
Pizza Sales Analysis
Using SQL
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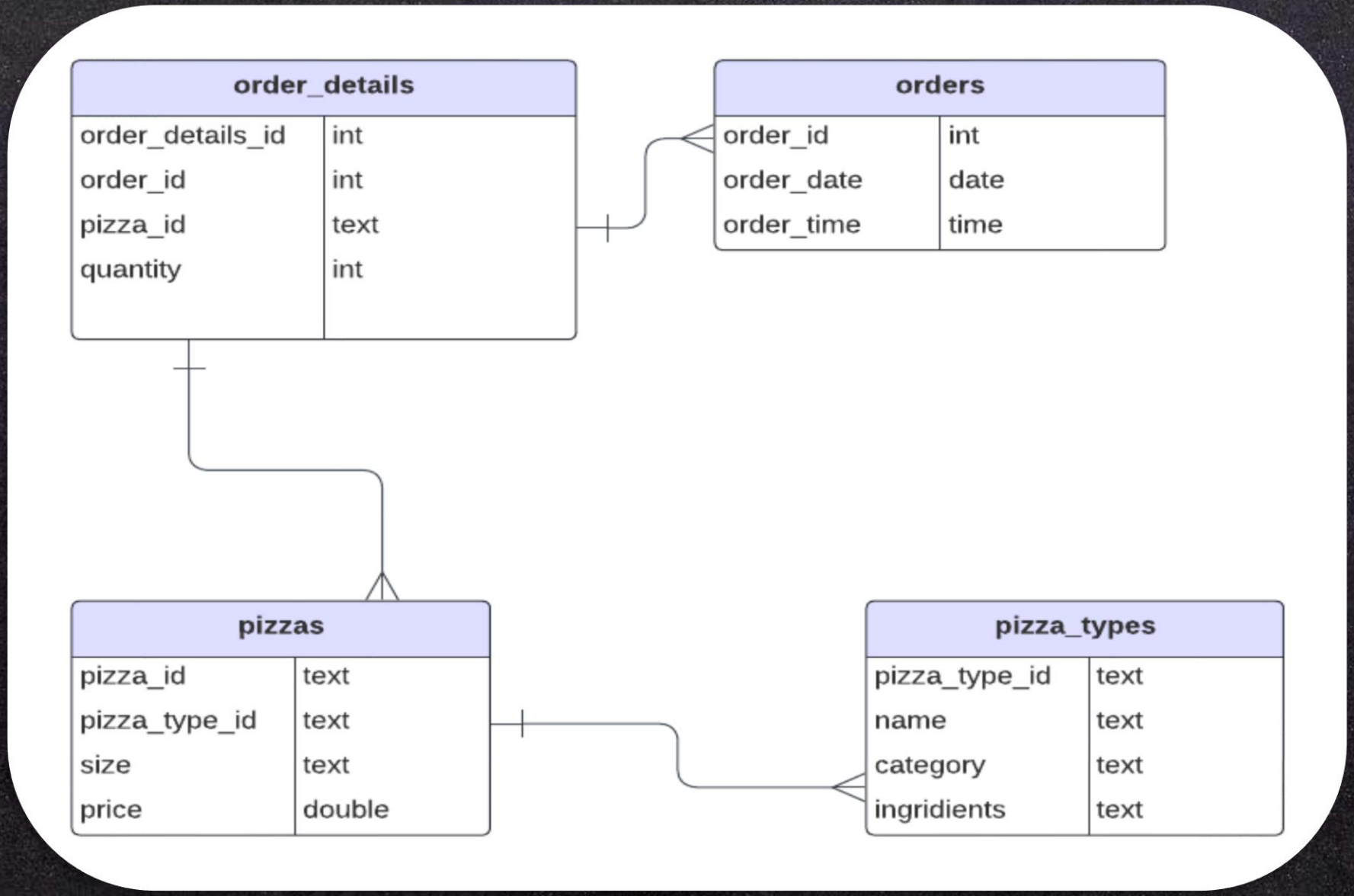
Hello!

I am Tufan Kundu, In this project I have utilized SQL queries to solve the questions those are related to the pizza sales.

Objective

This project looks at pizza sales numbers to find out how well restaurant is doing and what trends are there. This information is used to make smarter decisions and plan better for the future.

Data model view



Q1:Retrieve the total number of orders placed.

Query:

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

Output:

	total_orders
▶	21350

Q2:Calculate the total revenue generated from pizza sales.

Query:

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

Output:

	total_revenue
▶	817860.05

Q3:Identify the highest-priced pizza.

Query:

```
SELECT
    pizza_types.name, pizzas.price
FROM
    pizza_types
        JOIN
    pizzas ON pizzas.pizza_type_id = pizza_types.pizza_type_id
ORDER BY pizzas.price DESC
LIMIT 1;
```

Output:

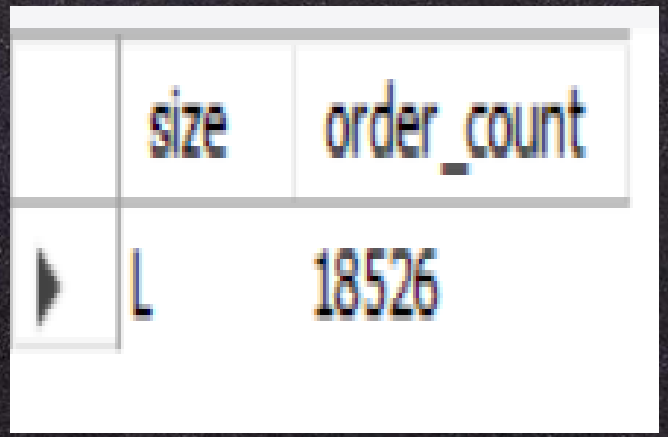
	name	price
▶	The Greek Pizza	35.95

Q4:Identify the most common pizza size ordered.

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
LIMIT 1;
```

Output:



	size	order_count
▶	L	18526

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

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;
```

Output:

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 category ordered.

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;
```

Output:

	category	quantity
▶	Classic	14888
	Supreme	11987
	Veggie	11649
	Chicken	11050

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

Query:

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

Output:

	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

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

Query:

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

Output:

category	count
Chicken	6
Classic	8
Supreme	9
Veggie	9

Q9:Group the orders by date and calculate the average number of pizzas ordered per day.

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;
```

Output:

avg_pizza_ordered_per_day
138

Q10:Determine the top 3 most ordered pizza types based on revenue.

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;
```

Output:

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

Q11:Calculate the percentage contribution of each pizza type to total revenue.

Query:

```
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 order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.category
ORDER BY revenue DESC;
```

Output:

	category	revenue
	Classic	26.91
	Supreme	25.46
▶	Chicken	23.96
	Veggie	23.68

Q12:Analyze the cumulative revenue generated over time.

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;
```

Output:

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

Q13:Determine the top 3 most ordered pizza types based on revenue for each pizza category.

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;
```

Output:

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


THANK YOU