SQL PROJECT- PIZZA SALES ANALYSIS

13 June, 2024

INTRODUCTION

Hello Everyone, I'm Vinayak!
This project explores pizza sales using advanced SQL techniques. By analyzing sales data, customer demographics, and product details, I've uncovered key trends and insights. Using complex joins, window functions, subqueries, and more, I've demonstrated how SQL can drive strategic business decisions in the world of pizza sales.

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AGENDA

01 Introduction

02 Data Overview

03 Sales Performance Analysis

04 Customer Insights

05 Operational Efficiency

06 Advanced SQL Techniques

07 Key Findings

08 Conclusion

RETRIEVE THE TOTAL NUMBER OF ORDERS PLACED.

L File 3* | SQL File 6* | SQL File 7* | SQL File 8* | SQL File 9*

Limit to 1000 rows

```
1    -- Retrieve the total number of orders placed. --
2
3 •  select count(*) as 'total orders' from orders;
```

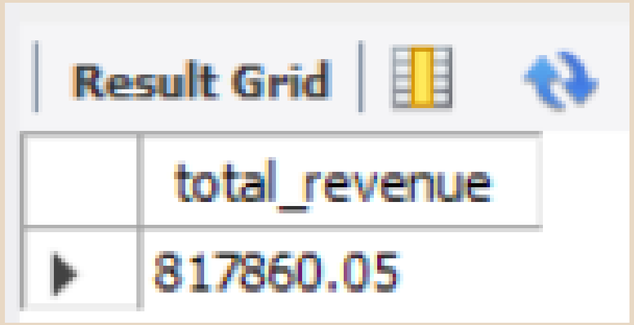
O/P:

	total orders
▶	21350

CALCULATE THE 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 ;
```

O/P:



IDENTIFY THE HIGHEST-PRICED 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 pizzas.price DESC
LIMIT 1;
```

O/P:

Result Grid | Filter Rows:

name	price
The Greek Pizza	35.95

IDENTIFY THE MOST COMMON PIZZA SIZE 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;
```

O/P:

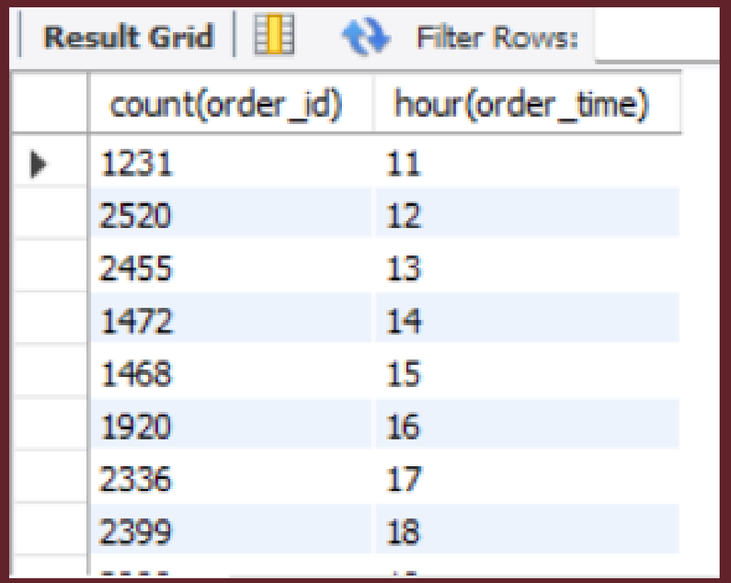
Result Grid | Filter

	size	order_count
▶	L	18526

DETERMINE THE DISTRIBUTION OF ORDERS BY HOUR OF THE DAY.

```
select count(order_id) , hour(order_time) from orders
group by hour(order_time);
```

O/P:



Result Grid | Filter Rows:

count(order_id)	hour(order_time)
1231	11
2520	12
2455	13
1472	14
1468	15
1920	16
2336	17
2399	18

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

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

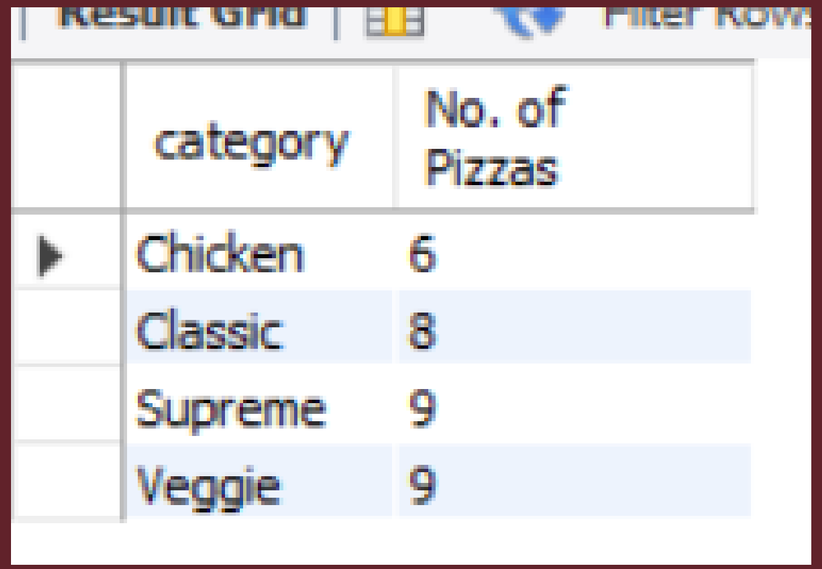
O/P:

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

JOIN RELEVANT TABLES TO FIND THE CATEGORY-WISE DISTRIBUTION OF PIZZAS.

