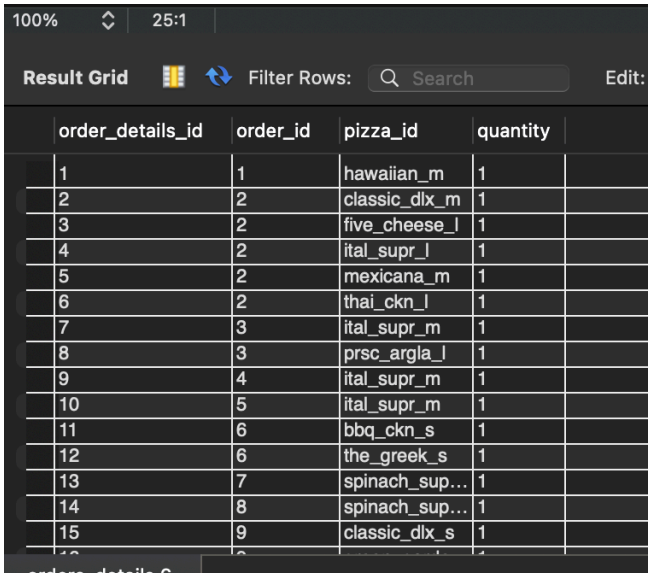
SQL Project : Pizza Data Set

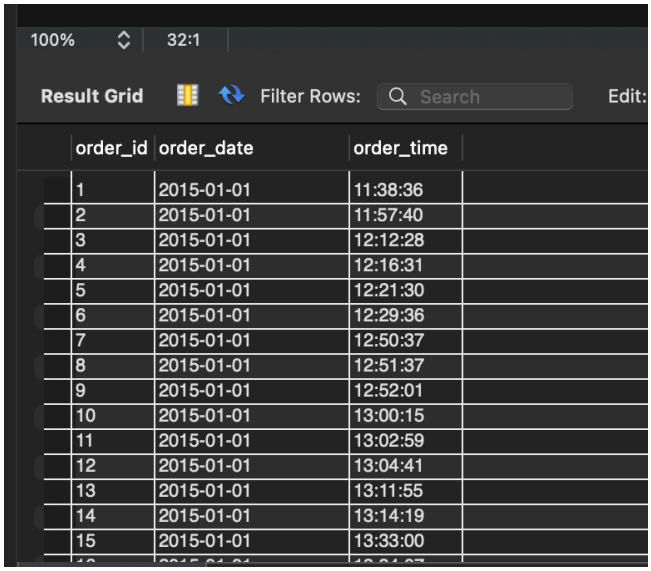
Work with 4 table includes Orders, Orders_details, Pizzas, Pizza_type

1.Orders_detials (48420*4)



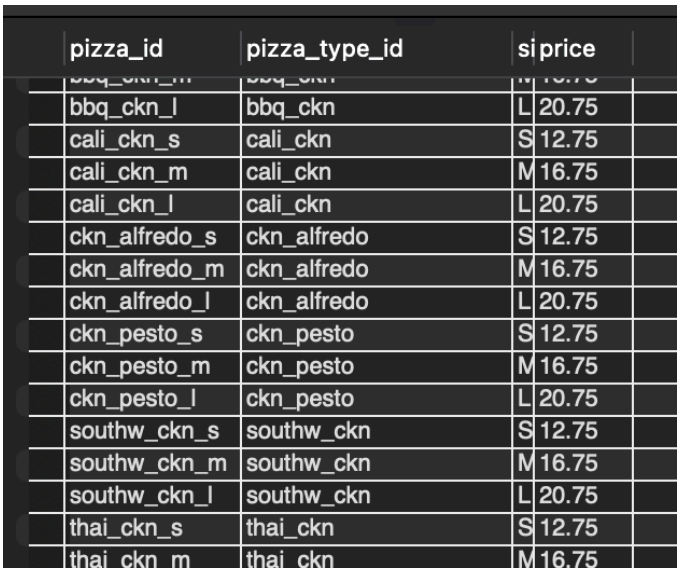
order_details_id	order_id	pizza_id	quantity
1	1	hawaiian_m	1
2	2	classic_dlx_m	1
3	2	five_cheese_l	1
4	2	ital_supr_l	1
5	2	mexicana_m	1
6	2	thai_ckn_l	1
7	3	ital_supr_m	1
8	3	prsc_argla_l	1
9	4	ital_supr_m	1
10	5	ital_supr_m	1
11	6	bbq_ckn_s	1
12	6	the_greek_s	1
13	7	spinach_sup…	1
14	8	spinach_sup…	1
15	9	classic_dlx_s	1

