MASTCRUST PIZZA CO. - SQL PROJECT REPORT

ANALYZING CUSTOMER ORDERS & PREFERENCES USING MYSQL

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COURSE: DATA ANALYTICS / SQL PROJECT
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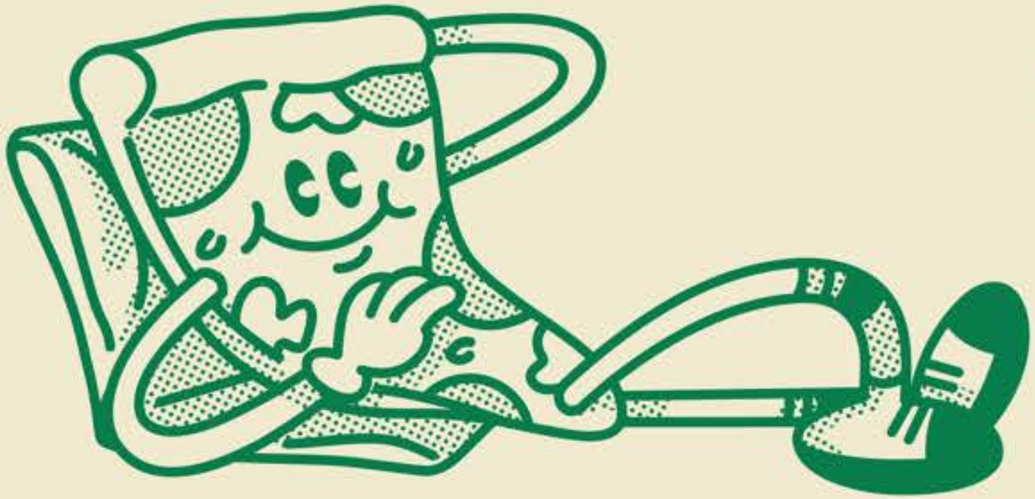
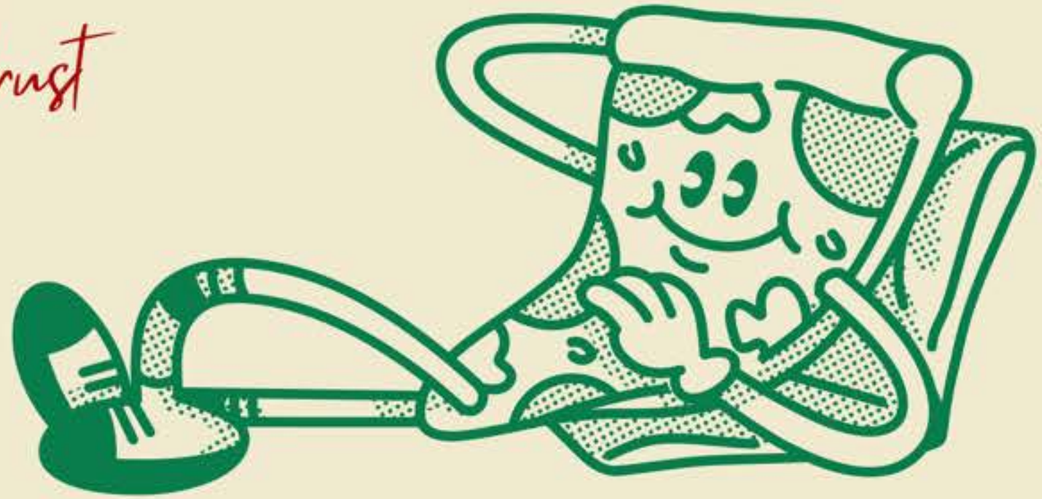


MastCrust



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"HELLO GUYS! 👋 WELCOME TO MASTCRUST PIZZA CO., JAHAN HAR SLICE MEIN MASTI HAI AUR HAR CRUST MEIN TASTE KA BLAST!"

IN 2025, MANAGING PIZZA ORDERS IS MORE THAN TRACKING SALES. CUSTOMERS EXPECT EVERY ORDER—ITS TYPE, SIZE, AND QUANTITY—TO BE ACCURATE. USING MYSQL, I ANALYZED THE MASTCRUST DATABASE, CONNECTING ORDERS, ORDER_DETAILS, PIZZAS, AND PIZZA_TYPES TO FIND WHICH PIZZAS ARE MOST POPULAR, AT WHAT TIME, AND IN WHAT QUANTITY.

