Data Analytics Project

In today's dynamic food industry, understanding customer preferences and operational efficiencies is crucial for success. This data analytics project focuses on analyzing pizza sales data to derive meaningful insights using
SQL (Structured Query Language).
By leveraging the power of relational databases, we aim to uncover patterns, trends, and correlations that can inform strategic decisions for a pizza chain.

Skills Used - MS Excel, SQL, MS PowerPoint

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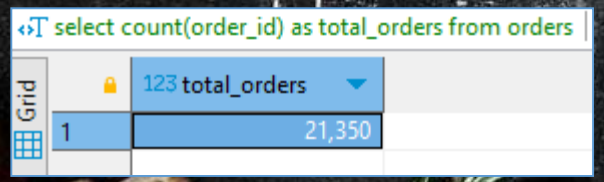
LET'S HAVE SOME FUN WITH NUMBERS USING SQL...

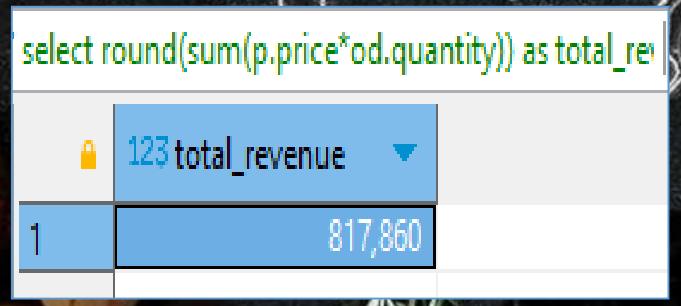
Question-1 - Retrieve the total number of orders placed.

```sql
select
    count(order_id) as total_orders
from
    orders;
```



Question-2 - Calculate the total revenue generated from pizza sales..

```sql
select
    round(sum(p.price * od.quantity)) as total_revenue
from
    pizzas p
join order_details od
on
    p.pizza_id = od.pizza_id ;
```



Question-3 - Identify the highest-priced pizza.

```sql
select
    pt.name,
    p.price
from
    pizzas p
join pizza_types pt
on
    p.pizza_type_id = pt.pizza_type_id
where
    p.price = (
                select
                    max(price)
                from
                    pizzas p2);
```

```sql
select
    pt.name,
    p.price
from
    pizzas p
join pizza_types pt
on
    p.pizza_type_id = pt.pizza_type_id
order by
    p.price desc
limit 1;
```

select pt.name, p.price from pizzas p join pizza_typ

	name	price
1	The Greek Pizza	35.95

Question-4 - Identify the most common pizza size ordered.

```sql
select
    p.size,
    count(od.quantity) as order_count
from
    pizzas p
join order_details od
on
    p.pizza_id = od.pizza_id
group by
    p.size
order by
    order_count desc;
```

```sql
select
    p.size,
    count(od.quantity) as order_count
from
    pizzas p
join order_details od
on
    p.pizza_id = od.pizza_id
group by
    p.size
order by
    order_count desc
limit 1;
```

select p.size, count(od.quantity) as order_count frc

	size	order_count
1	L	18,526
2	M	15,385
3	S	14,137
4	XL	544
5	XXL	28

select p.size, count(od.quantity) as order_count frc

	size	order_count
1	L	18,526

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

```sql
select
    pt.name,
    sum(od.quantity) as order_count
from
    pizzas p
join order_details od
on
    p.pizza_id = od.pizza_id
join pizza_types pt on
    p.pizza_type_id = pt.pizza_type_id
group by
    pt.name
order by
    order_count desc
limit 5;
```

```
select pt.name, sum(od.quantity) as order_count f | Enter a SQL
```

	name	order_count
1	The Classic Deluxe Pizza	2,453
2	The Barbecue Chicken Pizza	2,432
3	The Hawaiian Pizza	2,422
4	The Pepperoni Pizza	2,418
5	The Thai Chicken Pizza	2,371

Question-6 - Join the necessary tables to find the total quantity of each pizza category ordered.

```sql
select
    pt.category,
    sum(od.quantity) as order_count
from
    pizza_types pt
join pizzas p
on
    pt.pizza_type_id = p.pizza_type_id
join order_details od on
    p.pizza_id = od.pizza_id
group by
    pt.category
order by
    order_count desc;
```

select pt.category, sum(od.qua | Enter a SQL expression

	category	order_count
1	Classic	14,888
2	Supreme	11,987
3	Veggie	11,649
4	Chicken	11,050

Question-7- Determine the distribution of orders by hour of the day.

```sql
select
    extract(hour from order_time) as hour_slot,
    count(o.order_id) as order_count
from
    orders o
group by
    hour_slot
order by
    hour_slot;
```

select extract(hour from order_time) as hour_slot,

	123 hour_slot	123 order_count
1	9	1
2	10	8
3	11	1,231
4	12	2,520
5	13	2,455
6	14	1,472
7	15	1,468
8	16	1,920
9	17	2,336
10	18	2,399
11	19	2,009
12	20	1,642
13	21	1,198
14	22	663
15	23	28

