PIZZA SALES ANALYSIS

USING SQL

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OBJECTIVES

1)Identify Sales Trends .

2)Understand Customer Preferences .

3)Evaluate Sales Performance .

4)Enhance Customer Satisfaction.

5)Financial Performance Analysis .

OVERVIEW

In this project, we address several critical questions related to pizza sales, organized under different categories to provide a structured analysis. By following this comprehensive approach, the pizza sales analysis aims to deliver actionable insights that will optimize various aspects of the business. These insights will help identify sales trends, understand customer preferences.. Additionally, the project focuses on customer segmentation, inventory optimization, operational efficiency, and financial performance. The ultimate goal is to enhance customer satisfaction, increase sales, and boost profitability. This structured analysis will guide data-driven decisions, ensuring sustained business growth and success.

Q1) Retrive the total numbers of orders placed.

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

Result Grid

	COUNT(order_id)
▶	21350

Q2) Calculate total revenue generated from pizza sales.

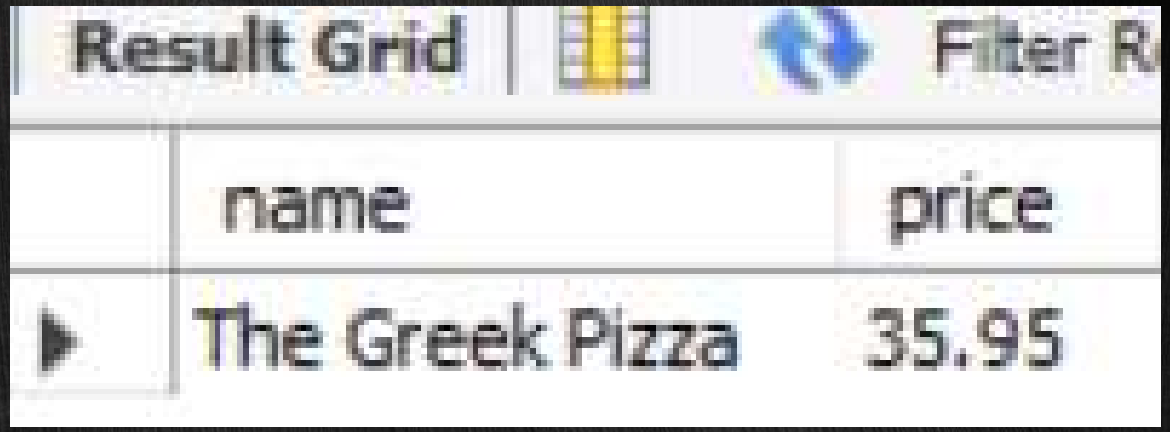
```
SELECT
    ROUND(SUM(order_details.quantity * pizzas.price),
            2) AS total_sales
FROM
    order_details
        JOIN
    pizzas ON pizzas.pizza_id = order_details.pizza_id
```

Result Grid

total_sales
817860.05

Q3) Identify the Highest Price 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 price DESC
LIMIT 1;
```



name	price
The Greek Pizza	35.95

Q4) Identify the most common pizza sized ordered

```sql
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
LIMIT 1;
```

Result Grid | Filt

size	order_count
L	18526

Q5) list 5 most ordered pizza types along with quantities

```
    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
```

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

Q6) Join the necessary tables to find the total quantity of each pizza catagory 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;
```

Result Grid | Filter R

category	quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

Q7) Determine the distribution of orders by hour of the day.

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

Result Grid

hour	order_count
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

Q8) Join relevant tables to find the category wise distribution of pizzas.

```
select category, count(name) from pizza_types
group by category;
```

Result Grid | Filter Ro

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

Q9) Group the orders by date and calculate the average number of pizzas orders per day

```sql
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;
```

Result Grid | Filter Rows:

avg_pizza_ordered_per_day
138

Q10) Determine top 3 most ordered pizza types based revenue.

```sql
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;
```

Result Grid | Filter Rows:

name	revenue
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5

Q11) 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(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;
```

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
2015-01-10	23990.350000000002
2015-01-11	25862.65
2015-01-12	27781.7
2015-01-13	29831.300000000003
2015-01-14	32358.700000000004

Q12) Determine the top 3 most ordered pizza types based on revenue for each pizza type.

```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((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 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

INSIGHTS

* Large (L) sized pizza is most commonly ordered.
* The Thai Chicken Pizza ($43434.25), Barbecue Chicken Pizza($42768) and California Chicken pizza ($41409.5) generate the highest revenue.
*The most ordered pizza type based on quantities are the Classic Delux Pizza (2453), Barbecue chicken pizza(2432) and Hawaiian pizza(2422).
*The highest priced pizza is Greek pizza ($35.95).
*The average number of pizzas ordered per day is 138.
*Understanding the percentage contribution of each pizza type to total revenue helps in identifying customer performance.

THANK YOU !