DB Assignment 2

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CSC 351

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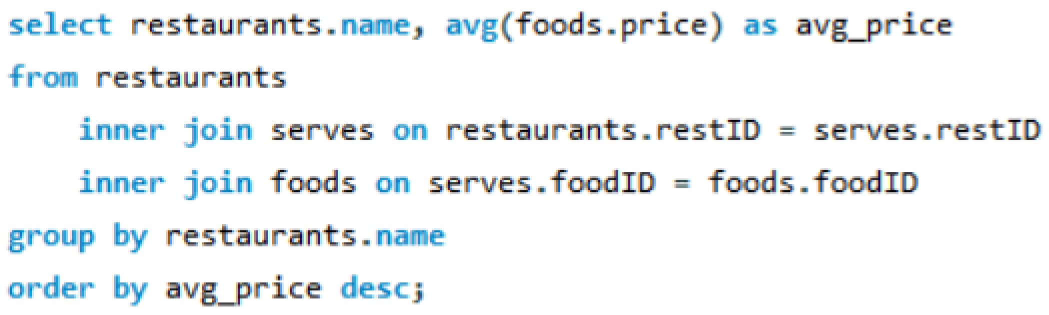
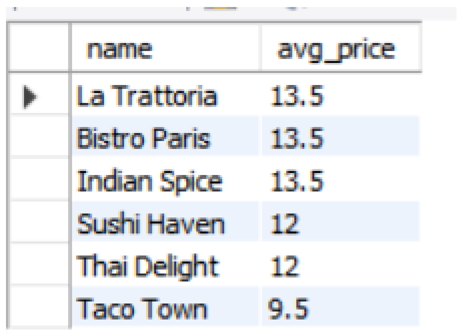
1. Average Price of Foods at Each Restaurant



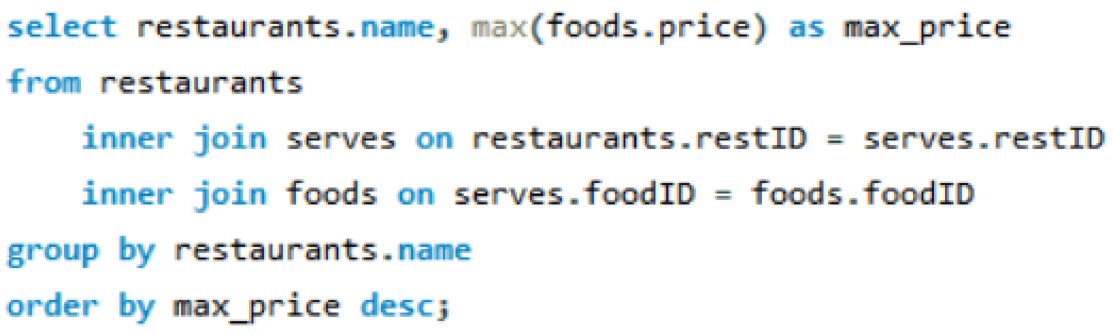
```
select restaurants.name, avg(foods.price) as avg_price
from restaurants
    inner join serves on restaurants.restID = serves.restID
    inner join foods on serves.foodID = foods.foodID
group by restaurants.name
order by avg_price desc;
```



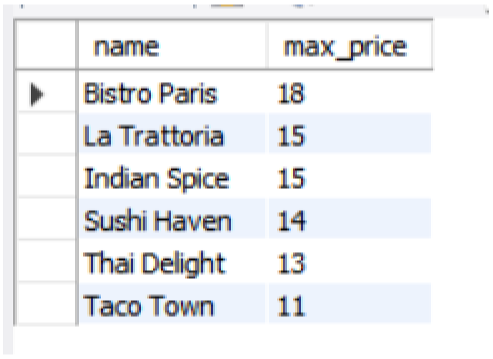
name	avg_price
La Trattoria	13.5
Bistro Paris	13.5
Indian Spice	13.5
Sushi Haven	12
Thai Delight	12
Taco Town	9.5

This query finds the average food price, avg(), at each restaurant by joining restaurants with the foods they serve, grouping by restaurant name, and ordering the results from highest to lowest price just to make it easier to read.