THESE INSIGHTS HELP OPTIMIZE INVENTORY, PRICING, AND MENU DECISIONS. BEYOND NUMBERS, UNDERSTANDING CUSTOMER PREFERENCES ENSURES MASTCRUST DELIVERS NOT ONLY TASTY PIZZAS BUT ALSO A SMOOTH, RELIABLE, AND ENJOYABLE EXPERIENCE FOR EVERY CUSTOMER.

"PIZZA PULSE INSIGHTS"

MastCrust - Taste That's Simply the Best!

LEVEL 1: BASIC AGGREGATION AND SUMMARIES - TOTAL ORDERS, MOST POPULAR PIZZA SIZES, REVENUE PER CATEGORY, AND SOME FUN INSIGHTS TO GET STARTED! 🍕

LEVEL 2: INTERMEDIATE ANALYSIS - UNDERSTANDING GENERATIONAL PREFERENCES AND MINDSETS, LIKE WHICH AGE GROUPS PREFER WHICH PIZZAS AND AT WHAT TIMES ORDERS PEAK.

LEVEL 3: ADVANCED INSIGHTS - COMBINING MULTIPLE TABLES TO DISCOVER DETAILED PATTERNS, SUCH AS QUANTITY TRENDS, PEAK HOURS, AND CATEGORY-WISE REVENUE ANALYSIS.

-- 1-> Retrive the total number of orders placed.

```sql
SELECT
        COUNT(order_id) AS total_order_placed
FROM
        orders;
-- 1-> Insight
 # The dataset contains a total of 21,350 orders,
 #reflecting the overall customer demand and
 #providing a strong base for further analysis of sales patterns,
 #customer preferences, and revenue trends.
```

Result Grid | Filter R

total_order_placed
21350

"TOTAL ORDERS SHOW OVERALL CUSTOMER DEMAND."

-- 2-> calculate the total revenue generated from pizza sales.

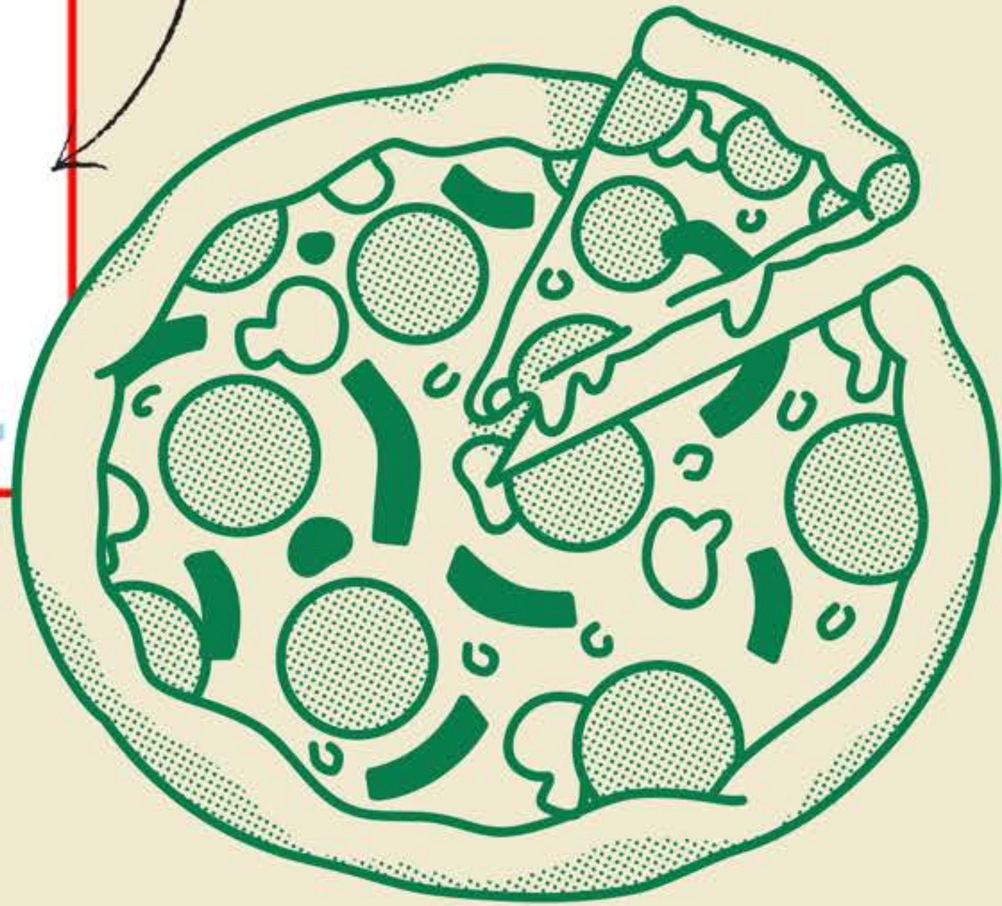
```sql
SELECT
    ROUND(SUM(order_details.quantity * pizzas.price),
            0) AS Total_revenue
FROM
        order_details
JOIN
        pizzas
ON
        pizzas.pizza_id = order_details.pizza_id;

-- 2-> Insight
 # The total revenue generated from pizza sales amounts to ₹817,860, highlighting
 #the overall earnings from all orders and providing a foundation to analyze top-performing pizza types and
 #categories.
```

