

SQL project on pizza sales

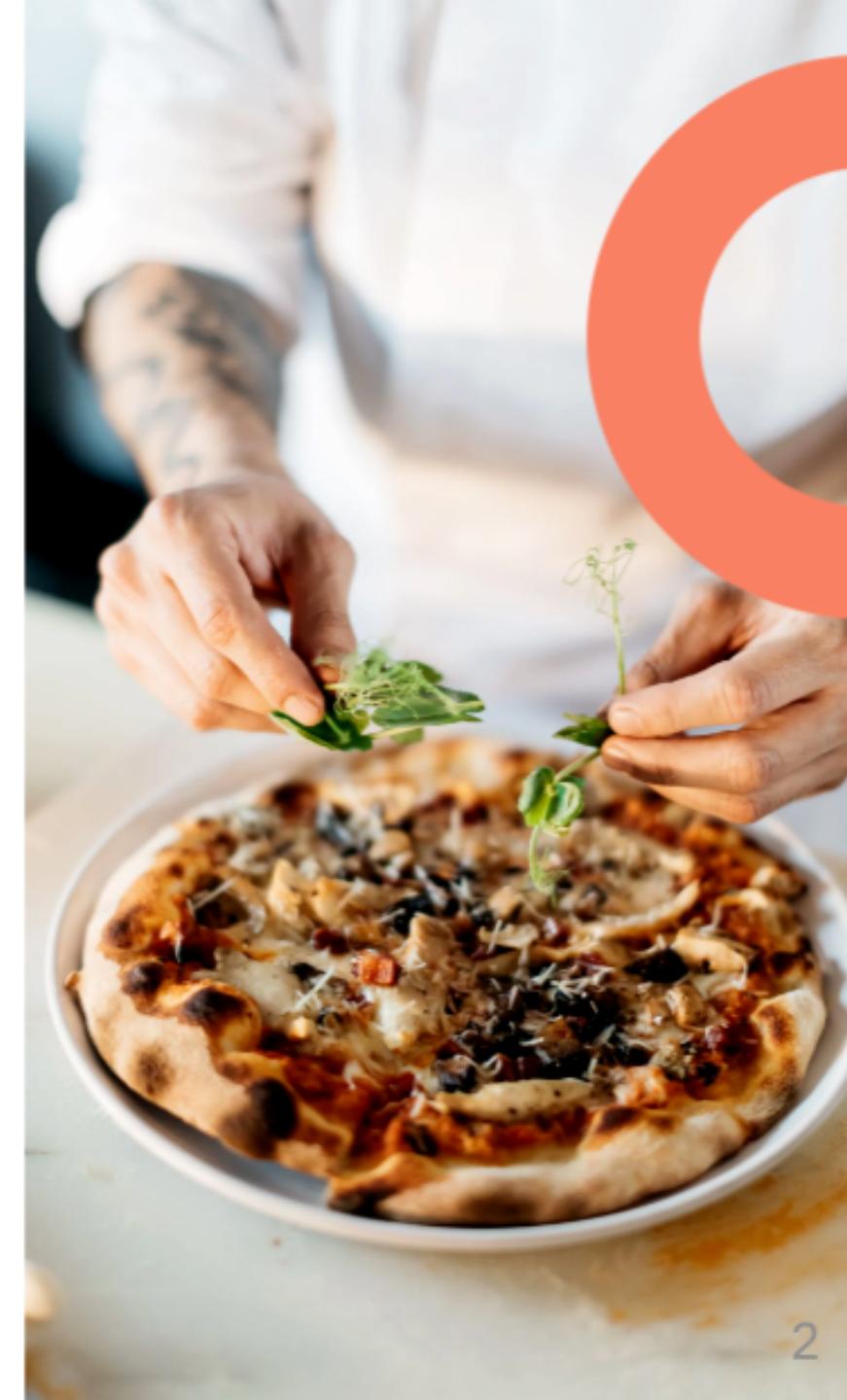
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MISSION

“HELLO”

My name is vaibhav
chaudhary and in this
project i have utilized **SQL**
query to solve the questions
related to **pizza Sales.**



DATABASE CONTENT

This DataBase(pizzahut) contains four different tables as follows:

1. Orders

2. Order_Details

3. Pizza_types

4. Pizzas

SAMPE 5 ROWS

1.Orders

	order_id	order_date	order_time
▶	1	2015-01-01	11:38:36
	2	2015-01-01	11:57:40
	3	2015-01-01	12:12:28
	4	2015-01-01	12:16:31
	5	2015-01-01	12:21:30