2. Maximum Food Price at Each Restaurant



```
select restaurants.name, max(foods.price) as max_price
from restaurants
    inner join serves on restaurants.restID = serves.restID
    inner join foods on serves.foodID = foods.foodID
group by restaurants.name
order by max_price desc;
```

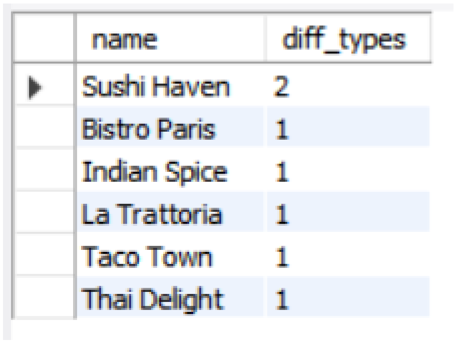


	name	max_price
▶	Bistro Paris	18
	La Trattoria	15
	Indian Spice	15
	Sushi Haven	14
	Thai Delight	13
	Taco Town	11

This query finds the most expensive priced food at each restaurant by joining restaurants with the foods they serve, grouping by restaurant, and using max() to get the most expensive item. The results are sorted from highest to lowest price.

3. Count of Different Food Types Served at Each Restaurant

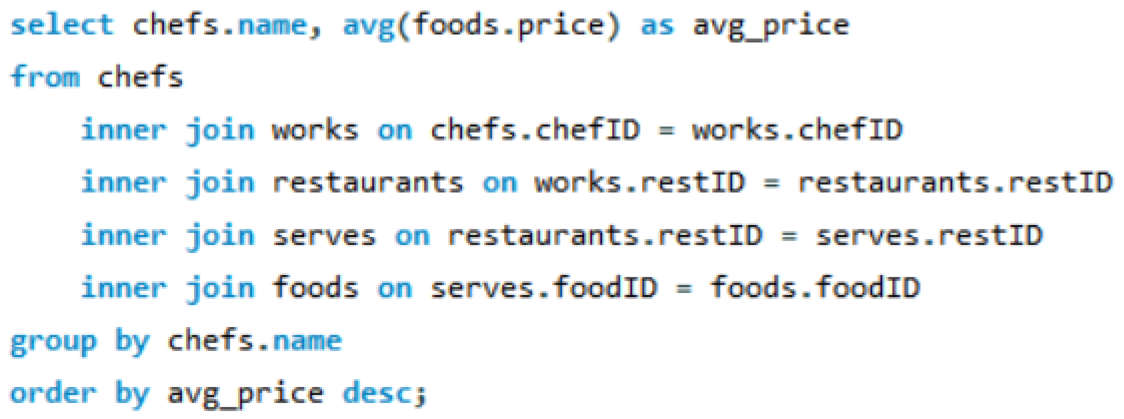
```
select restaurants.name, count(distinct foods.type) as diff_types
from restaurants
    inner join serves on restaurants.restID = serves.restID
    inner join foods on serves.foodID = foods.foodID
group by restaurants.name
order by diff_types desc;
```



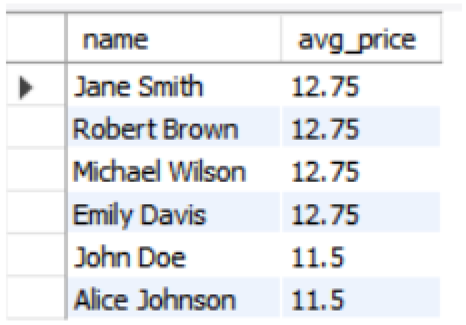
	name	diff_types
▶	Sushi Haven	2
	Bistro Paris	1
	Indian Spice	1
	La Trattoria	1
	Taco Town	1
	Thai Delight	1

Counts the number of different food types each restaurant serves by joining restaurants with their foods, using count(distinct foods.type) to count unique types of food, and grouping by restaurant. The results are ordered from most to least types that the restaurant has. In the CSV there are only 7 distinct types of foods, so this output makes sense.