```sql
SELECT
    pizza_types.category,
    COUNT(pizza_types.category) AS 'No. of Pizzas'
FROM
    pizza_types
GROUP BY pizza_types.category;
```

O/P:



	category	No. of Pizzas
▶	Chicken	6
	Classic	8
	Supreme	9
	Veggie	9

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

```sql
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 pizzas.pizza_id = order_details.pizza_id
GROUP BY pizza_types.category;
```

O/P:

Result Grid | Filte

category	quantity
Classic	14888
Veggie	11649
Supreme	11987
Chicken	11050

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

```
select round(avg(quantity),0) as average_pizzas_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 data_quantity;
```

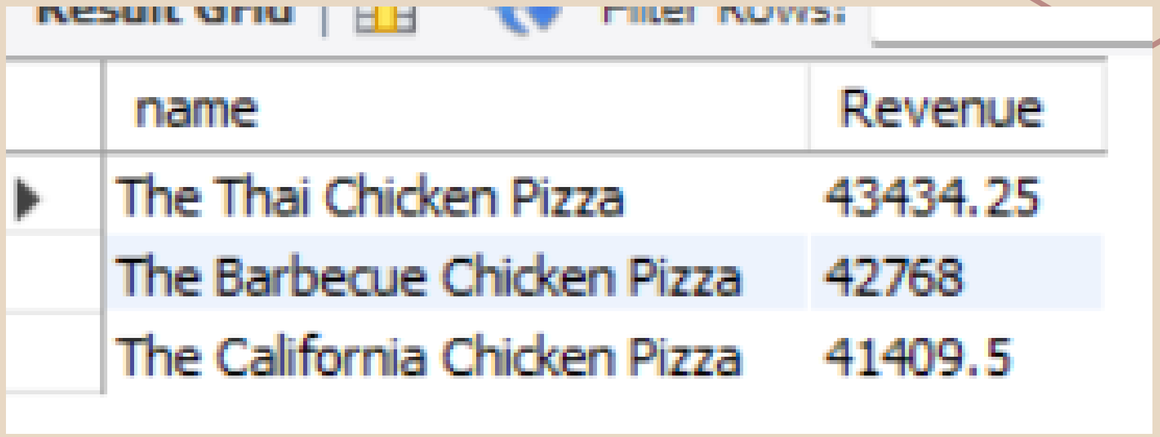
O/P:

average_pizzas_per_day
138

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 pizzas.pizza_id=order_details.pizza_id
group by pizza_types.name
order by Revenue desc limit 3
;
```

O/P:



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

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

```sql
select pizza_types.category,
round((sum(order_details.quantity*pizzas.price)/(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
)*100),2) as revenue from pizza_types
join pizzas on pizza_types.pizza_type_id=pizzas.pizza_type_id
join order_details on pizzas.pizza_id=order_details.pizza_id
group by pizza_types.category
order by revenue desc
;
```

O/P:

	category	revenue
▶	Classic	26.91
	Supreme	25.46
	Chicken	23.96
	Veggie	23.68

ANALYZE THE CUMULATIVE REVENUE GENERATED OVER TIME.

```sql
-- Analyze the cumulative revenue generated over time.
select order_date,round(sum(revenue) over(order by order_date),2) 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 order_details.order_id=orders.order_id
group by orders.order_date) as sales;
```

O/P:

order_date	cum_revenue
2015-01-01	2713.85
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

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

```
select name,price from
(select category, name, round(revenue,2) as 'price',
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 pizzas.pizza_id=order_details.pizza_id
group by pizza_types.category,pizza_types.name) as a)as b where rn<=3;
```

O/P:

name	price
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5
The Classic Deluxe Pizza	38180.5
The Hawaiian Pizza	32273.25
The Pepperoni Pizza	30161.75
The Spicy Italian Pizza	34831.25
The Italian Supreme Pizza	33476.75

THANK YOU

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