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

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

	category	count
1	Supreme	9
2	Chicken	6
3	Classic	8
4	Veggie	9

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

```sql
select
    round(avg(total_sale_per_day)) as average_pizzas_ordered_per_day
from
    (
    select
        o.order_date as date_slot,
        sum(quantity) as total_sale_per_day
    from
        orders o
    join order_details od
    on
            o.order_id = od.order_id
        group by
            o.order_date
        order by
        o.order_date) a;
```

Final Query Result

	average_pizzas_ordered_per_day
1	138

Inner/Sub-Query Query Result

	date_slot	total_sale_per_day
1	2015-01-01	162
2	2015-01-02	165
3	2015-01-03	158
4	2015-01-04	106
5	2015-01-05	125
6	2015-01-06	147
7	2015-01-07	138
8	2015-01-08	173
9	2015-01-09	127
10	2015-01-10	146
11	2015-01-11	116
12	2015-01-12	119
13	2015-01-13	120
14	2015-01-14	150
15	2015-01-15	123
16	2015-01-16	158
17	2015-01-17	125
18	2015-01-18	122
19	2015-01-19	142
20	2015-01-20	143
21	2015-01-21	129
22	2015-01-22	158
23	2015-01-23	152
24	2015-01-24	142
25	2015-01-25	102
26	2015-01-26	113
27	2015-01-27	151
28	2015-01-28	118
29	2015-01-29	119
30	2015-01-30	138
31	2015-01-31	145

Question-10- Determine the top 3 most ordered pizza types based on revenue.

```sql
select
    pt.name,
    round(sum(p.price * od.quantity)) as total_revenue
from
    pizzas p
join order_details od
on
    p.pizza_id = od.pizza_id
join pizza_types pt
on
    p.pizza_type_id = pt.pizza_type_id
group by
    pt.name
order by
    total_revenue desc
limit 3;
```

	name	total_revenue
1	The Thai Chicken Pizza	43,434
2	The Barbecue Chicken Pizza	42,768
3	The California Chicken Pizza	41,410

Question-11- Calculate the percentage contribution of each pizza type to total revenue.

```sql
select
    pt.category as category,
    (round(((round(sum(p.price * od.quantity)) / (
            select
                round(sum(p2.price * od2.quantity))
            from
                pizzas p2
            join order_details od2
            on
                p2.pizza_id = od2.pizza_id)))* 100)|| '%')
            as revenue_percentage
from
    pizzas p
join order_details od
on
    p.pizza_id = od.pizza_id
join pizza_types pt
on
    p.pizza_type_id = pt.pizza_type_id
group by
    category
order by
    revenue_percentage;
```

	category	revenue_percentage
1	Chicken	24%
2	Veggie	24%
3	Supreme	25%
4	Classic	27%

Question-12- Analyze the cumulative revenue generated over time.

