HW 2

Title: DB Assignment 2

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Problem 1:

First, I wanted to combine the 3 tables (foods, serves, restaurants) with inner joins to be able to get which foods are served at which restaurants. A projection is then used to grab the name of the restaurant and the average price of the food sold at each restaurant when grouping by the name of restaurant.

```
10      -- PT 2 Problem 1:
11      -- Average Price of Foods at Each Restaurant
12
13  •   SELECT r.name AS restName, AVG(price) AS avgPrice
14      FROM (foods AS f INNER JOIN serves AS s ON f.foodID = s.foodID
15              INNER JOIN restaurants AS r ON r.restID = s.restID)
16      GROUP BY restName;
17
```

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

restName	avgPrice
La Trattoria	13.5
Sushi Haven	12
Taco Town	9.5
Bistro Paris	13.5
Thai Delight	12
Indian Spice	13.5

Problem 2:

Starting off, I wanted to combine the 3 tables (foods, serves, restaurants) with inner joins to be able to get which foods are served at which restaurants. A projection is then used to grab the name of the restaurant and the maximum price of the food sold at each restaurant when grouping by the name of restaurant.

```
18
19      -- PT 2 Problem 2:
20      -- Maximum Food Price at Each Restaurant
21
22 •    SELECT r.name AS restName, MAX(price) AS maxPrice                --
23      FROM (foods AS f INNER JOIN serves AS s ON f.foodID = s.foodID   --
24              INNER JOIN restaurants AS r ON r.restID = s.restID)      --
25      GROUP BY restName;                                               --
26
```

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

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

Problem 3:

I combined the 3 tables (foods, serves, restaurants) with inner joins to be able to get which foods are served at which restaurants. A projection is then used to grab the name of the restaurant and the number of unique food types served at each restaurant when grouping by the name of restaurant.

```
27
28      -- PT 2 Problem 3:
29      -- Count of Different Food Types Served at Each Restaurant
30
31 •    SELECT r.name AS restName, COUNT(DISTINCT f.type) AS foodTypeCount
32      FROM (foods AS f INNER JOIN serves AS s ON f.foodID = s.foodID
33              INNER JOIN restaurants AS r ON r.restID = s.restID)
34      GROUP BY restName;
35
```

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

restName	foodTypeCount
Bistro Paris	1
Indian Spice	1
La Trattoria	1
Sushi Haven	2
Taco Town	1
Thai Delight	1

Problem 4:

First, I wanted to combine the 5 tables (foods, serves, restaurants, works, chefs) with inner joins to be able to get which foods are served at which restaurants and by which chefs. Finally, when grouping by the chefs' names, a projection is used to grab the name of the chef and the average price of the foods they cook.

```
36
37      -- PT 2 Problem 4:
38      -- Average Price of Foods Served by Each Chef
39
40 •    SELECT c.name AS chefName, AVG(price) AS avgFoodPrice                --
41      FROM (foods AS f INNER JOIN serves AS s ON f.foodID = s.foodID       --
42              INNER JOIN restaurants AS r ON r.restID = s.restID           --
43              INNER JOIN works AS w ON w.restID = r.restID                 --
44              INNER JOIN chefs AS c ON c.chefID = w.chefID)                --
45      GROUP BY chefName;                                                   --
46
47
```

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

chefName	avgFoodPrice
John Doe	11.5
Jane Smith	12.75
Robert Brown	12.75
Alice Johnson	11.5
Emily Davis	12.75
Michael Wilson	12.75

Problem 5:

I combined the 3 tables (foods, serves, restaurants) with inner joins to be able to get which foods are served at which restaurants and which food types are served including their prices. A projection is then used to grab the name of the restaurant and the average price of the food sold at each restaurant when grouping by the name of restaurant and descended ordering by the average price of the food served at the restaurant. Finally, I added a limit by 1 to grab the max average price served at the restaurant.

```
47
48      -- PT 2 Problem 5:
49      -- Find the Restaurant with the Highest Average Food Price
50
51 •    SELECT r.name AS restName, AVG(price) AS avgPrice
52      FROM (foods AS f INNER JOIN serves AS s ON f.foodID = s.foodID
53              INNER JOIN restaurants AS r ON r.restID = s.restID)
54      GROUP BY restName
55      ORDER BY avgPrice DESC LIMIT 1;
56
```

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

restName	avgPrice
La Trattoria	13.5