2.Orders_details

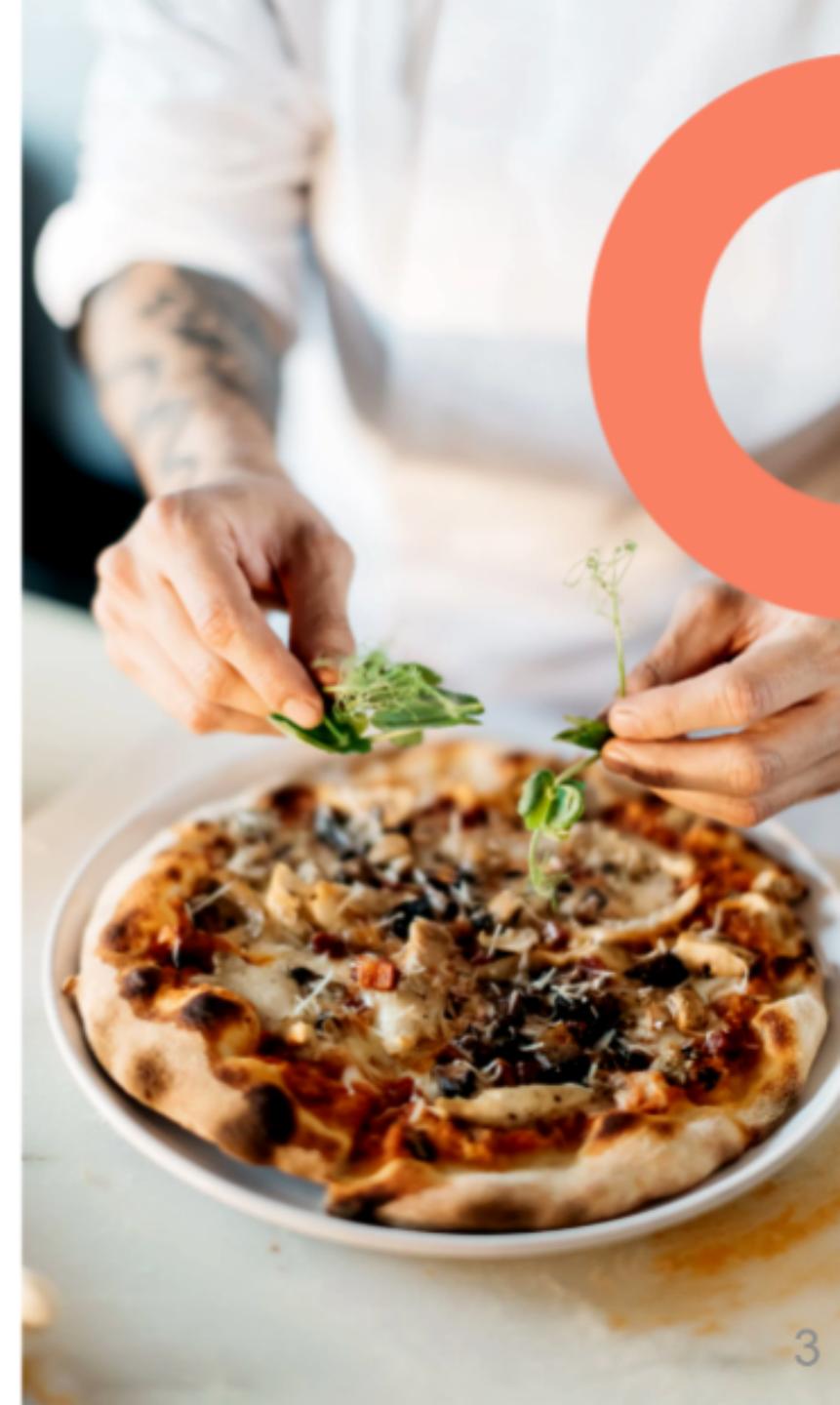
	order_details_id	order_id	pizza_id	quantit
▶	1	1	hawaiian_m	1
	2	2	classic_dx_m	1
	3	2	five_cheese_l	1
	4	2	ital_supr_l	1
	5	2	mexicana_m	1

3.Pizza_types

	pizza_type_id	name	category	ingredients
▶	bbq_ckn	The Barbecue Chicken Pizza	Chicken	Barbecued Chicken, Red Peppers, Green Pepp...
	cali_ckn	The California Chicken Pizza	Chicken	Chicken, Artichoke, Spinach, Garlic, Jalapeno P...
	dckn_alfredo	The Chicken Alfredo Pizza	Chicken	Chicken, Red Onions, Red Peppers, Mushrooms...
	dckn_pesto	The Chicken Pesto Pizza	Chicken	Chicken, Tomatoes, Red Peppers, Spinach, Garl..

