DB Assignment 2
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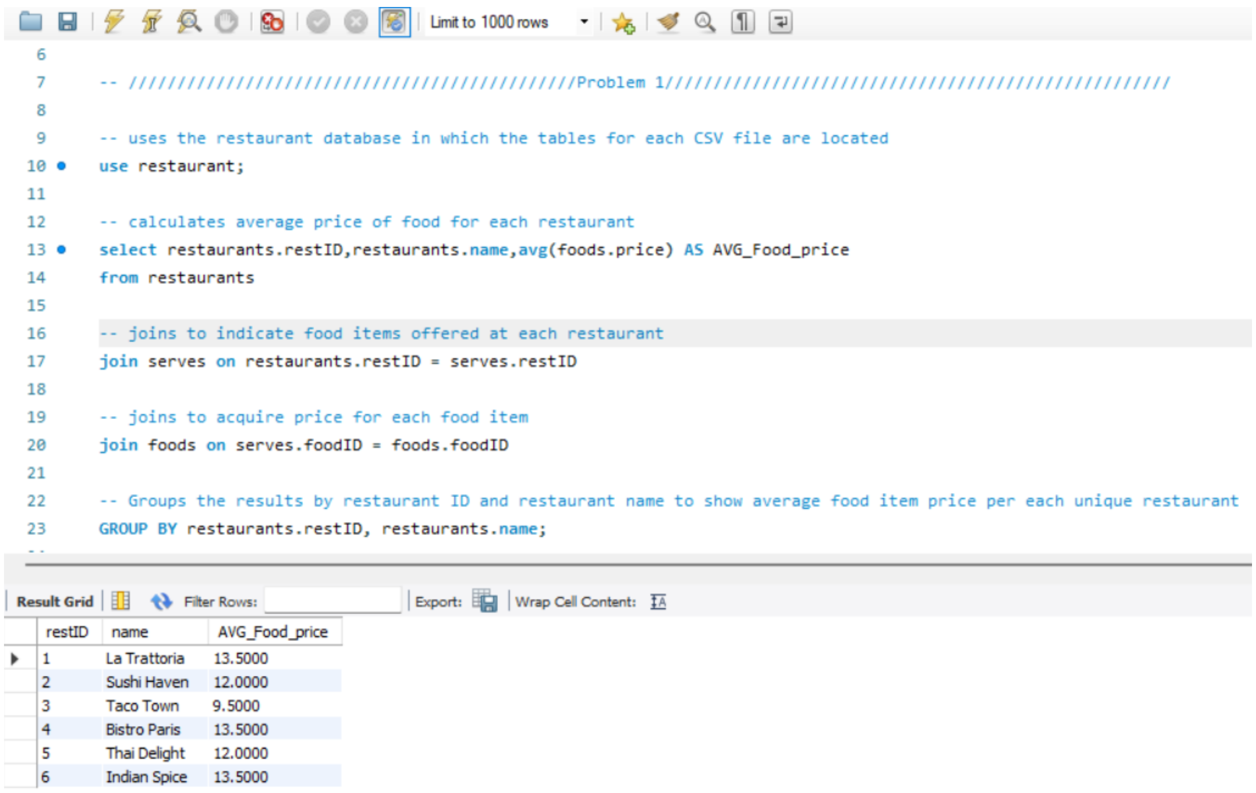
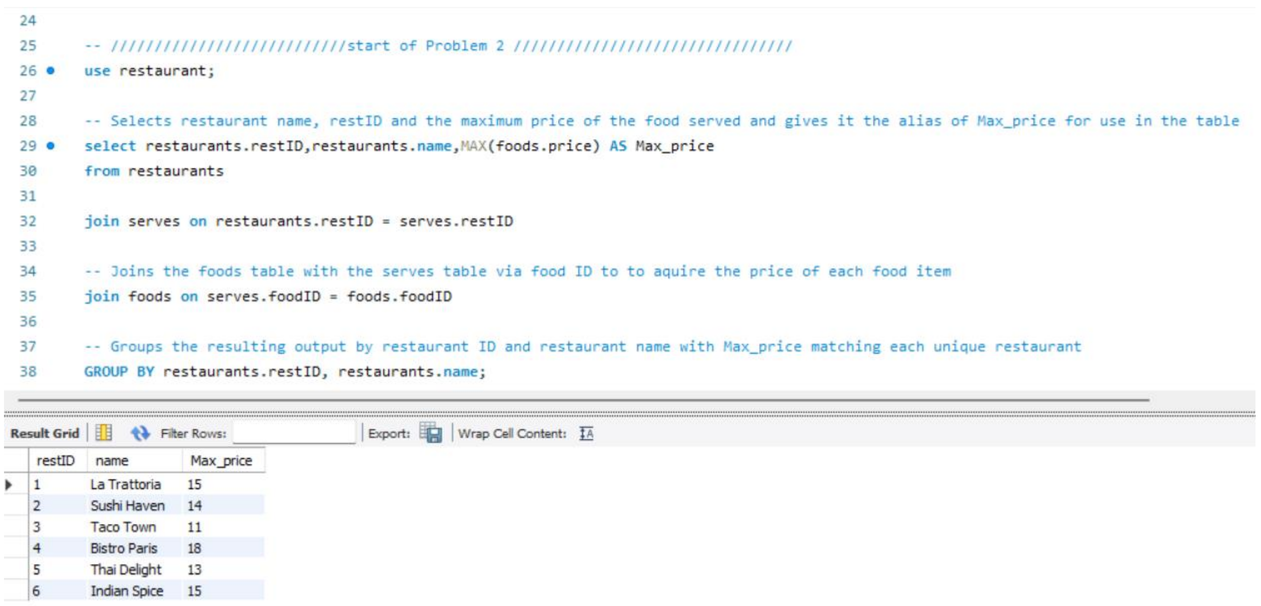


```sql

-- ///////////////////////////////////////////////Problem 1///////////////////////////////////////////////////////

-- uses the restaurant database in which the tables for each CSV file are located
use restaurant;

-- calculates average price of food for each restaurant
select restaurants.restID,restaurants.name,avg(foods.price) AS AVG_Food_price
from restaurants

-- joins to indicate food items offered at each restaurant
join serves on restaurants.restID = serves.restID

-- joins to acquire price for each food item
join foods on serves.foodID = foods.foodID

-- Groups the results by restaurant ID and restaurant name to show average food item price per each unique restaurant
GROUP BY restaurants.restID, restaurants.name;
```

