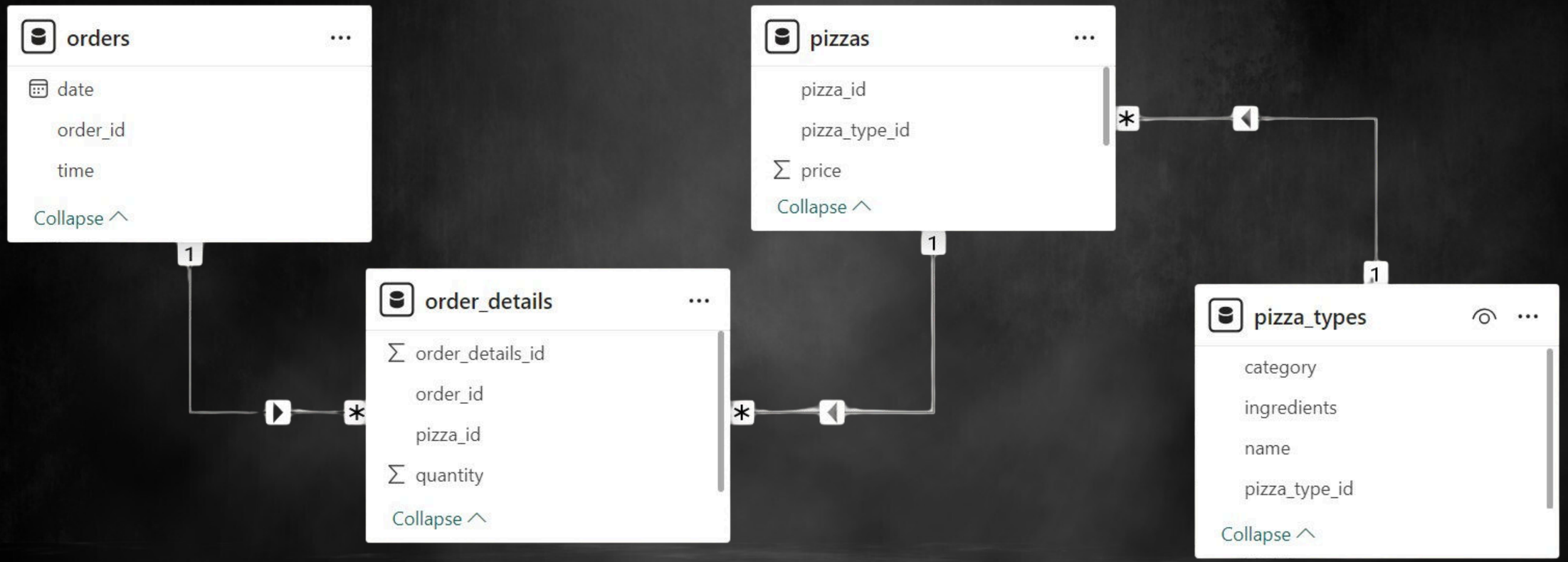
MySQL
Data Analysis for Pizza Hut Sales

Introduction to Pizza Hut sales project

- This presentation will delve into the sales performance of Pizza Hut using MySQL Workbench.
- Through carefully crafted queries, we will uncover valuable insights into our sales data.
- The analysis will provide a concise overview of our sales trends and patterns

Entity Realtionship Diagram



Retrieve the total number of orders placed

```sql
SELECT
    COUNT(order_id) as Total_Orders
FROM
    orders;
```

Total_Orders
21350

Calculate the total revenue generated from pizza sales.

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

Total_revenue
817860.05

Identify the highest-priced pizza.

