



SQL PROJECT ON PIZZA SALES

delicious pizza for everyone!

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HELLO

In this project, I analyzed pizza sales data using SQL to extract valuable insights on key performance metrics, including revenue, order counts, sales trends, pricing, and quantities sold. By leveraging SQL queries, I was able to evaluate sales patterns, identify top-selling items, and assess overall revenue generation. This presentation walks through the core queries I applied and the insights they revealed to support data-driven decision-making for improved sales strategies

DATABASE OVERVIEW

This pizza sales database captures essential information on customer orders, product details, sales transactions, and revenue. It enables a comprehensive analysis of business performance, focusing on sales trends, customer preferences, and revenue generation. By analyzing these metrics, we can better understand which pizza types and sizes are most popular, identify peak ordering times, and evaluate revenue contributions from different items. This project uses SQL queries to uncover data-driven insights, supporting strategies to optimize sales and enhance customer satisfaction..

- **Order and Revenue Analysis:**

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

- **Sales and Customer Patterns:**

- Find the total quantity of each pizza category ordered by joining necessary tables.
- Determine the distribution of orders by hour of the day to identify peak times.
- Find the category-wise distribution of pizzas to assess popularity.
- Group orders by date to calculate the average number of pizzas ordered per day.
- Identify the top 3 most ordered pizza types based on revenue.

- **Revenue Contribution and Growth Insights:**

- Calculate the percentage contribution of each pizza type to total revenue to understand its impact.
- Analyze cumulative revenue generated over time to track growth.
- Determine the top 3 most ordered pizza types based on revenue within each pizza category, highlighting category-specific favorites.

ORDER AND REVENUE ANALYSIS

RETRIEVE THE TOTAL NUMBER OF ORDERS PLACED.

```
SELECT  
    COUNT(order_id) AS Total_orders  
FROM  
    orders;
```

Result Grid	
	Total_orders
▶	21350



CALCULATE THE TOTAL REVENUE GENERATED FROM PIZZA SALES.

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

Result Grid	
	total_sales
▶	13272



IDENTIFY THE HIGHEST-PRICED PIZZA.

```
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



IDENTIFY THE MOST COMMON PIZZA SIZE ORDERED.

```
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	323
	M	242
	S	208
	XL	7



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

```
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;
```

	name	quantity
▶	The Classic Deluxe Pizza	43
	The Thai Chicken Pizza	43
	The Italian Supreme Pizza	41
	The Barbecue Chicken Pizza	40
	The California Chicken Pizza	38



SALES AND CUSTOMER PATTERNS

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

```
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;
```

	category	quantity
▶	Classic	237
	Supreme	195
	Chicken	185
	Veggie	178



DETERMINE THE DISTRIBUTION OF ORDERS BY HOUR OF THE DAY.

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

	hour	order_count
▶	12	2520
	13	2455
.....	18	2399
	17	2336
	19	2009
	16	1920
	20	1642
	14	1472
	15	1468
	11	1231
	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.

```
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 order_details.order_id = orders.order_id  
GROUP BY orders.order_date) AS order_quantity;
```

	avg_pizzas_ordered_per_day
▶	133



DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE.

```
3 •  SELECT
4      pizza_types.name,
5      SUM(order_details.quantity * pizzas.price) AS revenue
6  FROM
7      pizza_types
8      JOIN
9      pizzas ON pizzas.pizza_type_id = pizza_types.pizza_type_id
10     JOIN
11     order_details ON order_details.pizza_id = pizzas.pizza_id
12 GROUP BY pizza_types.name
13 ORDER BY revenue DESC
14 LIMIT 3;
```

	name	revenue
▶	The Thai Chicken Pizza	788.25
	The Italian Supreme Pizza	732.75
	The Barbecue Chicken Pizza	726



REVENUE CONTRIBUTION AND GROWTH INSIGHTS

CALCULATE THE PERCENTAGE CONTRIBUTION OF EACH PIZZA TYPE TO TOTAL REVENUE.

```
4 ● SELECT
5     pizza_types.category,
6     ROUND((SUM(order_details.quantity * pizzas.price) / (SELECT
7         ROUND(SUM(order_details.quantity * pizzas.price),
8         0) AS total_sales
9     )
10    FROM
11        order_details
12        JOIN
13            pizzas ON pizzas.pizza_id = order_details.pizza_id)) * 100,
14        3) AS revenue
15    FROM
16        pizza_types
17        JOIN
18            pizzas ON pizzas.pizza_type_id = pizza_types.pizza_type_id
19        JOIN
20            order_details ON order_details.pizza_id = pizzas.pizza_id
21    GROUP BY pizza_types.category
22    ORDER BY revenue DESC;
```

Result Grid		
	category	revenue
▶	Classic	26.271
	Supreme	25.779
	Chicken	25.066
	Veggie	22.882



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 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	2713.85
	2015-01-02	5445.75
	2015-01-03	8108.15
	2015-01-04	9863.6
	2015-01-05	11929.55
	2015-01-06	13271.8



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

```
2 •  select name , revenue from
3   (select category,name,revenue,
4    rank() over (partition by category order by revenue desc) as rn
5    from
6   (select pizza_types.category,pizza_types.name,
7    sum(order_details.quantity * pizzas.price) as revenue from pizza_types join
8    pizzas on pizzas.pizza_type_id =pizza_types.pizza_type_id
9    join order_details on
10   order_details.pizza_id = pizzas.pizza_id
11   group by pizza_types.category,pizza_types.name) as X ) as b
12  where rn <=3;
```

Result Grid		
	name	revenue
▶	The Thai Chicken Pizza	788.25
	The Barbecue Chicken Pizza	726
	The California Chicken Pizza	676.5
	The Classic Deluxe Pizza	672.5
	The Hawaiian Pizza	495
	The Pepperoni Pizza	477.75
	The Italian Supreme Pizza	732.75
	The Spicy Italian Pizza	646.75
	The Sicilian Pizza	483.5
	The Five Cheese Pizza	573.5
	The Four Cheese Pizza	467.39...
	The Mexicana Pizza	455.75