restID	name	AVG_Food_price
1	La Trattoria	13.5000
2	Sushi Haven	12.0000
3	Taco Town	9.5000
4	Bistro Paris	13.5000
5	Thai Delight	12.0000
6	Indian Spice	13.5000

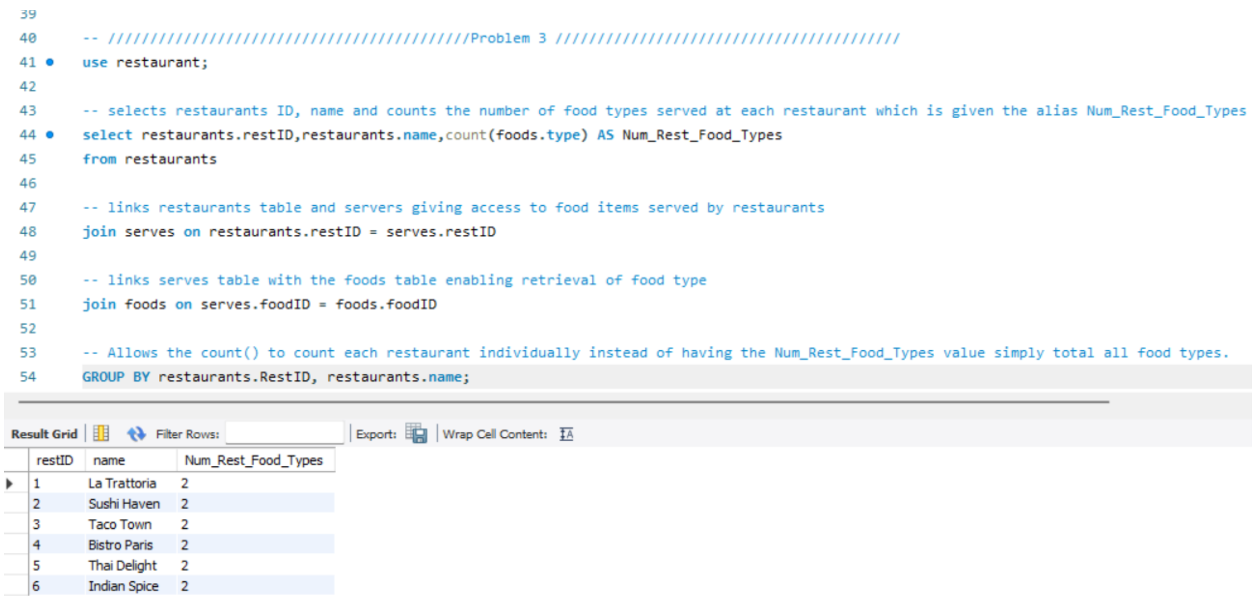
The above SQL Script for problem 1 calcuates the average price of each food item served at each specific restaurant. The script joins the restaurants table, the serves table and the foods table to aquire data neccesary to then calcuate the average which is grouped by restaurant ID and name to have the average food prices be attached to specific restaurants.



```sql

-- ///////////////////////////start of Problem 2 ///////////////////////////////
use restaurant;

-- Selects restaurant name, restID and the maximum price of the food served and gives it the alias of Max_price for use in the table
select restaurants.restID,restaurants.name,MAX(foods.price) AS Max_price
from restaurants

join serves on restaurants.restID = serves.restID

-- Joins the foods table with the serves table via food ID to to aquire the price of each food item
join foods on serves.foodID = foods.foodID

-- Groups the resulting output by restaurant ID and restaurant name with Max_price matching each unique restaurant
GROUP BY restaurants.restID, restaurants.name;
```

restID	name	Max_price
1	La Trattoria	15
2	Sushi Haven	14
3	Taco Town	11
4	Bistro Paris	18
5	Thai Delight	13
6	Indian Spice	15

