

PIZZA STORE DATA ANALYSIS USING SQL



INTRODUCTION

Pizza is a dish that originates from Italy and is one of the favorite foods of many people in various parts of the world.

**Let's start our quest to retrieve information about
the Pizza Store!**

We will explore a detailed analysis of pizza sales data using SQL. The primary goal of this analysis is to uncover key sales trends, customer preferences, and business insights that can help optimize operations and drive growth. The dataset includes various aspects of the pizza business, such as order details, pizza types, and sales over time. Using SQL, it will help in identifying the most popular pizzas, determining peak sales times, and understanding customer ordering habits. Through this analysis, we aim to provide actionable insights that can inform better decision-making and enhance the overall strategy for the business.

PROBLEM STATEMENT

- Identifying Best-Selling Products
- Optimizing Sales Timing
- Understanding Customer Preferences
- Improving Strategic Decision-Making





QUESTION & QUERIES

Now, let's dive into the analysis of pizza store and generate meaningful insights:

01

Retrieve the total number of orders placed.

```
SELECT  
    COUNT(*) AS total_orders  
FROM  
    orders;
```

	total_orders
▶	21350



Q2

Calculate the total revenue generated from pizza sales

```
select round(sum(a.price*b.quantity),2) as total_revenue  
from pizzas a  
join order_details b  
on a.pizza_id = b.pizza_id;
```

	total_revenue
▶	817860.05



03

Identify the highest-priced pizza.

```
select a.name, b.price  
from pizza_types a  
join pizzas b  
on a.pizza_type_id = b.pizza_type_id  
order by b.price desc  
limit 1;
```

	name	price
▶	The Greek Pizza	35.95



04

Identify the most common pizza size ordered

```
select a.size, count(distinct b.order_details_id) as counts  
from pizzas a join order_details b  
on a.pizza_id = b.pizza_id  
group by a.size  
order by counts desc;
```

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



Q5

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

```
select pt.name, sum(o.quantity) as orders  
from pizza_types pt join pizzas p on pt.pizza_type_id =  
p.pizza_type_id  
join order_details o on p.pizza_id = o.pizza_id  
group by pt.name  
order by orders desc  
limit 5;
```

	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



Q6

Find the total quantity of each pizza category ordered

```
select pt.category, sum(o.quantity) as orders  
from pizza_types pt join pizzas p on pt.pizza_type_id =  
p.pizza_type_id  
join order_details o on p.pizza_id = o.pizza_id  
group by pt.category  
order by orders desc;
```

	category	orders
▶	Classic	14888
	Supreme	11987
	Veggie	11649
	Chicken	11050



07

Determine the distribution of orders by hour of the day

```
select concat(hour(order_time), '-', hour(order_time)+1) as Hours, count(order_id) as Orders from orders  
group by Hours  
order by Orders desc;
```

Hours	Orders
12-13	2520
13-14	2455
18-19	2399
17-18	2336
19-20	2009
16-17	1920
20-21	1642
14-15	1472
15-16	1468
11-12	1231
21-22	1198
22-23	663
23-24	28
10-11	8
9-10	1



08

Find the category-wise distribution of pizzas

```
select category, count(pizza_type_id) as Distribution from  
pizza_types  
group by category;
```

	category	Distribution
▶	Chicken	6
	Classic	8
	Supreme	9
	Veggie	9



09

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

```
select o.order_date,  
sum(od.quantity) as orders_per_day  
from orders o  
join order_details od on o.order_id =  
od.order_id  
group by o.order_date;
```

order_date	orders_per_day
2015-01-01	162
2015-01-02	165
2015-01-03	158
2015-01-04	106
2015-01-05	125
2015-01-06	147
2015-01-07	138
2015-01-08	173
2015-01-09	127

	Avg_Pizza_Order
	138

```
select round(avg(orders_per_day))  
as Avg_Pizza_Order from  
(select o.order_date,  
sum(od.quantity) as orders_per_day  
from orders o  
join order_details od on o.order_id =  
od.order_id  
group by o.order_date) as d;
```



10

Determine the top 3 most ordered pizza types based on revenue

```
select pt.name, round(sum(p.price*od.quantity),2) as revenue  
from pizza_types pt join pizzas p  
on pt.pizza_type_id = p.pizza_type_id  
join order_details od on p.pizza_id = od.pizza_id  
group by pt.name  
order by revenue desc  
limit 3;
```

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



11

Calculate the percentage contribution of each pizza type to total revenue

```
with first_table as (
    select pt.category, round(sum(p.price*od.quantity),2) as revenue
    from pizza_types pt join pizzas p
    on pt.pizza_type_id = p.pizza_type_id
    join order_details od on p.pizza_id = od.pizza_id
    group by pt.category),
second_table as (
    select distinct pt.category, round(sum(p.price*od.quantity) over (),2) as total_revenue
    from pizza_types pt join pizzas p
    on pt.pizza_type_id = p.pizza_type_id
    join order_details od on p.pizza_id = od.pizza_id)
select a.category, a.revenue, b.total_revenue, round((a.revenue/b.total_revenue)*100,2) as perc_contri
from first_table a join
second_table b on a.category = b.category;
```

	category	revenue	total_revenue	perc_contri
▶	Classic	220053.1	817860.05	26.91
	Veggie	193690.45	817860.05	23.68
	Supreme	208197	817860.05	25.46
	Chicken	195919.5	817860.05	23.96



12

Analyze the cumulative revenue generated over time

```
select distinct o.order_date, round(sum(p.price*od.quantity) over (order by o.order_date),2) as revenue  
from pizza_types pt join pizzas p  
on pt.pizza_type_id = p.pizza_type_id  
join order_details od on p.pizza_id = od.pizza_id  
join orders o on od.order_id = o.order_id;
```

	order_date	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



13

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

```
select category, name, revenue from (
  select *, dense_rank() over (partition by category order by revenue desc) as rnk from
  (select pt.category, pt.name, round(sum(p.price*od.quantity),2) as revenue
   from pizza_types pt join pizzas p
   on pt.pizza_type_id = p.pizza_type_id
   join order_details od on p.pizza_id = od.pizza_id
   group by pt.category, pt.name)a)b
where rnk <= 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



VARIATIONS



Veggie Pizza



Classic Pizza



Chicken Pizza



Supreme Pizza

INSIGHTS

- Large-Sized and Medium sized Pizza are the most ordered among all, store should focus in making more of these sized pizzas.
- The Classic Deluxe Pizza is most ordered out of all pizzas.
- The peak hours of ordering pizzas are afternoon and evening, most of the sales occur between 12-14 or 17-19.
- The store sells on an average 138 pizzas everyday.
- Although Classic type Pizza contributes to most sales, but chicken type pizza generates higher revenue.



THANK YOU

“Have fun making your own pizza
and enjoy every bite”