4.Pizzas

	pizza_id	pizza_type_id	size	price
▶	bbq_dkn_s	bbq_ckn	S	12.75
	bbq_dkn_m	bbq_ckn	M	16.75
	bbq_dkn_l	bbq_ckn	L	20.75
	cali_dkn_s	cali_ckn	S	12.75
	cali_dkn_m	cali_ckn	M	16.75



Problem queries

Intermediate Level

1. Retrieve the total number of order placed.
2. Retrive the total number of sales of pizza.
3. Identify the highest priced pizza.
4. Identify the most common pizza size ordered



Moderate Level

1. list the 5 most ordered pizza types along with their quantities.
2. join the necessary tables to find the total quantity of each pizza size category ordered.
3. Determine the distribution of the order by hour of the day.
4. Join relevant tables to find the category wise distribution of pizzas.
5. Group the orders by date and calculate the average number of pizzas ordered per day.



Advanced Level

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



1. RETRIEVE THE TOTAL NUMBER OF ORDER PLACED.

SQL query:

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

Result:

	total_orders
▶	21350



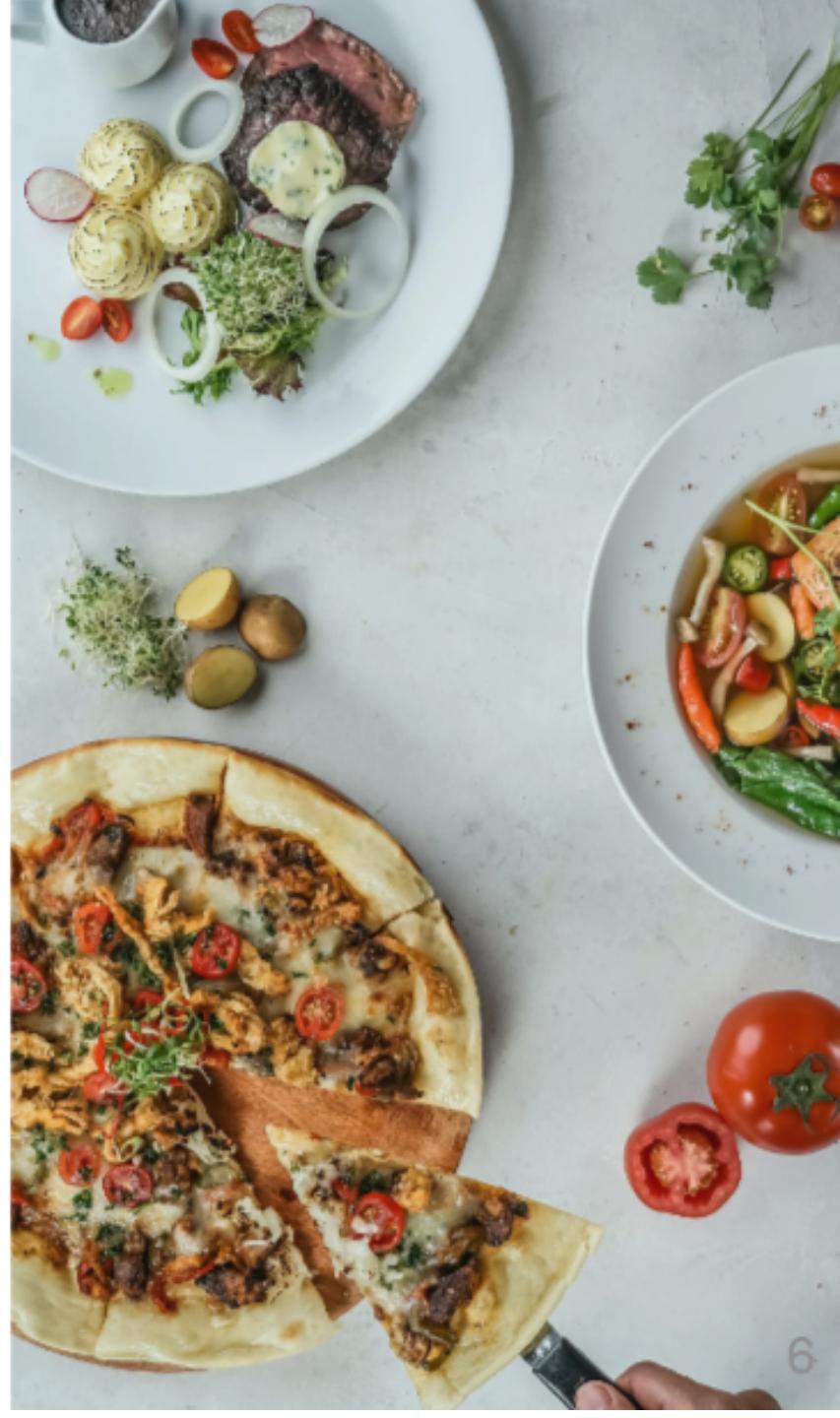
2. Retrieve the total number of sales of pizza.

