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

```sql
SELECT pizza_types.name, SUM(order_details.quantity) AS orders
    FROM pizza_types
        JOIN pizzas
    ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN order_details
    ON pizzas.pizza_id = order_details.pizza_id
GROUP BY pizza_types.name
    ORDER BY orders DESC LIMIT 5 ;
```

Result Grid | Filter Rows:

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

Result Grid | Filter Rows:

category	quantity_ordered
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

Determine the distribution of orders by hour of the day.

```
SELECT HOUR(orders.order_time) AS hour, COUNT(orders.order_id) AS total_orders
    FROM orders
        GROUP BY HOUR(orders.order_time)
    ORDER BY hour ;
```

Result Grid | Filter Rows:

hour	total_orders
9	1
10	8
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

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

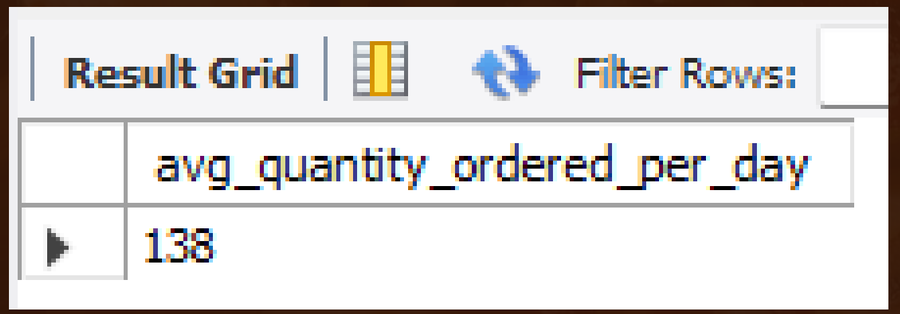
```
SELECT category, COUNT(name) AS pizza_types
    FROM pizza_types
        GROUP BY category ;
```

Result Grid | Filter Row

	category	pizza_types
▶	Chicken	6
	Classic	8
	Supreme	9
	Veggie	9

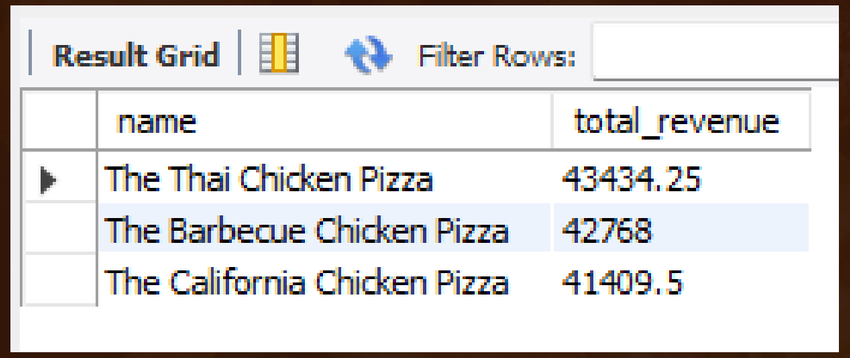
Group the orders by date and calculate the average number of pizzas ordered per day.

```
SELECT ROUND(AVG(total_quantity), 0) AS avg_quantity_ordered_per_day
    FROM
(SELECT orders.order_date, SUM(order_details.quantity) AS total_quantity
    FROM orders
        JOIN order_details
    ON orders.order_id = order_details.order_id
        GROUP BY orders.order_date ) AS order_quantity
```



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

```
SELECT pizza_types.name ,
ROUND(SUM(order_details.quantity * pizzas.price),2) as total_revenue
    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 total_revenue DESC LIMIT 3 ;
```



name	total_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.

```
SELECT pizza_types.category, ROUND(SUM(order_details.quantity * pizzas.price) /
(SELECT
SUM(order_details.quantity * pizzas.price)as total_revenue
    FROM order_details
        JOIN pizzas
    ON order_details.pizza_id = pizzas.pizza_id ) * 100, 2) AS percentage_contributed
FROM
    pizza_types
        JOIN pizzas
    ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN order_details
    ON pizzas.pizza_id = order_details.pizza_id
GROUP BY pizza_types.category
        ORDER BY percentage_contributed DESC ;
```

Result Grid | Filter Rows:

category	percentage_contributed
Classic	26.91
Supreme	25.46
Chicken	23.96
Veggie	23.68

Analyze the cumulative revenue generated over time.

```
SELECT order_date, ROUND(SUM(revenue) OVER(ORDER BY order_date),2) AS cum_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 order_details.pizza_id = pizzas.pizza_id
            GROUP BY orders.order_date) AS total_sales
```

Result Grid | Filter Rows:

order_date	cum_revenue
2015-03-21	183389.45
2015-03-22	184648.7
2015-03-23	186881.25
2015-03-24	189043.55
2015-03-25	190971.3
2015-03-26	193186.8
2015-03-27	195931.6

Goes on ...

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 pizzas.pizza_id = order_details.pizza_id
            GROUP BY pizza_types.category, pizza_types.name) AS table1) AS table2
        WHERE rn <= 3 ;
```

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

5 BUSINESS INSIGHTS

- Evening (4-8) saw peak orders - Key sales window
- Large size pizzas were most popular - Preferred by Customers
- Classic had high volume and drove most Revenue
- Expensive pizzas sold less - Mid range pricing works better
- Average 138 pizzas sold per day during the analyzed period

Thank you for reviewing my SQL Project.

I hope you found the insights valuable.

Let’s connect -

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