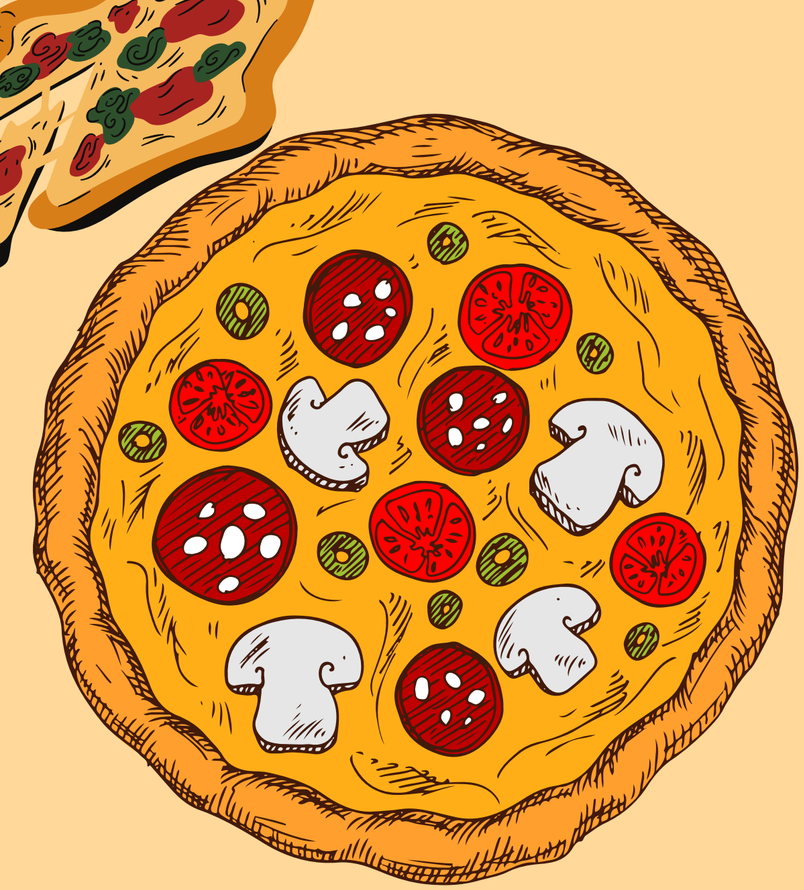


# PIZZA SALES ANALYSIS

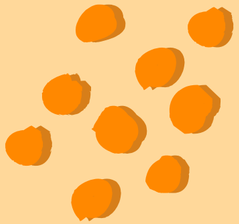
Using

SQL

# Description

I completed a Pizza Sales Analysis project using MySQL with the pizza_hut database, which includes tables for pizzas, orders, order_details, and pizza_types. The project focused on solving various SQL queries, generating insights such as calculating pizza sales revenue, identifying customer preferences, and analyzing sales trends. This work enhanced my SQL skills and provided valuable data-driven insights for optimizing sales strategies.

# Questions



Basic:

Retrieve the total number of orders placed.

Calculate the total revenue generated from pizza sales.

Identify the highest-priced pizza.

Identify the most common pizza size ordered.

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

Intermediate:

Join the necessary tables to find the total quantity of each pizza category ordered.

Determine the distribution of orders by hour of the day.

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

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

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

Advanced:

Calculate the percentage contribution of each pizza type to total revenue.

Analyze the cumulative revenue generated over time.

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

# Retrieve the total number of orders placed.

```sql
-- 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.

```sql
-- 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;
```

Result Grid | Filter Rows:

| | total_revenue |
|---|---|
| ▶ | 84616.40 |

# Identify the highest-priced pizza.

```sql
-- Identify the highest-priced pizza.

SELECT
    pizza_types.name, MAX(pizzas.price) AS highest_price
FROM
    pizza_types
        INNER JOIN
    pizzas ON pizzas.pizza_type_id = pizza_types.pizza_type_id
ORDER BY pizzas.price DESC;
```

| name | highest_price |
|---|---|
| The Barbecue Chicken Pizza | 35.95 |

# Identify the most common pizza size ordered.

```sql
-- Identify the most common pizza size ordered.