4. Average Price of Foods Served by Each Chef



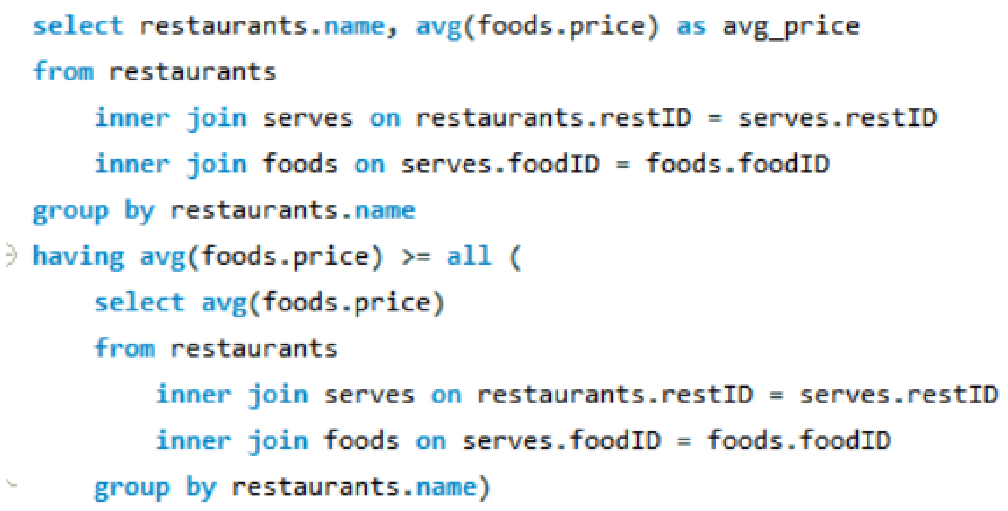
```
select chefs.name, avg(foods.price) as avg_price
from chefs
    inner join works on chefs.chefID = works.chefID
    inner join restaurants on works.restID = restaurants.restID
    inner join serves on restaurants.restID = serves.restID
    inner join foods on serves.foodID = foods.foodID
group by chefs.name
order by avg_price desc;
```



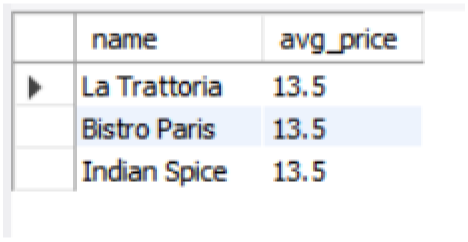
	name	avg_price
▶	Jane Smith	12.75
	Robert Brown	12.75
	Michael Wilson	12.75
	Emily Davis	12.75
	John Doe	11.5
	Alice Johnson	11.5

Calculates the average price of foods, avg(foods.price), served by each chef by joining chefs to the restaurants they work at, then to the foods served there. It groups by chef name and orders the results from highest to lowest average price.

5. Find the Restaurant with the Highest Average Food Price



```
select restaurants.name, avg(foods.price) as avg_price
from restaurants
    inner join serves on restaurants.restID = serves.restID
    inner join foods on serves.foodID = foods.foodID
group by restaurants.name
having avg(foods.price) >= all (
    select avg(foods.price)
    from restaurants
        inner join serves on restaurants.restID = serves.restID
        inner join foods on serves.foodID = foods.foodID
    group by restaurants.name)
```



name	avg_price
La Trattoria	13.5
Bistro Paris	13.5
Indian Spice	13.5

The Input finds the restaurant with the highest average food price by first calculating the average price, avg(foods.price), for each restaurant, joining restaurants to serves to get the foods each restaurant serves, and then joining to foods to access their prices. Then using a having clause to keep only those whose average is greater than or equal to the maximum among all the restaurants. I started the problem by forgoing the having clause and using limit 1, but when I realized that there were ties between restaurants with the highest average food price; so I switched to the having clause.