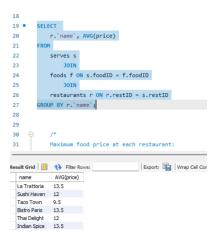
Title: DBMS HW2 Date: 9/30/2025

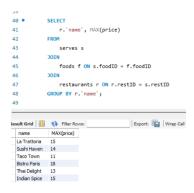
Question 1: Average food price at each restaurant

This query works by selecting name and food price. We are able to attain those values by joining the foodIDs from foods and serves, which would match columns only where the food IDs match. Finally, we join the restaurant IDs where they match the serve IDs, because we are only interested in restaurants that serve their own food. We also Group by the name.



Question 2: Maximum food price at each restaurant:

We select name and max price. We get it from serves, and we want to join serves to the food associated with each restaurant. Additionally, we join restaurant as well, because we want the restaurant associated with their food. Since we used the MAX function, we will retrieve the max price, and it will be grouped by restaurant name.



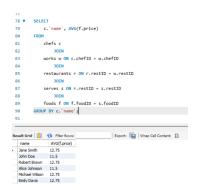
Question 3: Count of different food types at each restaurant

Here we select restaurant name and the count of distinct food types. The

distinct keyword makes it so that it will only contribute to the count if it is unique type. We select it from serves, and we want to join foods with the restaurant associated with it again. We combine the tables by joining foods to the corresponding foodID in serves, and likewise with restaurants so there will only be foods and restaurants that are associated, then group by name.

Question 4: Average price of foods by chef

We select the chef name and average food prices for display. We go to the chefs table first, and need to use joins to associate chefs with the restaurant at which they work using the corresponding chefID and restID in works. Next, we need to know what foods are served at each restaurant, so we combine restaurants and foods using the serves table, making sure the restID and foodID are matching. Next we want to join the foods with the serves table, and since we joined only matching restIDs and matching foodIDs throughout all of our joins, we are left only with each food that each chef serves. Finally, we group by name.



Question 5: Find the Restaurant with the Highest Average Food Price

We select the restaurant name and average food price, and we make avg_price a variable. We use restaurants first, and join it to the corresponding foods using the serves table, because we only want foods that the restaurant serves. Then we group by restaurant name, but since we care about the highest price, we want to order it by the avg_price. Since we want the highest average priced restaurant specifically, we limit the result to 1.

Extra Credit: Question 6:

We select the average price, assign it to the variable avg_price, and each chef name. We need the last column to fill the requirement, but some chefs work at multiple restaurants and we can't cram two rows into one. Therefore instead of creating a whole new column we can just concatenate a column called restaurants onto the end, and use the distinct keyword to avoid repeats. From there, we start with the chefs table and want to join them to the restaurant that they work at using the works table, and we do this by making sure the chefID and restID match each other. next, we need to combine restaurants to the foods they serve using the serve table, and making sure the foodID and restID match. We will be left with only the average price of each chef, their name, and the restaurants they work at. Finally, we group by chef name and order it by avg price with the keyword desc to get the highest values on top.

