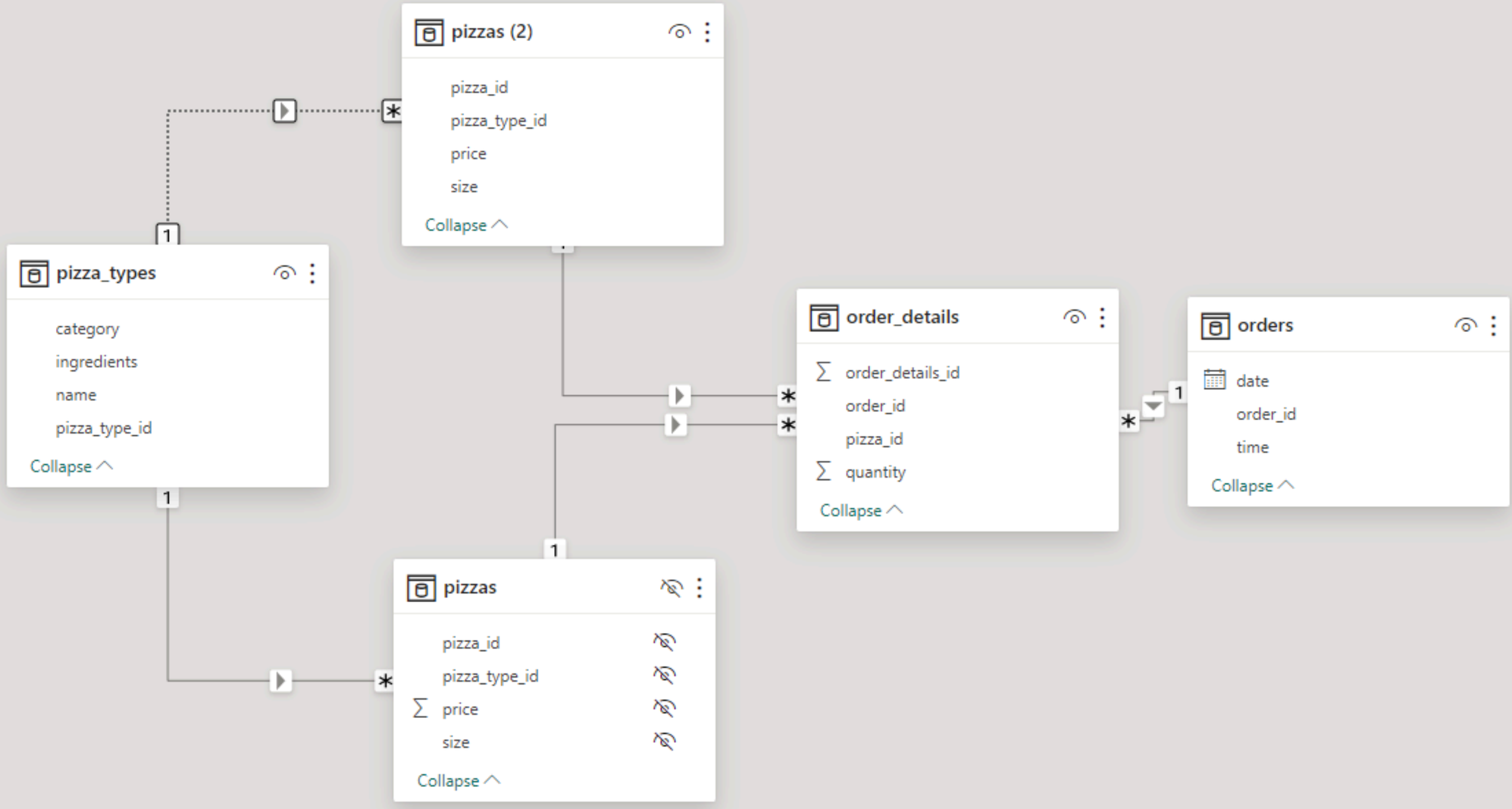
HELLO !