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

name	price
The Greek Pizza	35.95

Identify the most common pizza size ordered

```sql
SELECT
    size, COUNT(quantity) AS order_count
FROM
    order_details o
        JOIN
    pizzas p ON p.pizza_id = o.pizza_id
GROUP BY size
ORDER BY order_count DESC
```

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

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

```sql
SELECT
    pt.name, sum(quantity) AS order_count
FROM
    order_details o
        JOIN
    pizzas p ON p.pizza_id = o.pizza_id
        JOIN
    pizza_types pt ON pt.pizza_type_id = p.pizza_type_id
GROUP BY pt.name
ORDER BY order_count DESC
LIMIT 5
```

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

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

```sql
SELECT
    pt.category, SUM(quantity) AS order_count
FROM
    order_details o
        JOIN
    pizzas p ON p.pizza_id = o.pizza_id
        JOIN
    pizza_types pt ON pt.pizza_type_id = p.pizza_type_id
GROUP BY pt.category
ORDER BY order_count DESC
```

category	order_count
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

Determine the distribution of orders by hour of the day

```sql
SELECT
    HOUR(order_time) as Hour, COUNT(order_id) as order_count
FROM
    orders
GROUP BY HOUR(order_time);
```

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

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

```sql
SELECT
    pt.category, COUNT(name) as count
FROM
    pizza_types pt
GROUP BY pt.category
```

category	count
Chicken	6
Classic	8
Supreme	9
Veggie	9

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

```sql
SELECT
    ROUND(AVG(order_quantity)) AS AVG_orders
FROM
    (SELECT
        order_date, SUM(quantity) AS order_quantity
    FROM
        order_details od
    JOIN orders o ON o.order_id = od.order_id
    GROUP BY order_date) AS avg_quantity
```

AVG_orders
138

Determine the top 3 most ordered pizza types based on revenue

```sql
SELECT
    pt.name, SUM(price * quantity) AS revenue
FROM
    order_details od
        JOIN
    pizzas p ON p.pizza_id = od.pizza_id
        JOIN
    pizza_types pt ON pt.pizza_type_id = p.pizza_type_id
GROUP BY 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

Calculate the percentage contribution of each pizza type to total revenue

```sql
SELECT
    pt.category, ceil((SUM(price * quantity)/(SELECT
    ROUND(SUM(o.quantity * p.price), 2) AS total_sales
FROM
    order_details o
        JOIN
    pizzas p ON p.pizza_id = o.pizza_id)) * 100) AS revenue
FROM
    order_details od
        JOIN
    pizzas p ON p.pizza_id = od.pizza_id
        JOIN
    pizza_types pt ON pt.pizza_type_id = p.pizza_type_id
GROUP BY category
ORDER BY revenue DESC
```

category	revenue
Classic	27
Supreme	26
Veggie	24
Chicken	24

Analyze the cumulative revenue generated over time

```sql
select order_date,
round(sum(Day_revenue) over (order by order_date),2)  as cum_revenue
from
(select order_date,
 round(sum(quantity*price),2) as Day_revenue from order_details od
join pizzas p on p.pizza_id = od.pizza_id
join orders o on o.order_id = od.order_id
group by order_date) as day_sales;
```

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
2015-01-09	21526.4
2015-01-10	23990.35

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

```sql
select name,revenue
from (select category,name,revenue,rank() over (partition by category order by revenue desc) as rn
from
(select category,name,sum(quantity*price) as revenue from order_details od
join pizzas p on p.pizza_id = od.pizza_id
join pizza_types pt on pt.pizza_type_id = p.pizza_type_id
group by category,name) as ab) as b
where rn<=3;
```

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	32265.7000
The Mexicana Pizza	26780.75
The Five Cheese Pizza	26066.5

Sales Insights

- The analysis indicates that **chicken** pizza is the most popular category among customers.
- However ,the current menu only offers six chicken pizza varieties. Expanding the selection of chicken pizzas could lead to a significant increase in sales.
- The peak hours for business are between **12** PM and **1** PM,as well as **4** PM to **7** PM,which coincide with lunch breaks and after-work hours

Thanks!

Do you have any questions?

bhumireddyvamsinathreddy@gmail.com
+91 7569842843
https://www.linkedin.com/in/bhumireddy-vamsinathreddy/