2. Orders (21350 * 3)



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
6	2015-01-01	12:29:36
7	2015-01-01	12:50:37
8	2015-01-01	12:51:37
9	2015-01-01	12:52:01
10	2015-01-01	13:00:15
11	2015-01-01	13:02:59
12	2015-01-01	13:04:41
13	2015-01-01	13:11:55
14	2015-01-01	13:14:19
15	2015-01-01	13:33:00

3. Pizzas (96*3)



pizza_id	pizza_type_id	si	price
bbq_ckn_l	bbq_ckn	L	20.75
cali_ckn_s	cali_ckn	S	12.75
cali_ckn_m	cali_ckn	M	16.75
cali_ckn_l	cali_ckn	L	20.75
ckn_alfredo_s	ckn_alfredo	S	12.75
ckn_alfredo_m	ckn_alfredo	M	16.75
ckn_alfredo_l	ckn_alfredo	L	20.75
ckn_pesto_s	ckn_pesto	S	12.75
ckn_pesto_m	ckn_pesto	M	16.75
ckn_pesto_l	ckn_pesto	L	20.75
southw_ckn_s	southw_ckn	S	12.75
southw_ckn_m	southw_ckn	M	16.75
southw_ckn_l	southw_ckn	L	20.75
thai_ckn_s	thai_ckn	S	12.75
thai_ckn_m	thai_ckn	M	16.75

4. Pizza_type (36*4)

pizza_type_id	name	category	ingredients
ckn_alfredo	The Chicken Alfredo Pizza	Chicken	Chicken, Red Onions, Red Peppers, Mushroom…
ckn_pesto	The Chicken Pesto Pizza	Chicken	Chicken, Tomatoes, Red Peppers, Spinach, Gar…
southw_ckn	The Southwest Chicken Pizza	Chicken	Chicken, Tomatoes, Red Peppers, Red Onions,…
thai_ckn	The Thai Chicken Pizza	Chicken	Chicken, Pineapple, Tomatoes, Red Peppers, T…
big_meat	The Big Meat Pizza	Classic	Bacon, Pepperoni, Italian Sausage, Chorizo Sa…
classic_dlx	The Classic Deluxe Pizza	Classic	Pepperoni, Mushrooms, Red Onions, Red Pepp…
hawaiian	The Hawaiian Pizza	Classic	Sliced Ham, Pineapple, Mozzarella Cheese
ital_cpcllo	The Italian Capocollo Pizza	Classic	Capocollo, Red Peppers, Tomatoes, Goat Chee…
napolitana	The Napolitana Pizza	Classic	Tomatoes, Anchovies, Green Olives, Red Onion…
pep_msh_pep	The Pepperoni, Mushroom,…	Classic	Pepperoni, Mushrooms, Green Peppers
pepperoni	The Pepperoni Pizza	Classic	Mozzarella Cheese, Pepperoni
the_greek	The Greek Pizza	Classic	Kalamata Olives, Feta Cheese, Tomatoes, Garli…

Requirement

1. Calculate the total revenue generated from pizza sales.

```sql
SELECT sum(p.price*o.quantity) as revenue
FROM
    (SELECT pizza_id, price FROM pizzas) AS p
JOIN
    (SELECT pizza_id, quantity FROM orders_details) AS o
ON p.pizza_id = o.pizza_id;

-- or
select sum(pizzas.price*orders_details.quantity) from pizzas join orders_details
on pizzas.pizza_id = orders_details.pizza_id;
```

revenue
817860.049999993

2. Identify the highest-priced pizza.

```sql
select name, price from pizzas join pizza_types
on pizzas.pizza_type_id = pizza_types.pizza_type_id order by price desc limit 1;

-- or
select name, price from
(select pizza_type_id as w, price from pizzas)a
join
(select name, pizza_type_id as v from pizza_types)b
on a.w = b.v order by price desc limit 1;
```