Result Grid

Total_revenue
817860

"TOTAL REVENUE HIGHLIGHTS EARNINGS FROM PIZZAS."



-- 3-> Identify the highest(5)priced pizza.

"Pizza Speaks All"

```sql
SELECT
    pt.name AS pizza_type,
    p.price
FROM
    pizza_types pt
JOIN
    pizzas p ON pt.pizza_type_id = p.pizza_type_id
ORDER BY
    p.price DESC
LIMIT 5;
-- 3-> Insight
#The top 5 highest-priced pizzas are premium options, led by
#"The Greek Pizza" at ₹35.95, highlighting high-value menu items for revenue focus.
```

pizza_type	price
The Greek Pizza	35.95
The Greek Pizza	25.5
The Brie Carre Pizza	23.65
The Italian Vegetables Pizza	21
The Barbecue Chicken Pizza	20.75

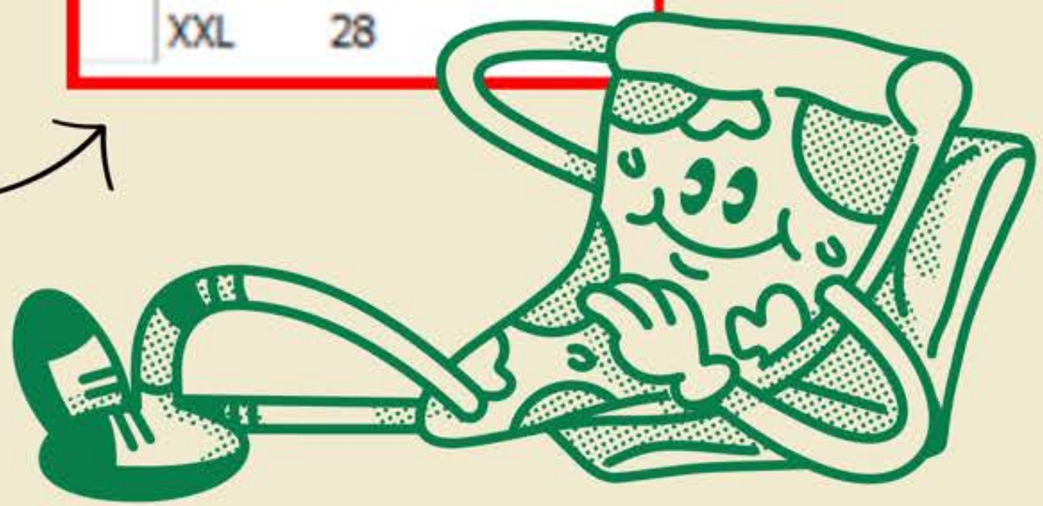
THE GREEK PIZZA" AT ₹35.95,

```
-- 4 -> Identify the most common pizza size ordered
```

```sql
SELECT
    p.size,
    COUNT(od.order_id) AS total_orders
FROM
    pizzas p
JOIN
    order_details od
ON
    p.pizza_id = od.pizza_id
GROUP BY
    p.size
ORDER BY
    total_orders DESC;
```

