Pizza sales analysis using SQL

Here are some questions

Basic:

- Retrieve the total number of orders placed.
- Calculate the total revenue generated from pizza sales.
- Identify the highest-priced pizza.
- Identify the most common pizza size ordered.
- List the top 5 most ordered pizza types along with their quantities.

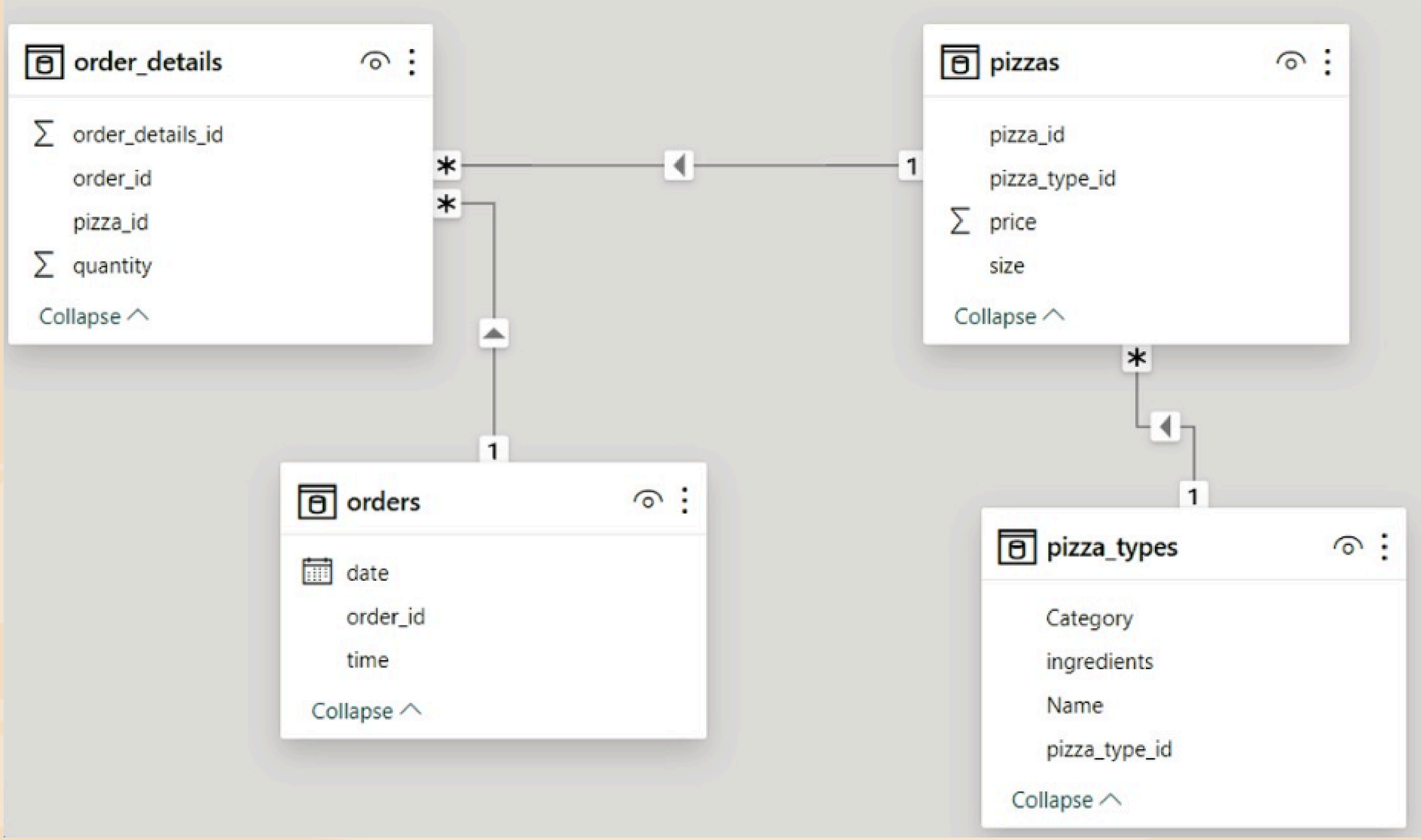
Intermediate:

- Join the necessary tables to find the total quantity of each pizza category ordered.
- Determine the distribution of orders by hour of the day.
- Join relevant tables to find the category-wise distribution of pizzas.
- Group the orders by date and calculate the average number of pizzas ordered per day.
- Determine the top 3 most ordered pizza types based on revenue.

