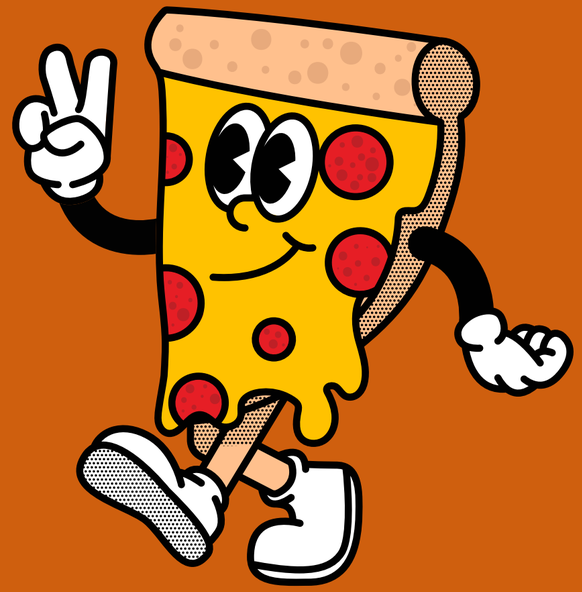
# PIZZA SALES DATA ANALYSIS



# USING SQL

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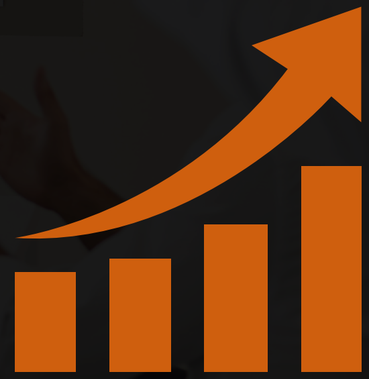
# INTRODUCTION

In this report, I have solved SQL queries from basic to advanced and solved different problems to extract out the relevant data



# QUESTIONS

**Basic:**

Retrieve the total number of orders placed.
Calculate the total revenue generated from pizza sales.
Identify the highest-priced pizza.
Identify the most common pizza size ordered.
List the top 5 most ordered pizza types along with their quantities.

**Intermediate:**

Join the necessary tables to find the total quantity of each pizza category ordered.
Determine the distribution of orders by hour of the day.
Group the orders by date and calculate the average number of pizzas ordered per day.
Determine the top 3 most ordered pizza types based on revenue.

**Advanced:**

Calculate the percentage contribution of each pizza type to total revenue.
Analyze the cumulative revenue generated over time.
Determine the top 3 most ordered pizza types based on revenue for each pizza category.

## BASIC Q1 Retrieve the total number of orders placed.

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

Result Grid

| | total_orders |
|---|---|
| ▶ | 21350 |

## BASIC Q2 Calculate the total revenue generated from pizza sales.

```sql
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 |

## BASIC Q3 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;
```

Result Grid | Filter Rows

| name | price |
|---|---|
| The Greek Pizza | 35.95 |

## BASIC Q4 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;
```

Result Grid | Filter R

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

## BASIC Q5 List the top 5 most ordered pizza types along with their quantities.

```sql
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;
```

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 |

## INTERMEDIATE Q1 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_sum
FROM
    order_details
        JOIN
    pizzas ON order_details.pizza_id = pizzas.pizza_id
        JOIN
    pizza_types ON pizza_types.pizza_type_id = pizzas.pizza_type_id
GROUP BY pizza_types.category
ORDER BY quantity_sum DESC;
```

Result Grid | Filter Rows:

| category | quantity_sum |
|---|---|
| Classic | 14888 |
| Supreme | 11987 |
| Veggie | 11649 |
| Chicken | 11050 |

## INTERMEDIATE Q2 Determine the distribution of orders by hour of the day.

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

Result Grid | Filter Rows:

| HOUR(order_time) | COUNT(order_id) |
|---|---|
| 12 | 2520 |
| 13 | 2455 |
| 18 | 2399 |
| 17 | 2336 |
| 19 | 2009 |
| 16 | 1920 |
| 20 | 1642 |
| 14 | 1472 |
| 15 | 1468 |
| 11 | 1231 |
| 21 | 1198 |
| 22 | 663 |
| 23 | 28 |
| 10 | 8 |
| 9 | 1 |