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

- LARGE SIZE DOMINATES WITH 18,526 ORDERS
- MEDIUM SIZE POPULAR WITH 15,385 ORDERS
- SMALL SIZE STEADY AT 14,137 ORDERS
- EXTRA LARGE RARELY CHOSEN WITH 544 ORDERS
- XXL LEAST PREFERRED WITH 28 ORDERS



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

```sql
SELECT
ROW_NUMBER() OVER (ORDER BY SUM(od.quantity) DESC)
AS   sno,pt.name AS  pizza_name,SUM(od.quantity)
AS total_quantity FROM pizza_types pt JOIN pizzas p
ON pt.pizza_type_id = p.pizza_type_id
JOIN order_details od
ON  od.pizza_id = p.pizza_id
GROUP BY  pt.name
ORDER BY total_quantity DESC
LIMIT 5;
```

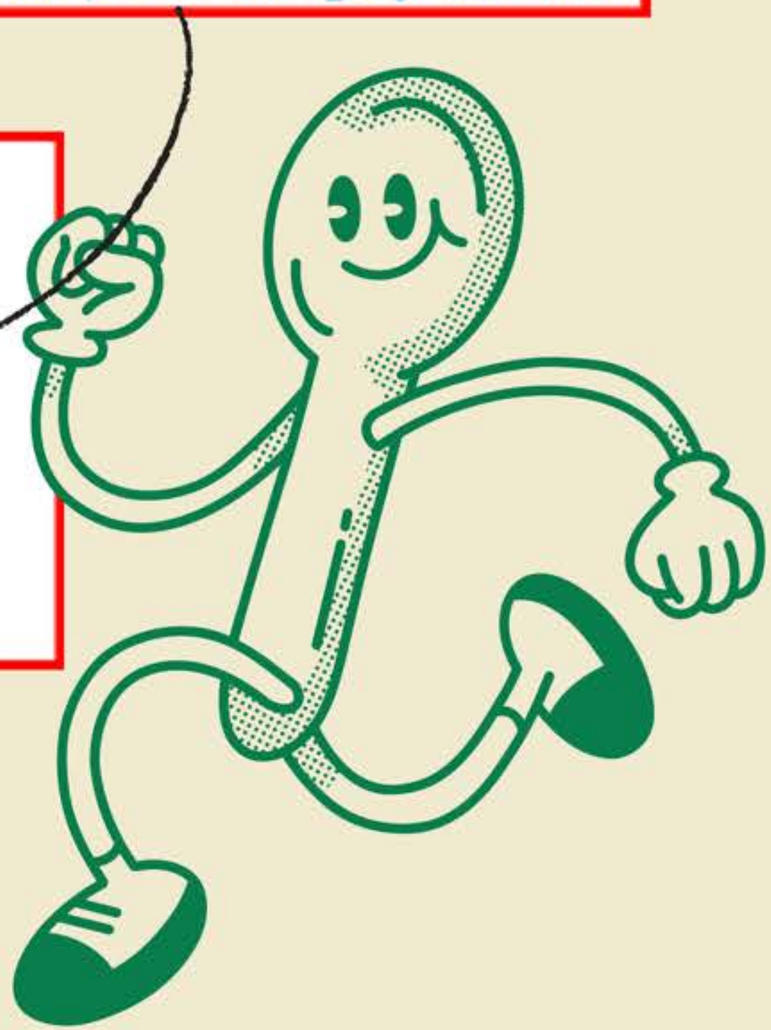
sno	pizza_name	total_quantity
1	The Classic Deluxe Pizza	2453
2	The Barbecue Chicken Pizza	2432
3	The Hawaiian Pizza	2422
4	The Pepperoni Pizza	2418
5	The Thai Chicken Pizza	2371