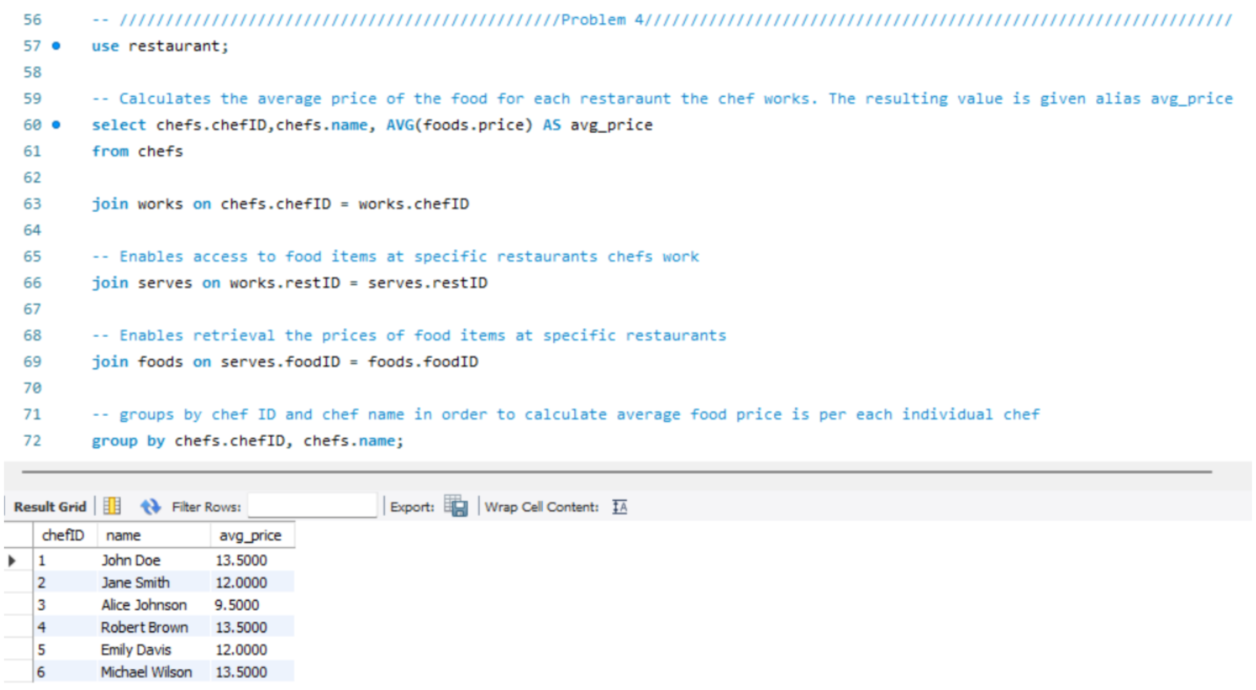
The above SQL query for problem 2 calculates the restaurant with the highest priced food item at each restaurant. The script joins the restaurant, serves and foods table to acquire the data necessary to then utilize the max function on foods.price. The Script then groups by restaurant to have the results return the highest priced food for each restaurant.



```sql

-- ////////////////////////////////////////////Problem 3 /////////////////////////////////////////
use restaurant;

-- selects restaurants ID, name and counts the number of food types served at each restaurant which is given the alias Num_Rest_Food_Types
select restaurants.restID,restaurants.name,count(foods.type) AS Num_Rest_Food_Types
from restaurants

-- links restaurants table and servers giving access to food items served by restaurants
join serves on restaurants.restID = serves.restID

-- links serves table with the foods table enabling retrieval of food type
join foods on serves.foodID = foods.foodID

-- Allows the count() to count each restaurant individually instead of having the Num_Rest_Food_Types value simply total all food types.
GROUP BY restaurants.RestID, restaurants.name;
```

restID	name	Num_Rest_Food_Types
1	La Trattoria	2
2	Sushi Haven	2
3	Taco Town	2
4	Bistro Paris	2
5	Thai Delight	2
6	Indian Spice	2

The above SQL Query for problem 3 counts how many distinct food types are served at each restaurant. The query joins the restaurant, serves and foods table to acquire the data necessary to then utilize the count function with the keyword DISTINCT to ensure that only unique food types are counted. The results are grouped by restaurant to ensure that specific restaurants food types are counted.

