Title: DB Assignment 2

Date: 29 September 2025

SQL Section

-- 1: average price of foods at each restaurant

-- selecting the restaurant prices

select restaurants.restID, restaurants.name, AVG(foods.price) as averagePrice

-- Joinging the tables restaurants, serves, and foods by their IDs

from restaurants

join serves

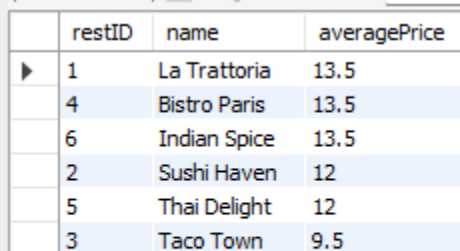on restaurants.restID = serves.restID

join foods

on foods.foodID = serves.foodID

-- Group by the restaurant ID and name

group by restaurants.restID, restaurants.name

-- Order by the average price descending

order by avg(foods.price) desc;

restID	name	averagePrice
1	La Trattoria	13.5
4	Bistro Paris	13.5
6	Indian Spice	13.5
2	Sushi Haven	12
5	Thai Delight	12
3	Taco Town	9.5

Explanation

Query 1 joins the tables: restaurants, serves, and foods by their IDs , gets the average food price and groups it by restaurantID and name.

-- 2: maximum food price at each restaurant

-- Selecting the restaurant id, name, and prices of food

select restaurants.restID, restaurants.name, max(foods.price) as maxPrice

-- Joining the tables restaurants, serves, and foods by their IDs

from restaurants

join serves

on restaurants.restID = serves.restID

join foods

on foods.foodID = serves.foodID

-- Group by the restaurant id and name

group by restaurants.restID, restaurants.name

-- Order by the max price descending

order by max(foods.price) desc;

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

Explanation

Query 2 joins the tables: restaurants, serves, and foods. It groups by restID and name of the restaurant and returns the max price of each restaurant in descending order

-- problem 3

select restaurants.restID, restaurants.name, count(foods.type) as typesServed

-- Joining the tables restaurants, serves, and foods by their IDs

from restaurants

join serves

on restaurants.restID = serves.restID

join foods

on foods.foodID = serves.foodID

-- Group by the restaurant id and name

group by restaurants.restID, restaurants.name

-- Order by the count of foods served descending

order by count(foods.type) desc;

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

Explanation

Query 3 groups restaurants, serves, and foods in order to find how many types of food are served by each restaurant. Each restaurant only serves 2 kinds of food.

```sql
-- 4 average price of foods served by each chef


-- Creating a view to keep later statement cleaner
create view cs as
(
        select chefs.chefID, chefs.name as cname, restaurants.restID
    from chefs
    join works
    on chefs.chefID = works.chefID
    join restaurants
    on restaurants.restID = works.restID
);


-- selecting chefID, chef name, and average prices
select chefID, cname, avg(foods.price) as averagePrice
from cs
join serves
on cs.restID = serves.restID
join foods
on foods.foodID = serves.foodID
group by chefID, cname
order by avg(foods.price) desc;
```

chefID	cname	averagePrice
2	Jane Smith	12.75
4	Robert Brown	12.75
6	Michael Wilson	12.75
5	Emily Davis	12.75
1	John Doe	11.5
3	Alice Johnson	11.5

Explanation

The tables: chefs, works, restaurants, serves, and foods are joined together to get the average price of the food per chef. A view is used to make the query look a little nicer.

-- 5 find the restaurant with the highest average food price

select restaurants.restID, restaurants.name, avg(foods.price) as averagePrice

from restaurants

join serves

on restaurants.restID = serves.restID

join foods

on foods.foodID = serves.foodID

group by restaurants.restID, restaurants.name

having avg(foods.price) >= all(

-- Subquery to get the restaurant with the highest average food price

select avg(foods.price)

from restaurants

join serves

on restaurants.restID = serves.restID

join foods

on foods.foodID = serves.foodID

group by restaurants.restID, restaurants.name

);

restID	name	averagePrice
1	La Trattoria	13.5
4	Bistro Paris	13.5
6	Indian Spice	13.5

Explanation

The tables restaurant, serves, and foods are joined together in order to find the highest average food served by each restaurant. A subquery is used to get the value that is greater than or equal to all the other restaurants. Ultimately, the query returns the restaurant/restaurants with the highest average price of food.