- CLASSIC DELUXE LEADS WITH 2453 ORDERS
- BARBECUE CHICKEN CLOSE WITH 2432 ORDERS
- HAWAIIAN PIZZA POPULAR AT 2422 ORDERS
- PEPPERONI PIZZA DEMAND AT 2418 ORDERS
- THAI CHICKEN FOLLOWS WITH 2371 ORDERS

```
-- 6 -> Join the necessary table 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	14888
Supreme	11987
Veggie	11649
Chicken	11050



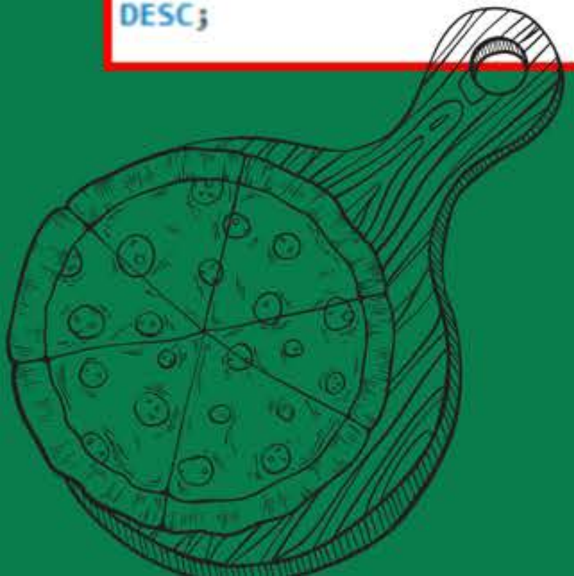
- CLASSIC PIZZAS ARE THE MOST ORDERED
- SUPREME PIZZAS TAKE THE SECOND SPOT
- VEGGIE PIZZAS SLIGHTLY BEHIND SUPREME
- CHICKEN PIZZAS LOWEST AMONG ALL CATEGORIES

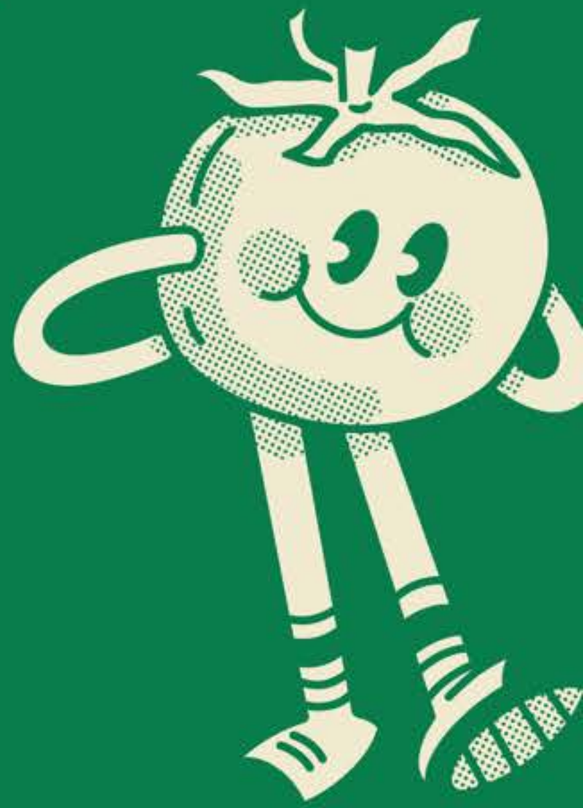
```
-- 7 -> Determine the distribution of orders by hour of the day.
```

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

Hours	order_count
12	2520
13	2455
18	2399
17	2336
19	2009

MOST ORDERS AT 12-13 PM, EVENINGS MODERATE, NIGHTS VERY LOW.



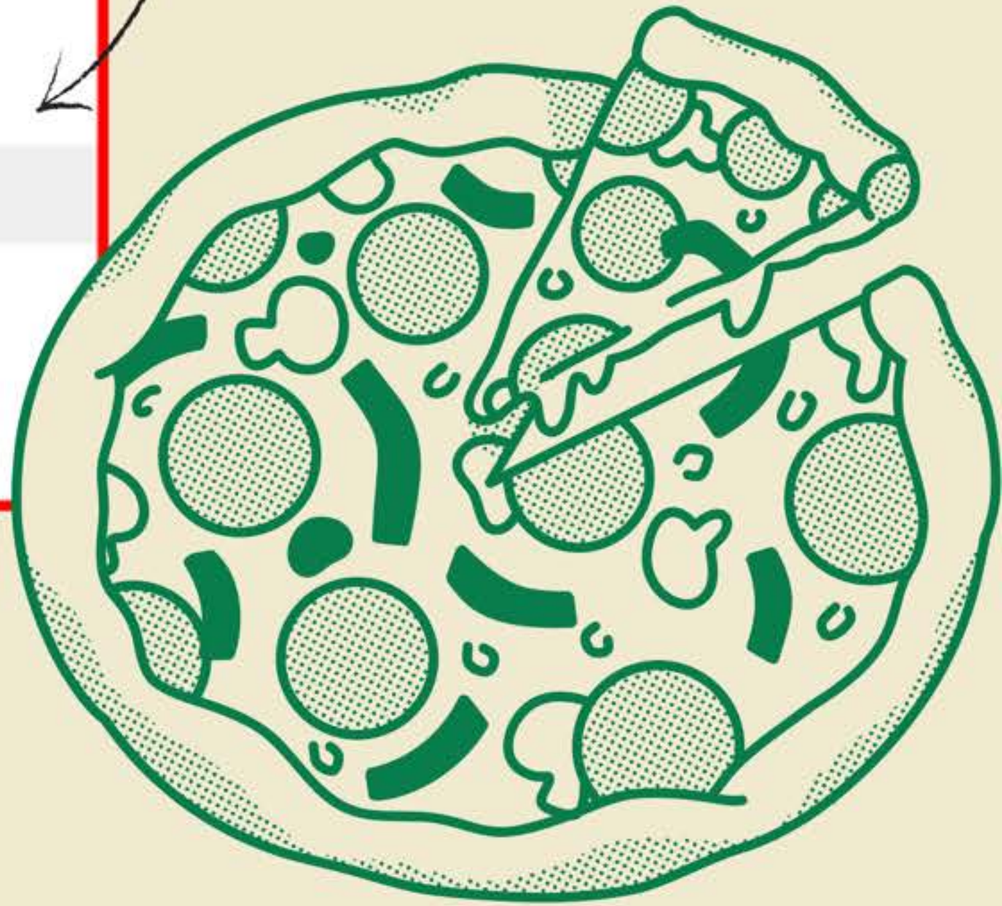


