
Pizza-Hut Sales Analysis

Data Analysis Project using
MYSQL

Project Description

- Utilizing MySQL, this project delves into Pizza Hut sales data to uncover insights on customer behavior, popular items, and regional trends, aiding in strategic decision-making and operational enhancements.
- We will be analysing the data sets given according to the problem statement in every slide.
- The SQL query along with the output is given for all the statements.

1. Retrieve the total number of orders placed

MySQL Query

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

Output

total_orders
21350

2. Calculate the total revenue generated from pizza sales

MySQL Query

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

Output

total_sales

817860.05

3. Identify the highest-priced pizza.

MySQL Query

```
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;
```

Output

name	price
The Greek Pizza	35.95

4. Identify the most common pizza size ordered.

MySQL Query

```
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;
```

Output

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

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

MySQL Query

```
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;
```

Output

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

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

MySQL Query

```
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 category order by quantity desc;
```

Output

category	quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

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

MySQL Query

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

Output

HOUR(order_time)	order_count	
12	2520	
13	2455	
18	2399	
17	2336	
19	2009	
16	1920	
20	1642	
14	1470	

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

MySQL Query

```
SELECT
    pizza_types.category, COUNT(pizza_types.name)
FROM
    pizza_types
GROUP BY category;
```

Output

category	count(pizza_types.name)
Chicken	6
Classic	8
Supreme	9
Veggie	9

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

MySQL Query

```
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;
```

Output

ROUND(AVG(quantity),...	
138	

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

MySQL Query

```
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;
```

Output

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.

MySQL Query

```
select pizza_types.category,  
(sum(order_details.quantity * pizzas.price) /  
(SELECT  
    ROUND(SUM(order_details.quantity * pizzas.price),  
          2) AS total_sales  
FROM  
    order_details  
    JOIN  
    pizzas ON order_details.pizza_id = pizzas.pizza_id) ) * 100 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;
```

Output

category	revenue
Supreme	25.45631126009862
Chicken	23.955137556847287
Veggie	23.682590927384577

12. Analyze the cumulative revenue generated over time.

MySQL Query

```
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;
```

Output

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	

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

MySQL Query

```
select category, name, revenue, ran_k
from
⊖ (select category, name, revenue,
rank() over(partition by category order by revenue desc) as ran_k
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 ran_k<=3;
```

Output

category	name	revenue	ran_k	
Chicken	The Thai Chicken Pizza	43434.25	1	
Chicken	The Barbecue Chicken Pizza	42768	2	
Chicken	The California Chicken Pizza	41409.5	3	
Classic	The Classic Deluxe Pizza	38180.5	1	
Classic	The Hawaiian Pizza	32273.25	2	

Thankyou