SELECT
    pizzas.size, COUNT(order_details.order_id) as order_id
FROM
    pizzas
        INNER JOIN
    order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY pizzas.size
order by order_id desc;
```

| size | order_id |
|---|---|
| L | 1936 |
| M | 1568 |
| S | 1480 |
| XL | 57 |
| XXL | 2 |

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

```sql
-- 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 Pepperoni Pizza | 288 |
| The Barbecue Chicken Pizza | 259 |
| The California Chicken Pizza | 248 |
| The Classic Deluxe Pizza | 231 |
| The Hawaiian Pizza | 229 |

# Join the necessary tables to find the total quantity of each pizza category ordered.

```sql
--  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
        INNER JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        INNER JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY category
ORDER BY quantity DESC;
```

| category | quantity |
|---|---|
| Classic | 1534 |
| Supreme | 1274 |
| Veggie | 1227 |
| Chicken | 1100 |

# Determine the distribution of orders by hour of the day.

```sql
-- Determine the distribution of orders by hour of the day.



SELECT
    HOUR(order_time), COUNT(order_id)
FROM
    orders
GROUP BY HOUR(order_time)
ORDER BY HOUR(order_time) ASC;
```

| HOUR(order_time) | COUNT(order_id) |
|---|---|
| 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 | 1108 |

Result 1

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

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


select
pizza_types.category  as category , count(pizza_types.name)

from pizza_types
group by category;
```

| category | count(pizza_types.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
-- Group the orders by date and calculate the average number of pizzas ordered per day.



SELECT
    ROUND(AVG(quantity), 0) as avg_order_pizza
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;
```

| | avg_order_pizza |
|---|---|
| ▶ | 139 |

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

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

SELECT
    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.name
ORDER BY revenue DESC
LIMIT 3;
```

| name | revenue |
|---|---|
| The Barbecue Chicken Pizza | 4618.25 |
| The California Chicken Pizza | 4270.00 |
| The Thai Chicken Pizza | 4170.25 |

# Calculate the percentage contribution of each pizza type to total revenue.

```sql
-- Calculate the percentage contribution of each pizza type to total revenue.
SELECT
    pizza_types.category,
    ROUND(SUM(order_details.quantity * pizzas.price) / (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) * 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
```

| | category | revenue |
|---|---|---|
| ▶ | Classic | 26.73 |
| | Supreme | 25.93 |
| | Veggie | 24.30 |
| | Chicken | 23.04 |

# Analyze the cumulative revenue generated over time.

```sql
-- Analyze the cumulative revenue generated over time.

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;
```

| order_date | cum_revenue |
|---|---|
| 2015-01-01 | 2713.85 |
| 2015-01-02 | 5445.75 |
| 2015-01-03 | 8108.15 |
| 2015-01-04 | 9863.60 |
| 2015-01-05 | 11929.55 |
| 2015-01-06 | 14358.50 |

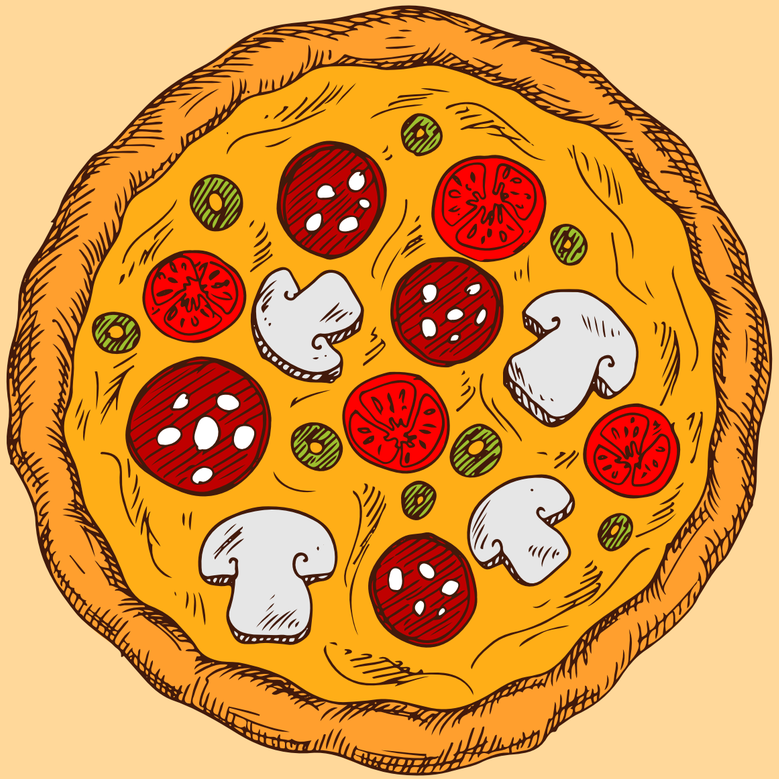
# Determine the top 3 most ordered pizza types based on revenue for each pizza category.

```sql
-- Determine the top 3 most ordered pizza types based on revenue for each pizza category.

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.name ,  pizza_types.category) as a) as b
where rn<=3;
```

| name | revenue |
|---|---|
| The Barbecue Chicken Pizza | 4618.25 |
| The California Chicken Pizza | 4270.00 |
| The Thai Chicken Pizza | 4170.25 |
| The Pepperoni Pizza | 3608.25 |
| The Classic Deluxe Pizza | 3577.50 |
| The Hawaiian Pizza | 3016.25 |



# THANK YOU