```
-- 8 ->Join relevant tables to find the category-wise distribution of pizzas.
```

```sql
SELECT
        category ,
        COUNT(name)  AS pizzas
FROM
        pizza_types
GROUP BY category;
```

	category	pizzas
▶	Chicken	6
	Classic	8
	Supreme	9
	Veggie	9

- CHICKEN CATEGORY HAS 6 PIZZAS
- CLASSIC CATEGORY HAS 8 PIZZAS
- SUPREME CATEGORY HAS 9 PIZZAS
- VEGGIE CATEGORY HAS 9 PIZZAS



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

```
SELECT ROUND(AVG(quantity),0)
AS avg_pizza_ordered_per_day
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_pizza_ordered_per_day
▶	138

AVERAGE 138
PIZZAS ORDERED
PER DAY.

```
-- 10 ->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
	pizzas.pizza_type_id = pizza_types.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 Thai Chicken Pizza	43434.25
	The Barbecue Chicken Pizza	42768
	The California Chicken Pizza	41409.5

- THAI CHICKEN PIZZA TOPS REVENUE
- BARBECUE CHICKEN PIZZA RANKS SECOND
- CALIFORNIA CHICKEN PIZZA THIRD REVENUE

```
-- 11 ->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),0)
AS    Total_salrs FROM order_details
JOIN  pizzas ON pizzas.pizza_id = order_details.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 order by revenue DESC;
```

category	revenue
Classic	26.91
Supreme	25.46
Chicken	23.96
Veggie	23.68

- THE THAI CHICKEN PIZZA - ₹43,434.25
- THE BARBECUE CHICKEN PIZZA - ₹42,768
- THE CALIFORNIA CHICKEN PIZZA - ₹41,409.5

