Pizza Sales Data Analysis using SQL

Subtitle: Mini Project Presentation

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📘 Learned from: Ayushi Jain Ma’am, WsCube Tech

Introduction

- This project analyzes pizza sales using SQL
- Built on concepts learned via WsCube Tech YouTube tutorials
- Uses relational database with 4 tables: orders, order_details, pizzas, pizza_types
- Includes basic to advanced business insights
- Each solution includes SQL query + result

Dataset Overview

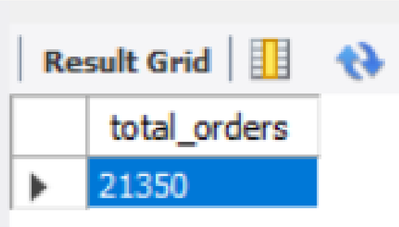
Table Name	Description
orders	Order ID, date, and time
order_details	Link between orders and pizzas, with qty
pizzas	Pizza ID, price, and size
pizza_types	Name, category, and ingredients

Designed to reflect real pizzeria operations

Supports both time-based and category-wise queries

-- Retrieve the total number of orders placed.

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



-- Calculate the total revenue generated from pizza sales.

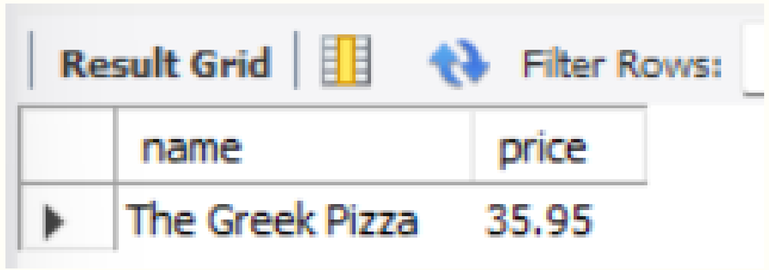
```sql
SELECT
    ROUND(SUM(order_details.quantity * pizzas.price),
            2) AS total_sales
FROM
    order_details
        JOIN
    pizzas ON pizzas.pizza_id = order_details.pizza_id
```

Result Grid

	total_sales
▶	817860.05

-- Identify the highest-priced pizza.

```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;
```



Result Grid | Filter Rows:

	name	price
▶	The Greek Pizza	35.95

-- Identity 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 ;
```

Result Grid | Filter Rows:

size	order_count
L	18526
M	15385
S	14137
XL	544
XXL	28

-- List the tap 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;
```

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,
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;
```

Result Grid | Filter Rows:

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_count from orders
group by hour(order_time) ;
```

Result Grid | Filter Rows:

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.

```
select category , count(name) from pizza_types
group by category;
```

Result Grid | Filter Rows:

	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.

```sql
select round(avg(quantity),0) 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 ;
```

Result Grid | Filter Rows:

	round(avg(quantity),0)
▶	138

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

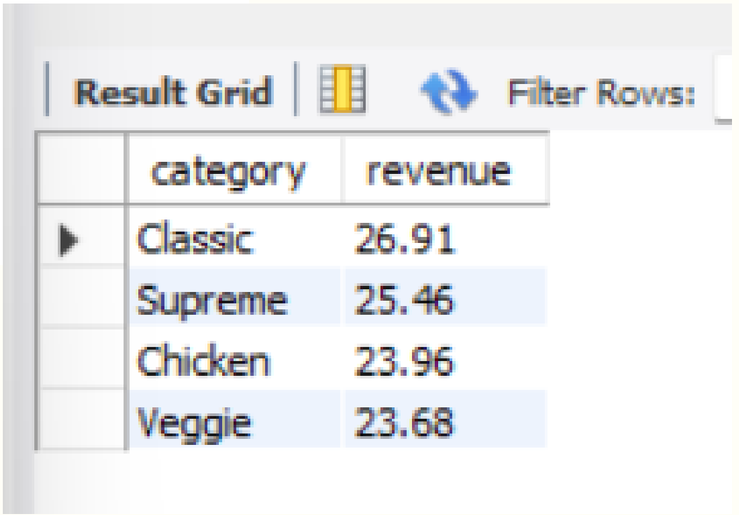
```sql
select pizza_types.name,
sum(order_details.quantity * pizzas.price) as revenue
from pizza_types join pizzas
on pizzas.pizza_type_id = pizza_types.pizza_type_id
join order_details
on order_details.pizza_id = pizzas.pizza_id
group by pizza_types.name order by revenue desc limit 3;
```

Result Grid | Filter Rows:

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

-- 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_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;
```



Result Grid | Filter Rows:

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 cum_revenue
from
(select orders.order_date,
sum(order_details.quantity * pizzas.price) as revenue
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;
```

Result Grid | Filter Rows:

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

Result 1

-- 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,
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;
```

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	32265.70000000065
The Mexicana Pizza	26780.75
The Five Cheese Pizza	26066.5

Final Reflections

**"SQL is not just about retrieving data —
it’s about unlocking stories hidden inside it."
This project was my first real experience in business-focused data analytics.**

Thank You 🙏

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