Pizza Sales Analysis

USING SQL

MySQL®

Analyzing pizza sales data using SQL queries to gain insights into sales trends, customer preferences, and business performance

OBJECTIVE

- Identify top-selling pizzas and sales trends
- Analyze revenue, order patterns, and customer preferences
- Generate actionable insights to improve sales and marketing

Retrieve the total number of orders placed

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

Result Grid

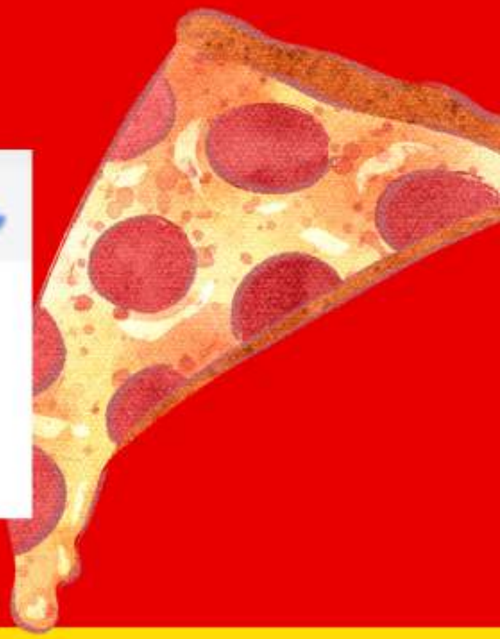
	total_orders
▶	21350

Calculate the total revenue generated from pizza sales

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

Identify the most common pizza size ordered

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

Result Grid | Filter Rows:

	size	order_count
▶	L	18526

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

```sql
SELECT
    pizza_types.name, SUM(orders_details.quantity) as quantity
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    orders_details ON orders_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

find the total quantity of each pizza category ordered

```sql
SELECT
    pizza_types.category,
    SUM(orders_details.quantity) AS quantity_ordered
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    orders_details ON orders_details.pizza_id = pizzas.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

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

Result Grid

hour	orders
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(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) as avg_pizza_ordered_per_day
FROM
    (SELECT
        orders.order_date, SUM(orders_details.quantity) AS quantity
    FROM
        orders
    JOIN orders_details ON orders.order_id = orders_details.order_id
    GROUP BY orders.order_date) AS order_quantity;
```

Result Grid | Filter Rows:

avg_pizza_ordered_per_day
138

Determine the top 3 most ordered pizza types based on revenue

```sql
SELECT
    pizza_types.name,
    SUM(orders_details.quantity * pizzas.price) AS revenue
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    orders_details ON orders_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

Calculate the percentage contribution of each pizza type to total revenue

```sql
SELECT
    pizza_types.category,
    ROUND((SUM(orders_details.quantity * pizzas.price) / (SELECT
                    ROUND(SUM(orders_details.quantity * pizzas.price),
                                2) AS total_sales
                FROM
                    orders_details
                        JOIN
                    pizzas ON orders_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
    orders_details ON orders_details.pizza_id = pizzas.pizza_id
GROUP BY category
ORDER BY revenue DESC;
```

Result Grid | Filter Rc

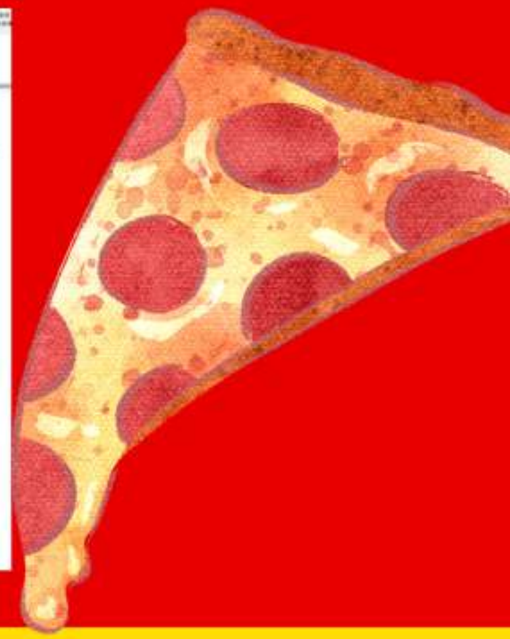
category	revenue
Classic	26.91
Supreme	25.46
Chicken	23.96
Veggie	23.68

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(orders_details.quantity * pizzas.price) as revenue
from orders_details
join pizzas
on orders_details.pizza_id=pizzas.pizza_id
join orders
on orders.order_id=orders_details.order_id
group by orders.order_date order by revenue) 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



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(orders_details.quantity*pizzas.price) as revenue
from pizza_types join pizzas
on pizza_types.pizza_type_id=pizzas.pizza_type_id
join orders_details
on orders_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

conclusion

Our SQL analysis of pizza sales provided key insights into order trends, revenue, and customer preferences. We identified the total orders, revenue, highest-priced pizza, most popular size, and top-selling pizza types. Further analysis revealed category-wise sales distribution, order patterns by time, and average daily orders.

Advanced queries helped us determine revenue contributions by pizza type, cumulative sales trends, and top revenue-generating pizzas per category. These insights can guide pricing, inventory management, and marketing strategies to boost sales and profitability.