SQL query:

```
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:

	total_sales
▶	817860.05



3. Identify the highest priced pizza.

SQL query:

```
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:

	name	price
▶	The Greek Pizza	35.95

4. IDENTIFY THE MOST COMMON PIZZA SIZE ORDERED

SQL query:

```
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:

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



5. list the 5 most ordered pizza types along with their quantities.

SQL query:

```
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:

	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

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

SQL Query:

```
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:

	category	quantity
▶	Classic	14888
	Supreme	11987
	Veggie	11649
	Chicken	11050



7. DETERMINE THE DISTRIBUTION OF THE ORDER BY HOUR OF THE DAY.

SQL query:

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

Result:

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
9	1



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

SQL query:

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

Result:

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



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

SQL Query:

```
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:

avg_pizza_ordered_per_day
138



10. DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE.

SQL query:

```
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:

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



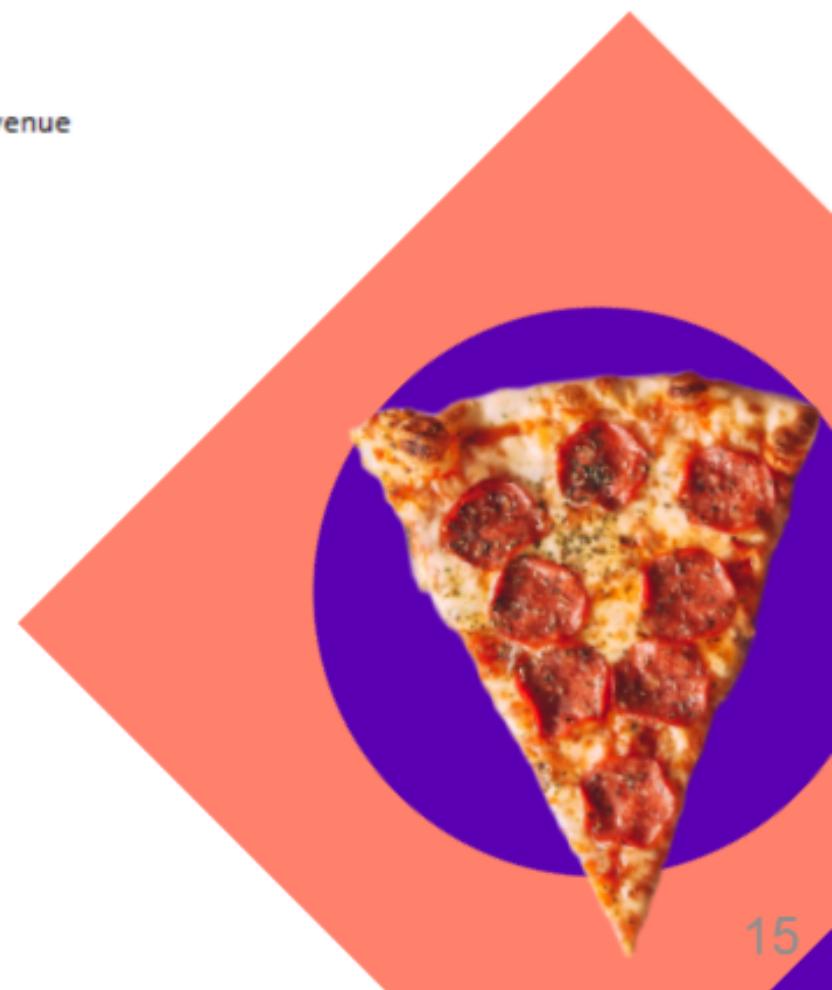
11. Calculate the percentage contribution of each pizza type to total revenue.

SQL Query:

```
SELECT
    pizza_types.category,
    (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 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;
```

Result:

	category	revenue
▶	Classic	26.90596025566967
	Supreme	25.45631126009862
	Chicken	23.955137556847287
	Veaaie	23.682590927384577



12. ANALYSE THE CUMULATIVE REVENUE GENERATED OVER TIME.

SQL query:

```
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:

	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

(Only top 5 rows)



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

SQL query:

```
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:

	name	revenue
▶	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
	The Sicilian Pizza	30940.5
	The Four Cheese Pizza	32265.70000000065
	The Mexicana Pizza	26780.75
	The Five Cheese Pizza	26066.5





Thank you!