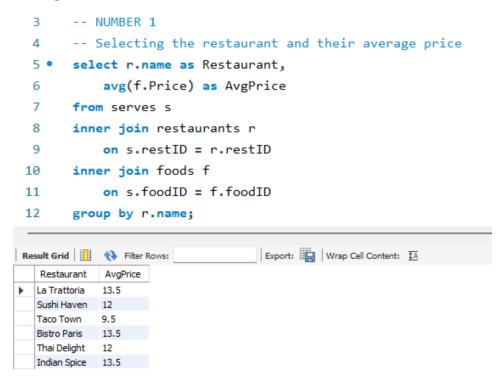
# Title Page

• **Title:** DB Assignment 2

• **Due Date:** 30 September 2025

# **SQL Section**

1. Average Price of Foods at Each Restaurant



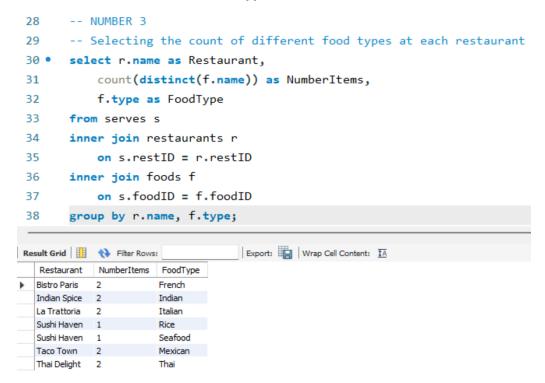
Explanation: In this query, I joined the serves, restaurants, and foods tables together. To calculate the average food price, grouping by restaurant name was necessary. The restaurant name and the average food price are returned in the output.

#### 2. Maximum Food Price at Each Restaurant

```
16
       -- NUMBER 2
       -- Selecting the restaurant and their highest price
17
       select r.name as Restaurant,
18 •
           max(f.price) as MaxPrice
19
20
       from serves s
21
       inner join restaurants r
           on s.restID = r.restID
22
       inner join foods f
23
           on s.foodID = f.foodID
24
       group by r.name;
25
                                  Export: Wrap Cell Content: 1A
Restaurant
           MaxPrice
 La Trattoria
           15
  Sushi Haven 14
  Taco Town
           11
 Bistro Paris
          18
  Thai Delight
          13
 Indian Spice 15
```

Explanation: In this query, I joined the serves, restaurants, and foods tables together once again. To calculate the highest price at each restaurant, grouping by restaurant name was necessary again. The restaurant name and the maximum food price are returned in the output.

## 3. Count of Different Food Types Served at Each Restaurant



Explanation: The serves, restaurants, and foods tables were joined together to answer this question. To calculate the number of different food types at each restaurant, grouping by restaurant name as well as food type was necessary. The restaurant name, the count of distinct food items, and the food types were selected to be returned in the output.

## 4. Average Price of Foods Served by Each Chef

```
-- NUMBER 4
41
       -- Selecting the average food price for each chef
42
43 •
       select c.name as Chef,
           avg(f.price) as AvgPrice
44
45
       from serves s
       inner join restaurants r
46
           on s.restID = r.restID
47
       inner join foods f
48
           on s.foodID = f.foodID
49
       inner join works w
50
           on w.restID = r.restID
51
       inner join chefs c
52
           on c.chefID = w.chefID
53
       group by c.name;
54
                                 Export: Wrap Cell Content: ‡A
Chef
            AvgPrice
  John Doe
            11.5
  Jane Smith
            12.75
  Robert Brown
           12.75
  Alice Johnson 11.5
  Emily Davis
            12.75
  Michael Wilson 12.75
```

Explanation: The serves, restaurants, foods, works, and chefs tables were joined together to answer this question due to the schema design. To calculate the average food price of each chef, grouping by chef name was necessary. The chef name and their average food prices were selected to be returned in the output.

5. Find the Restaurant with the Highest Average Food Price

```
58
         -- NUMBER 5
 59
         -- Finding the restaurant with the highest average food price
 60 •
         select r.name as Restaurant,
                avg(f.price) as AvgPrice
 61
62
         from serves s
         inner join restaurants r
 63
             on s.restID = r.restID
 64
         inner join foods f
 65
             on s.foodID = f.foodID
 66
         group by r.name
 67
        having avg(f.price) >= all
 68
 69
                 -- Sub Query
 70
                 -- returns list of all avg prices grouped by restaurants
71
                 -- used as a refernce for the Having clause in the main query
72
                 select avg(f.price) as AvgPrice
73
74
                 from serves s
75
                 inner join restaurants r
                     on s.restID = r.restID
 76
 77
                 inner join foods f
 78
                     on s.foodID = f.foodID
79
                 group by r.name
 80
         );
Result Grid
              Filter Rows:
                                          Export: Wrap Cell Content: IA
              AvgPrice
   Restaurant
  La Trattoria
              13.5
  Bistro Paris
              13.5
  Indian Spice
              13.5
```

Explanation: The serves, restaurants, and foods tables were joined together to answer this question. To find the restaurant with the highest average food price, I first needed to calculate the average food price of all restaurants by using a subquery. This allowed the main query to use the 'Having' clause to filter for only the restaurants with the highest of these average food prices. This one was done by using the '>= all ()' statement. The restaurant names and the average food price were selected to be returned in the output.

6. Extra Credit: Determine which chef has the highest average price of the foods served at the restaurants where they work. Include the chef's name, the average food price, and the names of the restaurants where the chef works. Sort the results by the average food price in descending order.

```
select c.name as ChefName,
 91 •
 92
                 avg(f.price) as AvgPrice,
                GROUP_CONCAT(DISTINCT r.name) AS Restaurants -- used online resources to understand this
 93
         inner join restaurants r on s.restID = r.restID
 96
         inner join foods f on s.foodID = f.foodID
 97
         inner join works w on w.restID = r.restID
         inner join chefs c on c.chefID = w.chefID
 98
 99
         group by c.name
         having avg(f.price) >= all
100
101
                  -- Sub Query
102
                  -- returns list of all avg prices for each chef
103
                  -- used as a refernce for the Having clause in the main query
104
                  select avg(f.price) as AvgPrice
                  from serves s
                  inner join restaurants r on s.restID = r.restID
                  inner join foods f on s.foodID = f.foodID
                  inner join works w on w.restID = r.restID
                  inner join chefs c on c.chefID = w.chefID
110
                  group by c.name
111
112
113
         order by avg(f.price) desc;
                                                Export: Wrap Cell Content: TA
Result Grid
                Filter Rows:
   ChefName
                  AvgPrice Restaurants
  Emily Davis
                  12.75
                           Indian Spice, Thai Delight
  Jane Smith
                 12.75
                           La Trattoria, Sushi Haven
  Michael Wilson
                 12.75
                           Indian Spice, Thai Delight
                 12.75
  Robert Brown
                           Bistro Paris, Sushi Haven
```

Explanation: This question confused me because it seems to state that there is only one chef with a higher average food price than all others, but there are multiple chefs that are tied for this position. I proceeded by returning results for each of these chefs.

My approach was somewhat similar to #5 in the sense that I used a subquery to filter for the highest numbers within a subquery that returns a column of average food prices. However, in this case, my focus was on the chef's average food prices instead of at the restaurant level. By using this subquery to filter for only the chefs with the highest average food price, the specific columns were selected, and the restaurant names were concatenated for a cleaner output.