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

```sql
SELECT
    pizza_types.name, SUM(orders_details.quantity) AS qu
FROM
    pizzas
        JOIN
    pizza_types ON pizzas.pizza_type_id = pizza_types.pizza_type_id
        JOIN
    orders_details ON pizzas.pizza_id = orders_details.pizza_id
GROUP BY pizza_types.name
ORDER BY qu DESC
LIMIT 5;
```

name	price
The Greek Pizza	35.95

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

```sql
SELECT
    pizza_types.category,
    SUM(orders_details.quantity) AS t_quantity
FROM
    pizzas
        JOIN
    pizza_types ON pizzas.pizza_type_id = pizza_types.pizza_type_id
        JOIN
    orders_details ON pizzas.pizza_id = orders_details.pizza_id
GROUP BY pizza_types.category
ORDER BY t_quantity;
```

category	t_quanti...
Chicken	11050
Veggie	11649
Supreme	11987
Classic	14888

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

```sql
SELECT
    AVG(qu) AS Avg_order_per_day
FROM
    (SELECT
        orders.order_date AS o, SUM(orders_details.quantity) AS qu
    FROM
        orders
    JOIN orders_details ON orders.order_id = orders_details.order_id
    GROUP BY o) t;
```

Avg_order_per_day
138.4749

6. Determine the top most ordered pizza types based on revenue.

```sql
SELECT
    name, SUM(price * quantity) AS revenue
FROM
    pizzas
        JOIN
    orders_details ON pizzas.pizza_id = orders_details.pizza_id
        JOIN
    pizza_types ON pizzas.pizza_type_id = pizza_types.pizza_type_id
GROUP BY name
ORDER BY revenue DESC;
```

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
The Southwest Chicken Pizza	34705.75
The Italian Supreme Pizza	33476.75
The Hawaiian Pizza	32273.25
The Four Cheese Pizza	32265.70000000065
The Sicilian Pizza	30940.5
The Pepperoni Pizza	30161.75
The Greek Pizza	28454.1000000000...
The Mexicana Pizza	26780.75
The Five Cheese Pizza	26066.5

7. Analyze the cumulative revenue generated over time.

```sql
select *,
sum(revenue) over (order by order_date) as cum_sum_revenue from
(
select  order_date, round(sum(price*quantity),2) as revenue from pizzas join orders_details
on pizzas.pizza_id = orders_details.pizza_id
join orders on orders.order_id = orders_details.order_id group by order_date)t;
```

order_date	revenue	cum_sum_revenue
2015-01-01	2713.85	2713.85
2015-01-02	2731.9	5445.75
2015-01-03	2662.4	8108.15
2015-01-04	1755.45	9863.6
2015-01-05	2065.95	11929.55
2015-01-06	2428.95	14358.5
2015-01-07	2202.2	16560.7

8. Determine the top 3 most ordered pizza types based on revenue for each pizza catego

```sql
select * from
) (select name, category, revenue, rank() over(partition by category order by revenue desc) as top_rank_base_on_category
) (
select  category, name,
sum(price*quantity) as revenue
from pizzas join orders_details on pizzas.pizza_id = orders_details.pizza_id
join pizza_types on pizzas.pizza_type_id = pizza_types.pizza_type_id group by category, name order by revenue) t)r
where top_rank_base_on_category<=3;
```

name	category	revenue	top_rank_base_on_category
The Thai Chicken Pizza	Chicken	43434.25	1
The Barbecue Chicken Pizza	Chicken	42768	2
The California Chicken Pizza	Chicken	41409.5	3
The Classic Deluxe Pizza	Classic	38180.5	1
The Hawaiian Pizza	Classic	32273.25	2
The Pepperoni Pizza	Classic	30161.75	3
The Spicy Italian Pizza	Supreme	34831.25	1
The Italian Supreme Pizza	Supreme	33476.75	2
The Sicilian Pizza	Supreme	30940.5	3
The Four Cheese Pizza	Veggie	32265.70...	1