

PIZZA SALES ANALYSIS USING SQL



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OBJECTIVES

The objective of this project is to analyze pizza sales data to identify trends and provide actionable insights that can help to increase sales and aim to uncover key metrics and patterns within the sales data by leveraging SQL queries my MySQL.

Let's start our adventure in the world of pizza!

Data Model View



OVERVIEW

In this task, addressed several critical question related to pizza sales. These questions are organized under different categories to provide a structured analysis.

- Retrieve the total number of orders placed
- Calculate the total revenue generated from pizza sales
- Identify the highest-priced pizza, most common pizza size ordered ahd 5 most ordered pizza types along with their quantites
- Join the necessary tables and find the total quantity of each pizza category ordered
- Determine the distribution of orders by hours of the day
- Calculate the percentage contribution of each pizza types to total revenue
- Determine the top 3 most ordered pizza types based on revenue for each pizza category



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

```
With most_ordered_pizza As(  
    Select category, name, total_rev,  
        Rank() over(partition by category order by total_rev DESC) as pizza_rank  
    From  
        (select pizza_types.category, pizza_types.name,  
            Round(sum(pizzas.price * order_details.quantity),2) as total_rev  
        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  
        order by pizza_types.category, total_rev DESC) as cat_table  
)  
Select category, name, total_rev  
from most_ordered_pizza  
where pizza_rank <= 3;
```

	category	name	total_rev
▶	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

ANALYZE THE CUMULATIVE REVENUE GENERATED OVER TIME.

```
select order_date, rev,  
sum(rev) over(order by order_date) as cumulative_rev  
  
From  
(select orders.order_date,  
Round(sum(pizzas.price * order_details.quantity),2) as rev  
  
From orders  
Join order_details  
on orders.order_id = order_details.order_id  
join pizzas on pizzas.pizza_id = order_details.pizza_id  
group by orders.order_date) as rev_table;
```

order_date	rev	cumulative_rev
2015-01-01	2713.85	2713.85
2015-01-02	2731.9	5445.75
2015-01-03	2662.4	8108.15
2015-01-04	1755.45	9863.6
2015-01-05	2065.95	11929.55
2015-01-06	2428.95	14358.5
2015-01-07	2202.2	16560.7
2015-01-08	2838.35	19399.05
2015-01-09	2127.35	21526.39999999998
2015-01-10	2463.95	23990.35
2015-01-11	1872.3	25862.64999999998
2015-01-12	1919.05	27781.69999999997
2015-01-13	2049.6	29831.29999999996
2015-01-14	2527.4	32358.69999999997
2015-01-15	1984.8	34343.5
2015-01-16	2594.15	36937.65

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

```
Select A.category,  
    Round(sum(B.price * C.quantity) / (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)*100,2) as revenue  
From pizza_types A  
Join pizzas B  
On A.pizza_type_id = B.pizza_type_id  
Join order_details C  
on B.pizza_id = C.pizza_id  
Group by A.category  
order by revenue DESC;
```

	category	revenue
1	Classic	26.91
2	Supreme	25.46
3	Chicken	23.96
4	Veggie	23.68

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

SELECT

C.name, ROUND(SUM(A.price * B.quantity), 2) AS total_revenue

FROM

pizzas A

JOIN

order_details B ON A.pizza_id = B.pizza_id

JOIN

pizza_types C ON A.pizza_type_id = C.pizza_type_id

GROUP BY C.name

ORDER BY total_revenue **DESC**

LIMIT 3;

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

GROUP THE ORDERS BY DATE AND CALCULATE THE AVERAGE NUMBER OF PIZZAS ORDERED PER DAY.

```
With avg_pizz_ordered as(  
    select A.order_date as Day, sum(B.quantity) as pizza_ordered  
    from orders A  
    join order_details B  
    on A.order_id = B.order_id  
    group by Day  
)  
Select Round(avg(pizza_ordered),0) as avg_ordered  
From avg_pizz_ordered;
```

Result Grid	Filter
avg_ordered	
138	

DETERMINE THE DISTRIBUTION OF ORDERS BY HOUR OF THE DAY.

```
SELECT  
    HOUR(order_time) AS Hour, COUNT(order_id) AS total_order  
FROM  
    orders  
GROUP BY HOUR(order_time);
```