My Name is Harsh Vardhan Jha, In this project i utilize SQL Query to solve a questions that are related to pizza sales

Schema


pizzas (2)
pizza_id
pizza_type_id
price
size
Collapse
pizza_types
category
ingredients
name
pizza_type_id
Collapse
order_details
order_details_id
order_id
pizza_id
quantity
Collapse
orders
date
order_id
time
Collapse
pizzas
pizza_id
pizza_type_id
price
size
Collapse
1
*

RETRIVE THE TOTAL NUMBER OF ORDERS PLACED

```sql
select count(order_id) as total_order from orders
```

Result Grid | Filter Rows:

	total_order
▶	21350

CALCULATE THE TOTAL REVENUE GENERATED FROM PIZZA SALES

```
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
```

Result Grid | Filter Rows:

Total_Revenue
817860.05

IDENTIFY THE HOGHEST-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

IDENTIFY THE MOST COMMON ORDERED QUANTITY

```sql
SELECT
    quantity, COUNT(order_details_id)
FROM
    order_details
GROUP BY quantity
LIMIT 1;
```

Result Grid | Filter Rows:

quantity	count(order_details_id)
1	47693

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 limit 1;
```

Result Grid | Filter Row

	size	order_count
▶	L	18526

IDENTIFY THE TOP 5 MOST ORDERED PIZZA 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;
```

esult 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

JOIN THE NECESSARY TABLE TO FIND THE TOTAL QUANTITY OF EACH PIZZA CATEGORY

```sql
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;
```

Result Grid | Filter Rows

category	quantity
Classic	14888
Veggie	11649
Supreme	11987
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)
```

Result Grid | Filter Rows:

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 CATEGORYWISE DISTRIBUTION OF PIZZAS

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

Result Grid | Filter Rows:

category	count(name)
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(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 Grid | Filter Rows:

avg_pizza_ordered_per_day
138

DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE

```sql
SELECT
    pizza_types.name,
    ROUND(SUM(order_details.quantity * pizzas.price),
            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.name
ORDER BY revenue DESC
LIMIT 3;
```

Result Grid | Filter Rows:

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 OF TOTAL REVENUE

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

Result Grid | Filter Rows:

category	revenue
Classic	26.90596025566967
Supreme	25.45631126009862
Chicken	23.955137556
Veggie	23.682590927384577

ANALYZE THE CUMULATIVE REVENUE GENERATED OVER TIME

```sql
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
            orders
        JOIN
            order_details ON orders.order_id = order_details.order_id
        JOIN
            pizzas ON order_details.pizza_id = pizzas.pizza_id
        GROUP BY
            orders.order_date
    ) AS sales;
```

Result Grid | Filter Rows:

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
2015-01-14	32358.700000000004
2015-01-15	34343.50000000001
2015-01-16	36937.65000000001
2015-01-17	39001.75000000001
2015-01-18	40978.600000000006
2015-01-19	43365.75000000001
2015-01-20	45763.65000000001
2015-01-21	47804.20000000001
2015-01-22	50300.90000000001
2015-01-23	52724.600000000006
2015-01-24	55013.850000000006
2015-01-25	56631.40000000001
2015-01-26	58515.80000000001
2015-01-27	61043.85000000001
2015-01-28	63059.85000000001

DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE FOR EACH PIZZA CATEGORY

USING SUB-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 Grid | Filter Rows:

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

OPTIMAL METHOD

```sql
SELECT
    name,
    category,
    revenue
FROM (
    SELECT
        pt.name,
        pt.category,
        SUM(od.quantity * p.price) AS revenue,
        RANK() OVER (PARTITION BY pt.category ORDER BY SUM(od.quantity * p.price) DESC) AS rn
    FROM
        pizza_types AS pt
    JOIN
        pizzas AS p ON pt.pizza_type_id = p.pizza_type_id
    JOIN
        order_details AS od ON od.pizza_id = p.pizza_id
    GROUP BY
        pt.category, pt.name
) AS ranked_pizzas
WHERE
    rn <= 3;
```

Result Grid | Filter Rows: | Export:

name	category	revenue
The Thai Chicken Pizza	Chicken	43434.25
The Barbecue Chicken Pizza	Chicken	42768
The California Chicken Pizza	Chicken	41409.5
The Classic Deluxe Pizza	Classic	38180.5
The Hawaiian Pizza	Classic	32273.25
The Pepperoni Pizza	Classic	30161.75
The Spicy Italian Pizza	Supreme	34831.25
The Italian Supreme Pizza	Supreme	33476.75
The Sicilian Pizza	Supreme	30940.5
The Four Cheese Pizza	Veggie	32265.70000000065
The Mexicana Pizza	Veggie	26780.75
The Five Cheese Pizza	Veggie	26066.5

THANK YOU