DB Assignment 2

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1. Average Price of Foods at Each Restaurant
    a. Find the average price of all food items at a restaurant, for all restaurants
    b. Query:
        i. select r.name as restaurant_name, avg(f.price) as avg_price
        ii. from restaurants r table
        iii. join serves s on r.restID = s.restID
        iv. join foods f on s.foodID = f.foodID
        v. group by r.name;
    c. Screenshot:
        i.

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

    d. Explanation:
        i. The query calculates the average price using avg() from each restaurant on the table, then joins with serves and foods to match each food to its respective restaurant, and then groups by the restaurant name.

2. Maximum Food Price at Each Restaurant
    a. Find the maximum price of all food items at a restaurant, for all restaurants
    b. Query:
        i. select r.name as restaurant_name, max(f.price) as max_price
        ii. from restaurants r
        iii. join serves s on r.restID = s.restID
        iv. join foods f on s.foodID = f.foodID
        v. group by r.name;
    c. Screenshot:
        i.

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

    d. Explanation:
        i. The query is similar to the previous one, but instead of the avg() function, it uses max().

3. Count of Different Food Types Served at Each Restaurant
    a. Find the different types food items at a restaurant, for all restaurants
    b. Query:
        i. select r.name as restaurant_name, count(distinct f.type) as food_type_count
        ii. from restaurants r
        iii. join serves s on r.restID = s.restID
        iv. join foods f on s.foodID = f.foodID
        v. group by r.name;
    c. Screenshot:
        i.

	restaurant_name	food_type_count
▶	Bistro Paris	1
	Indian Spice	1
	La Trattoria	1
	Sushi Haven	2
	Taco Town	1
	Thai Delight	1

    d. Explanation:
        i. The query is similar to the previous two, but it uses the count() function in conjunction with **distinct** to get each individual food type for each restaurant.

4. Average Price of Foods Served by Each Chef
    a. Find the average price of all food items served by a specific chef, for all chefs
    b. Query:
        i. select c.name as chef_name, avg(f.price) as avg_price
        ii. from chefs c
        iii. join works w on c.chefID = w.chefID
        iv. join serves s on w.restID = s.restID
        v. join foods f on s.foodID = f.foodID
        vi. group by c.name;
    c. Screenshot:
        i.

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

    d. Explanation:
        i. The query is similar to the first, but it is using chefs instead of restaurants, so it also needs a join statement to find out where the chef works. It then groups by the different chef names.

5. Find the Restaurant with the Highest Average Food Price
    a. Find the average price of all food items served by a specific chef, for all chefs
    b. Query:
        i. select r.name as restaurant_name, avg(f.price) as avg_price
        ii. from restaurants r
        iii. join serves s on r.restID = s.restID
        iv. join foods f on s.foodID = f.foodID
        v. group by r.name
        vi. having avg(f.price) = (
        vii. select max(avg_price)
        viii. from (
        ix. select avg(f2.price) as avg_price
        x. from restaurants r2
        xi. join serves s2 on r2.restID = s2.restID
        xii. join foods f2 on s2.foodID = f2.foodID
        xiii. group by r2.name
        xiv.) as subquery
        xv.);
    c. Screenshot:
        i.

restaurant_name	avg_price
La Trattoria	13.5
Bistro Paris	13.5
Indian Spice	13.5

d. Explanation:

    i. The query is the same as the first up until the subquery, which is used to filter the prices so that only the restaurants with the highest average prices are shown.