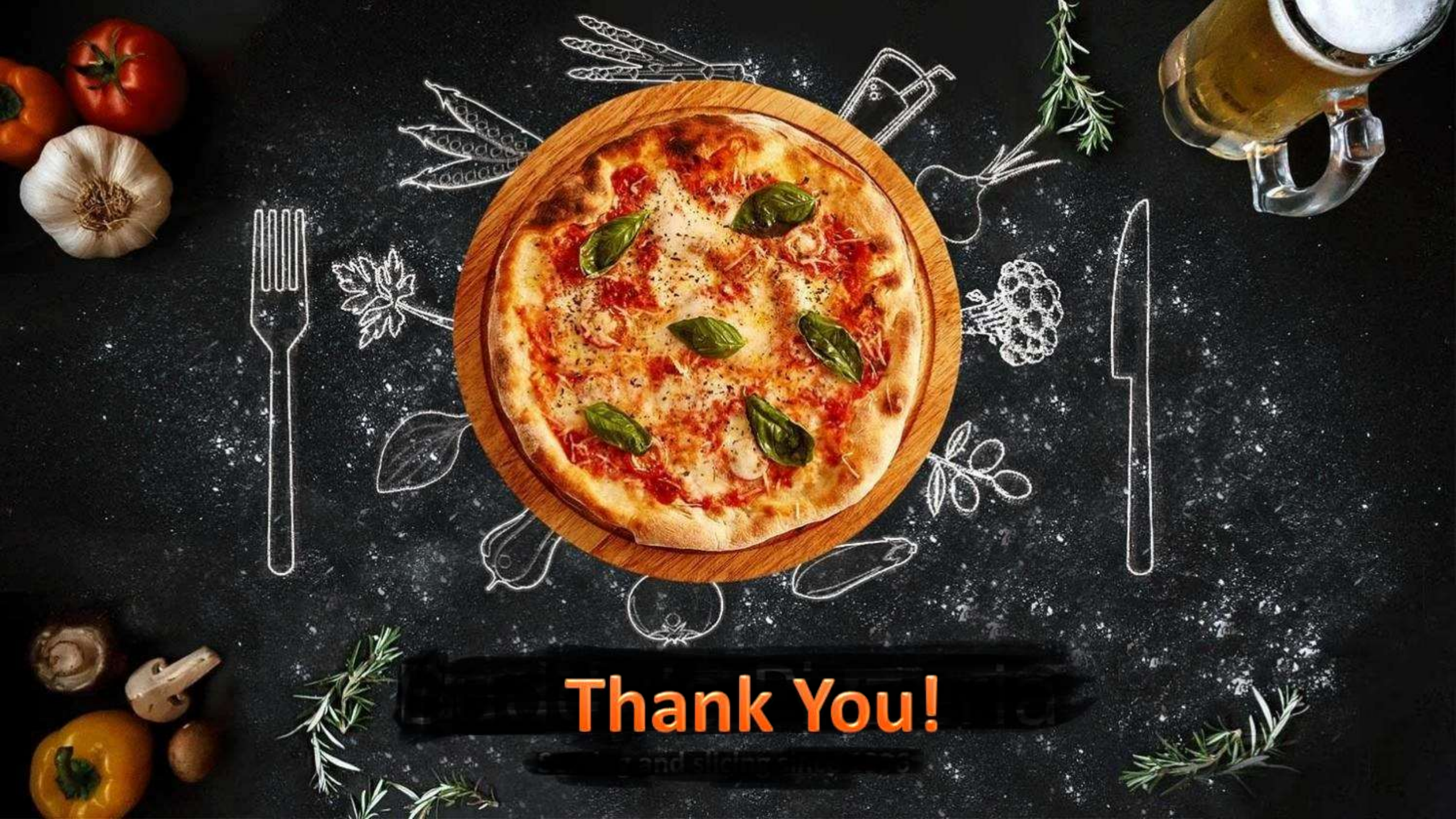
```sql
select
    order_date,
    sum(revenue) over(
    order by order_date) as cumulative_revenue
from
    (
    select
        o.order_date,
        round(sum(p.price * od.quantity)) as revenue
    from
        pizzas p
    join order_details od
on
        p.pizza_id = od.pizza_id
    join orders o
on
        od.order_id = o.order_id
    group by
        o.order_date
    order by
        o.order_date) as revenue_data;
```

order_date	cumulative_revenue
2015-01-01	2,714
2015-01-02	5,446
2015-01-03	8,108
2015-01-04	9,863
2015-01-05	11,929
2015-01-06	14,358
2015-01-07	16,560
2015-01-08	19,398
2015-01-09	21,525
2015-01-10	23,989
2015-01-11	25,861
2015-01-12	27,780
2015-01-13	29,830
2015-01-14	32,357
2015-01-15	34,342
2015-01-16	36,936
2015-01-17	39,000
2015-01-18	40,977
2015-01-19	43,364
2015-01-20	45,762
2015-01-21	47,803
2015-01-22	50,300
2015-01-23	52,724
2015-01-24	55,013
2015-01-25	56,631
2015-01-26	58,515
2015-01-27	61,043
2015-01-28	63,059
2015-01-29	65,104
2015-01-30	67,374
2015-01-31	69,792
2015-02-01	72,981

Question-13- Determine the top 3 most ordered pizza types based on revenue for each pizza category.

```sql
select *
from
    (
    select
        pt.category,
        pt.name ,
        round(sum(p.price * od.quantity)) as revenue,
        rank() over(partition by category
    order by
        round(sum(p.price * od.quantity)) desc) as rn
    from
        pizzas p
    join order_details od
on
        p.pizza_id = od.pizza_id
    join pizza_types pt
on
        p.pizza_type_id = pt.pizza_type_id
    group by
        pt.category,
        pt.name) as a
where
    rn<4 ;
```

category	name	revenue	rn
Chicken	The Thai Chicken Pizza	43,434	1
Chicken	The Barbecue Chicken Pizza	42,768	2
Chicken	The California Chicken Pizza	41,410	3
Classic	The Classic Deluxe Pizza	38,180	1
Classic	The Hawaiian Pizza	32,273	2
Classic	The Pepperoni Pizza	30,162	3
Supreme	The Spicy Italian Pizza	34,831	1
Supreme	The Italian Supreme Pizza	33,477	2
Supreme	The Sicilian Pizza	30,940	3
Veggie	The Four Cheese Pizza	32,266	1
Veggie	The Mexicana Pizza	26,781	2
Veggie	The Five Cheese Pizza	26,066	3


Thank You!