```
-- 12 -> Analyze the cumulative revenue generated over time.
```

```
SELECT
    order_date,ROUND(SUM(revenue) OVER (ORDER BY order_date),0) AS cum_revenue
FROM
(  SELECT o.order_date,SUM(od.quantity * p.price) AS revenue
    FROM order_details od JOIN
        pizzas p ON od.pizza_id = p.pizza_id JOIN
        orders o ON o.order_id = od.order_id GROUP BY o.order_date
) AS sales ORDER BY order_date;
```

order_date	cum_revenue
2015-01-01	2714
2015-01-02	5446
2015-01-03	8108
2015-01-04	9864
2015-01-05	11930

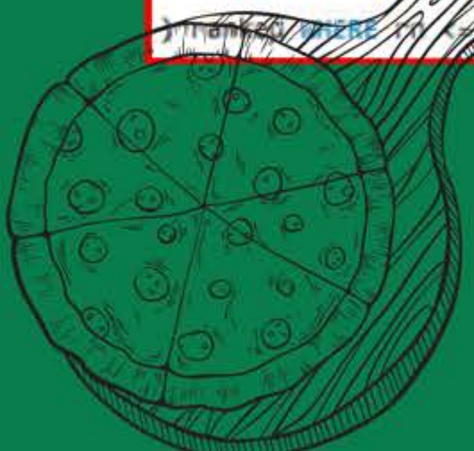
THIS ANALYSIS SHOWS THAT CUMULATIVE REVENUE STEADILY INCREASED OVER TIME. STARTING AT ₹2,714 ON JANUARY 1, 2015, REVENUE CROSSED ₹200,000 BY MARCH AND CONSISTENTLY REACHED OVER ₹350,000 BY MID-YEAR. DURING SEPTEMBER-OCTOBER, REVENUE ACCELERATED FURTHER, AND BY NOVEMBER 2, 2015, TOTAL REVENUE SURPASSED ₹687,000. THIS TREND CLEARLY INDICATES STRONG DEMAND AND CONTINUOUS GROWTH IN SALES. 🚀

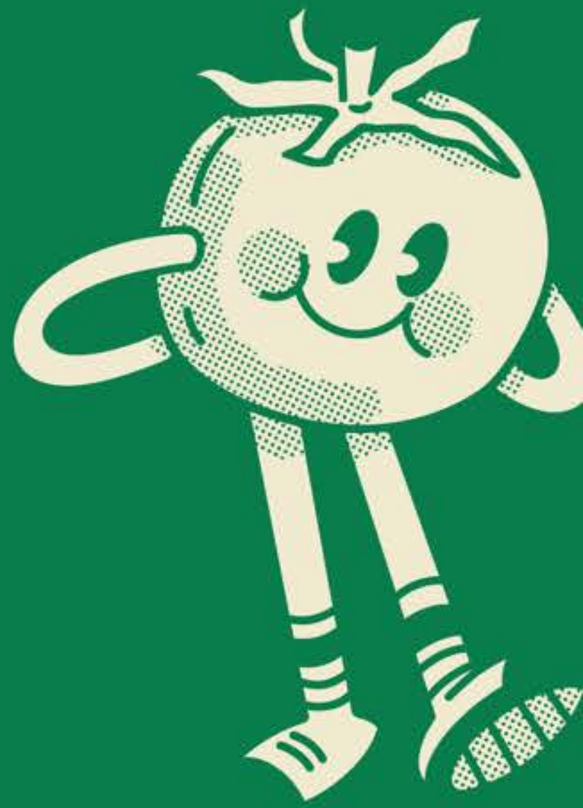
-- 13 -> Top 3 most ordered pizza types based on revenue for each category

```sql
SELECT category,name AS pizza_type,revenue
FROM (
    SELECT
        pt.category,
        pt.name,
        SUM(od.quantity * p.price) AS revenue,
        ROW_NUMBER() OVER (
            PARTITION BY pt.category
            ORDER BY SUM(od.quantity * p.price) DESC
        ) AS rn
    FROM pizza_types pt
    JOIN pizzas p ON pt.pizza_type_id = p.pizza_type_id
    JOIN order_details od ON od.pizza_id = p.pizza_id GROUP BY pt.category, pt.name
) ranked WHERE rn <= 3 ORDER BY category, revenue DESC;
```

- THAI CHICKEN PIZZA TOPS CHICKEN REVENUE
- BARBECUE CHICKEN CLOSE SECOND IN CHICKEN
- CALIFORNIA CHICKEN RANKS THIRD IN CHICKEN
- CLASSIC DELUXE LEADS CLASSIC CATEGORY REVENUE
- HAWAIIAN PIZZA SECOND IN CLASSIC CATEGORY
- PEPPERONI PIZZA THIRD IN CLASSIC CATEGORY
- SPICY ITALIAN DOMINATES SUPREME CATEGORY REVENUE
- ITALIAN SUPREME FOLLOWS IN SUPREME CATEGORY

category	pizza_type	revenue
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





THANK YOU

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