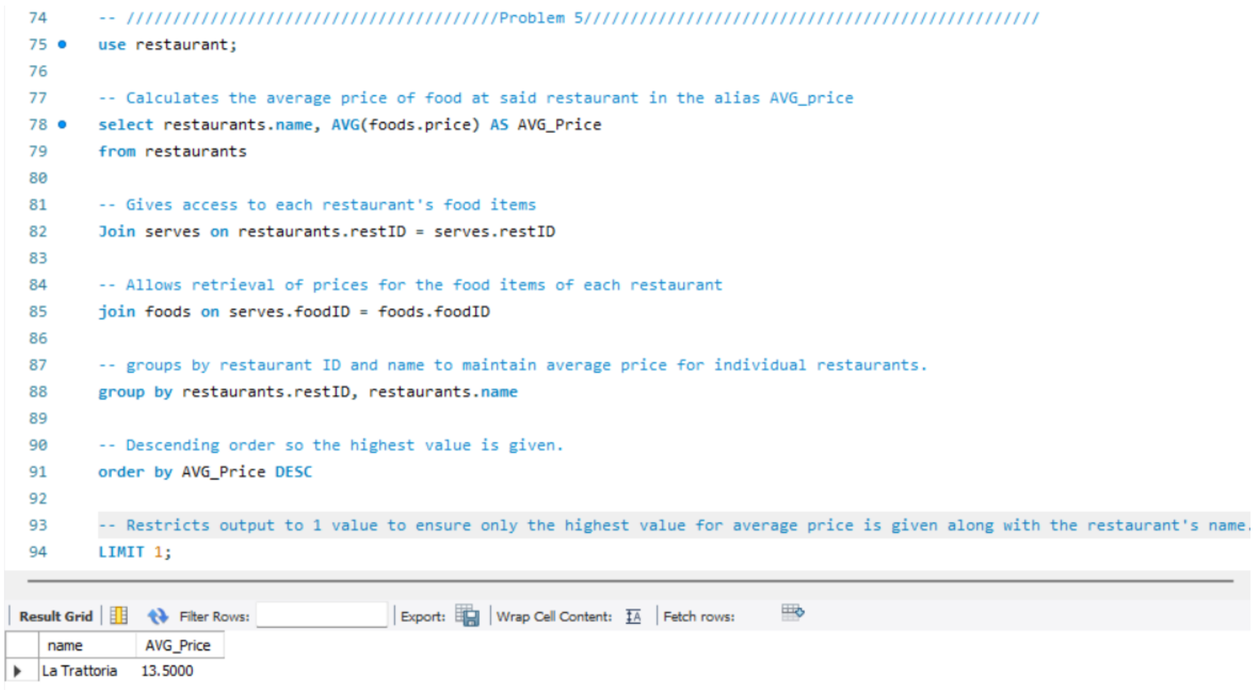


```sql
-- ///////////////////////////////////////////////Problem 4////////////////////////////////////////////////////////////////
use restaurant;

-- Calculates the average price of the food for each restaraunt the chef works. The resulting value is given alias avg_price
select chefs.chefID,chefs.name, AVG(foods.price) AS avg_price
from chefs

join works on chefs.chefID = works.chefID

-- Enables access to food items at specific restaurants chefs work
join serves on works.restID = serves.restID

-- Enables retrieval the prices of food items at specific restaurants
join foods on serves.foodID = foods.foodID

-- groups by chef ID and chef name in order to calculate average food price is per each individual chef
group by chefs.chefID, chefs.name;
```

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

chefID	name	avg_price
1	John Doe	13.5000
2	Jane Smith	12.0000
3	Alice Johnson	9.5000
4	Robert Brown	13.5000
5	Emily Davis	12.0000
6	Michael Wilson	13.5000

The above SQL query for problem 4 calculates the average price of the food items served at the restaurants each chef works. The query joins chefs, works serves and foods tables to calculate the average price, the result is then grouped by chefID and name to ensure price is calculated by chef.



```sql
-- ///////////////////////////////////////Problem 5///////////////////////////////////////////////
use restaurant;

-- Calculates the average price of food at said restaurant in the alias AVG_price
select restaurants.name, AVG(foods.price) AS AVG_Price
from restaurants

-- Gives access to each restaurant's food items
Join serves on restaurants.restID = serves.restID

-- Allows retrieval of prices for the food items of each restaurant
join foods on serves.foodID = foods.foodID

-- groups by restaurant ID and name to maintain average price for individual restaurants.
group by restaurants.restID, restaurants.name

-- Descending order so the highest value is given.
order by AVG_Price DESC

-- Restricts output to 1 value to ensure only the highest value for average price is given along with the restaurant's name.
LIMIT 1;
```

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

name	AVG_Price
La Trattoria	13.5000

The above SQL query for problem 5 calculates the restaurant with the highest average food price. Restaurant, serves and foods are joined, and the average food price is calculated with the joined data for each restaurant. The result is ordered by AVG_Price in descending order with a limit of 1 to show only the top priced restaurant.