Hour	total_order
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

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

```
SELECT  
    A.category, SUM(C.quantity) AS total_ordered  
FROM  
    pizza_types A  
    JOIN  
    pizzas B ON A.pizza_type_id = B.pizza_type_id  
    JOIN  
    order_details C ON B.pizza_id = C.pizza_id  
GROUP BY A.category  
ORDER BY total_ordered DESC;
```

category	total_ordered
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

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

```
SELECT  
    B.name, SUM(C.quantity) AS total_ordered  
FROM  
    pizzas A  
        JOIN  
    pizza_types B ON A.pizza_type_id = B.pizza_type_id  
        JOIN  
    order_details C ON A.pizza_id = C.pizza_id  
GROUP BY B.name  
ORDER BY total_ordered DESC  
LIMIT 5;
```

name	total_ordered
The Classic Deluxe Pizza	2453
The Barbecue Chicken Pizza	2432
The Hawaiian Pizza	2422
The Pepperoni Pizza	2418
The Thai Chicken Pizza	2371

IDENTIFY THE MOST COMMON PIZZA SIZE ORDERED.

```
SELECT  
    A.size, COUNT(B.order_details_id) AS total_order  
FROM  
    pizzas A  
    JOIN  
    order_details B ON A.pizza_id = B.pizza_id  
GROUP BY A.size  
ORDER BY total_order DESC;
```

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

CALCULATE THE TOTAL REVENUE GENERATED FROM PIZZA SALES.

SELECT

```
ROUND(SUM(A.price * B.quantity), 2) AS total_revenue
```

FROM

```
pizzas A
```

JOIN

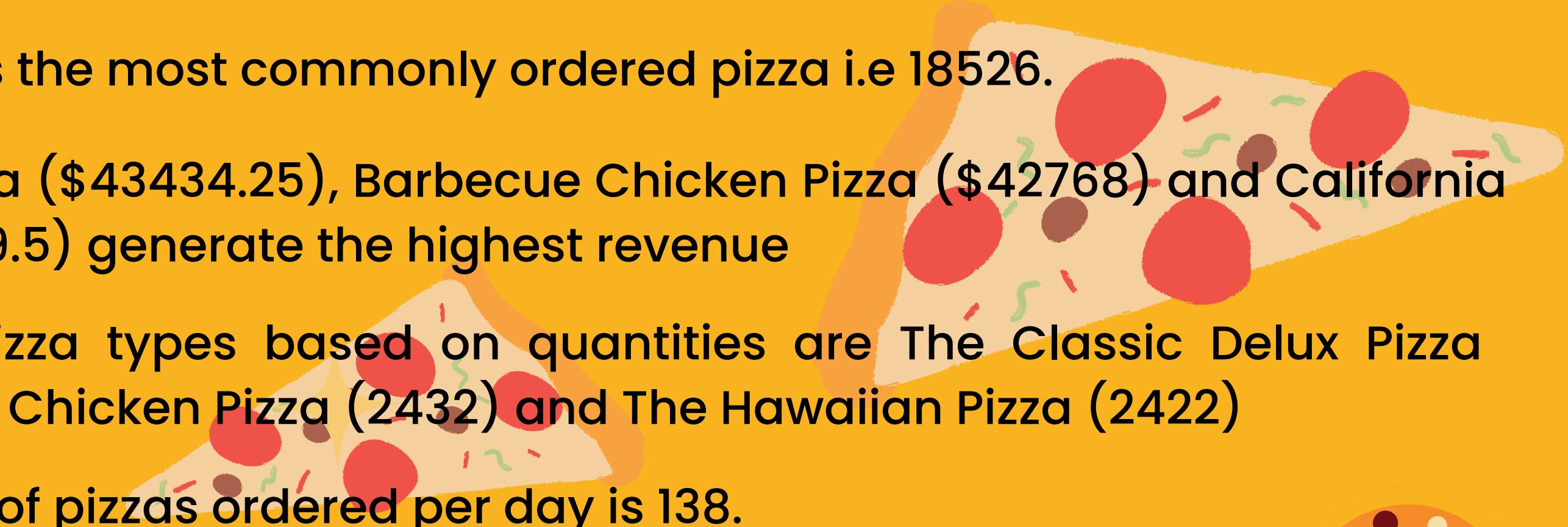
```
order_details B ON A.pizza_id = B.pizza_id;
```

Result Grid	
	total_revenue
▶	817860.05

INSIGHTS



- The analysis revealed that total revenue generated from pizza sales is \$817806.05
- Large (L) size pizzas is the most commonly ordered pizza i.e 18526.
- The Thai Chicken Pizza (\$43434.25), Barbecue Chicken Pizza (\$42768) and California Chicken Pizza (\$41409.5) generate the highest revenue
- The most ordered pizza types based on quantities are The Classic Delux Pizza (2453), The Barbecue Chicken Pizza (2432) and The Hawaiian Pizza (2422)
- The average number of pizzas ordered per day is 138.
- Cumulative revenue trends provide a long-term view of performance
- Classic Pizza dominates total revenue with a contribution of 26.91%



VARIATIONS



Pizza Margherita



Pepperoni Pizza



BBQ Chicken Pizza



Hawaiian Pizza



THANK YOU

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