## INTERMEDIATE Q3 Group the orders by date and calculate the average number of pizzas ordered per day.

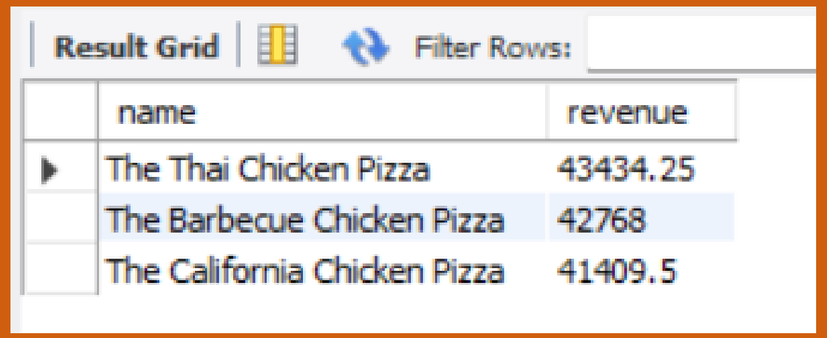
```sql
SELECT
    ROUND(AVG(quantities), 0) AS avg_pizzas_order_perday
FROM
    (SELECT
        orders.order_date, SUM(order_details.quantity) AS quantities
    FROM
        orders
    JOIN order_details ON orders.order_id = order_details.order_id
    GROUP BY order_date) AS order_quantities;
```

Result Grid | Filter Row

| avg_pizzas_order_perday |
|---|
| 138 |

## INTERMEDIATE Q4 Determine the top 3 most ordered pizza types based on revenue.

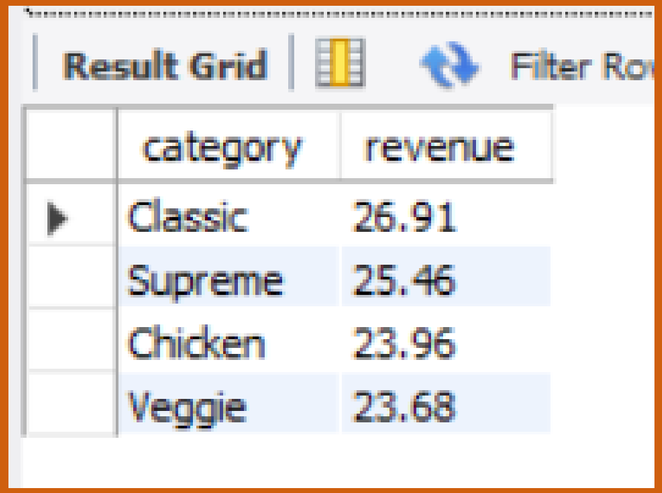
```sql
SELECT
    pizza_types.name,
    SUM(order_details.quantity * pizzas.price) AS revenue
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.name
ORDER BY revenue DESC
LIMIT 3;
```




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

## ADVANCE Q1 Calculate the percentage contribution of each pizza type to total revenue.

```sql
SELECT
    pizza_types.category,
    ROUND((SUM(order_details.quantity * pizzas.price) / (SELECT
                    SUM(order_details.quantity * pizzas.price)
                FROM
                    order_details
                        JOIN
                    pizzas ON order_details.pizza_id = pizzas.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 |

## ADVANCE Q2 Analyze the cumulative revenue generated over time.

```sql
select order_date , round(sum(revenue) over(order by order_date),2) as cumm_revenue
from
(select orders.order_date , round(sum(order_details.quantity * pizzas.price),2) as revenue
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 order by orders.order_date) as sales_perday;
```

Result Grid | Filter Rows:

| order_date | cumm_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 |
| 2015-01-09 | 21526.4 |

## ADVANCE Q3 Determine the top 3 most ordered pizza types based on revenue for each pizza category.

```sql
select category, 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 ,
round(sum(order_details.quantity * pizzas.price),2) as revenue
from order_details join pizzas
on order_details.pizza_id = pizzas.pizza_id
join pizza_types on pizza_types.pizza_type_id = pizzas.pizza_type_id
group by category, pizza_types.name order by revenue desc) as a) as b
where rn <=3 ;
```

Result Grid | Filter Rows: | Expor

| category | name | 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 |
| 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 |

# THANK YOU!

Thank you for your attention to my sales report presentation.