Advanced:

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

Schema of dataset



Q1. Retrieve the total number of orders placed.

```
1   -- Retrive the total number of order placed.
2
3•  Select count(order_id)as total_order_placed from orders;
4
5
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	total_order_placed
▶	21350

Q2. Calculate the total revenue generated from pizza sales.

```sql
-- 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 order_details.pizza_id = pizzas.pizza_id
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

total_revenue
817860.05

Q3. Identify the highest-priced pizza.

```sql
-- Identify the highiest priced pizza

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: | Export: | Wrap Cell Content:

	name	price
▶	The Greek Pizza	35.95

Q4. Identify the most common pizza size ordered.

```
1   -- Identify the most common pizza size ordered.
2
3 • select pizzas.size,sum(order_details.quantity) as order_count
4   from pizzas join order_details
5   on order_details.pizza_id = pizzas.pizza_id
6   group by pizzas.size order by order_count desc
7
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

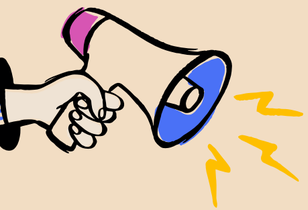
size	order_count
L	18956
M	15635
S	14403
XL	552
XXL	28

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

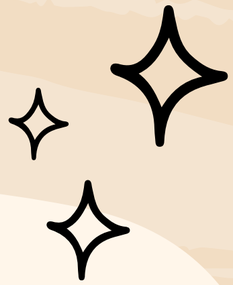
```sql
-- list the top 5 most ordered pizza types along with their quantity

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 Grid | Filter Rows: | Export: | Wrap Cell Content:

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.



```
1   -- Join the necessary tables to find the tatal quantity of each pizza category ordered
2
3 • select
4   pizza_types.category, sum(order_details.quantity) as total_quantity
5   from pizza_types join pizzas
6   on pizza_types.pizza_type_id = pizzas.pizza_type_id
7   join order_details
8   on order_details.pizza_id = pizzas.pizza_id
9   group by pizza_types.category order by total_quantity desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

category	total_quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

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

```
1   -- Determine the distribution of orders by hour of the day
2 • select hour(order_time), count(order_id) as order_count from orders
3   group by hour(order_time)
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

hour(order_time)	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..

```
1    -- Join the relevant tables to find the category wise distribution pizza
2
3 •  select
4    category, count(name) from pizza_types
5    group by category;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

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

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

```
1   -- Group the orders by date & calculate the average number of pizzas ordered per day
2
3 • select round(avg(quantity),0)from
4   (select
5   orders.order_date,count(order_details.quantity) as quantity
6   from orders join order_details
7   on orders.order_id = order_details.order_id
8   group by orders.order_date) as order_quantity;
9
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

round(avg(quantity),0)
136

Q10. Determine the top 5 most ordered pizza types based on revenue.

```sql
-- Determine the top 5 most ordered pizza type based on revenue

select
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.name order by revenue desc limit 5;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

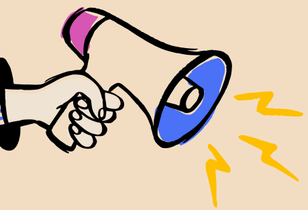
name	revenue
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5
The Classic Deluxe Pizza	38180.5
The Spicy Italian Pizza	34831.25

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

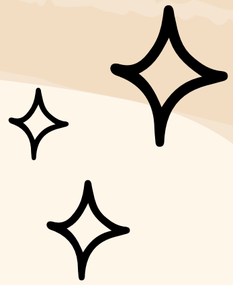
```sql
-- Calculate the percentage contribution of each pizza type to total revenue

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 order_details.pizza_id = pizzas.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
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

category	revenue
Classic	26.91
Supreme	25.46
Chicken	23.96
Veggie	23.68



Q12. Analyze the cumulative revenue generated over time.



```sql
-- Analyze the cumulative revenue generated over time.

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 pizzas join order_details
on pizzas.pizza_id = order_details.pizza_id
join orders
on orders.order_id = order_details.order_id
group by orders.order_date) as sales;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

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

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

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

select category, name, revenue from
(select category, name, revenue,
rank() over(partition by category order by revenue desc) as rate from
(select
pizza_types.category, pizza_types.name,
sum(order_details.quantity * pizzas.price) as revenue
from pizzas join pizza_types
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.category, pizza_types.name) as sales) as b
where rate <=3;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

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

Thank You!