Title: DB Assignment 2
Your Name: Andrew Kantner
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Problem 1:

Average Price of Foods at Each Restaurant

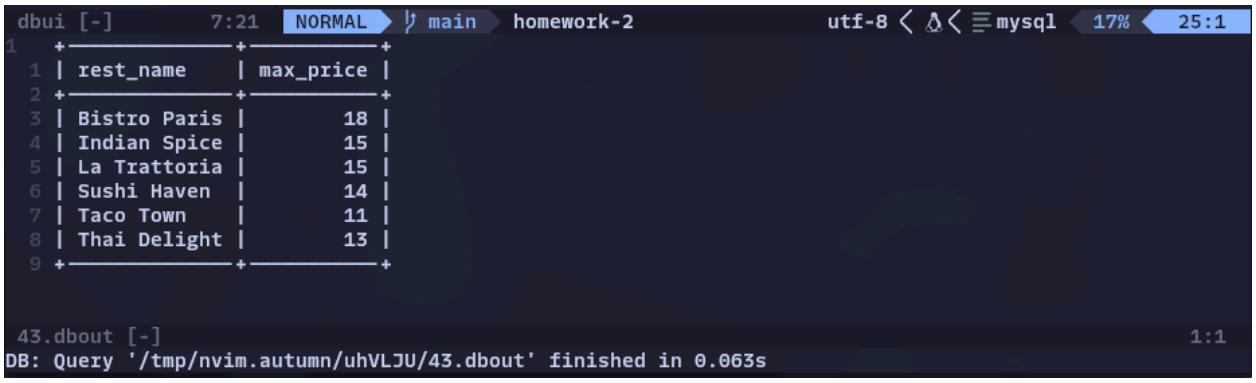
```
Unset
select r.name as rest_name, avg(f.price) as avg_price
from restaurants r
inner join serves s on r.restid = s.restid
inner join foods f on s.foodid = f.foodid
group by rest_name
;
```

The Query selects the restaurant name and average price of foods to print. It then joins restaurants and foods through the serves relationship so avg_price will include food from the restaurants and groups the output by restaurant name. This solves the problem by finding the average price of food at each restaurant.

Problem 2:

Maximum Food Price at Each Restaurant

```
Unset
select r.name as rest_name, max(f.price) as max_price
from restaurants r
inner join serves s on r.restid = s.restid
inner join foods f on f.foodid = s.foodid
group by r.name
;
```



The Query selects the restaurant name and max price of foods to print. It then joins restaurants and foods through the serves relationship so max_price will include food from the restaurants and groups the output by restaurant name. This solves the problem by finding the max price of food at each restaurant.

Problem 3:

Count of Different Food Types Served at Each Restaurant

```
Unset
select r.name as rest_name, count(distinct f.type) as food_types
from restaurants r
inner join serves s on r.restid = s.restid
inner join foods f on f.foodid = s.foodid
group by r.name
;
```

The Query selects the restaurant name and count of distinct foods to print. It joins restaurants to foods through the serves relationship and groups by restaurant name. This solves the problem by outputting the number of food types sold by each restaurant.

Problem 4:

Average Price of Foods Served by Each Chef

Unset

```
select c.name as chef_name, avg(f.price) as avg_price
from chefs c
inner join works w on c.chefid = w.chefid
inner join restaurants r on w.restid = r.restid
inner join serves s on r.restid = s.restid
inner join foods f on s.foodid = f.foodid
where c.specialty = f.type
group by c.name
;
```

This query selects the chef's name, and the average price of their food. It joins chefs to restaurants through the works relationship and restaurants to food with the serves relationship.

Finally, it checks if the specialty of the chef is equal to the type of food then groups by chef name. This solves the problem by outputting the average price of food prepared by each chef.

Problem 5:

Find the Restaurant with the Highest Average Food Price

```
Unset
select r.name as rest_name, avg(f.price) as avg_price
from restaurants r
inner join serves s on r.restid = s.restid
inner join foods f on s.foodid = f.foodid
group by rest_name
order by avg_price desc
limit 1
;
```

This query selects the restaurant name and average price of food. It joins restaurants to food using the serves relationship.
It groups by restaurant name then orders by average price descending so the highest average is output first. Then it's limited to 1 line so only the highest is output. This solves the problem by outputting the restaurant with the highest average food price.

Problem 6:

Determine which chef has the highest average price of the foods served at the restaurants where they work. Include the chef's name, the average food price, and the names of the restaurants where the chef works. Sort the results by the average food price in descending order.

```
Unset
select
       c.name as chef_name,
       avg(f.price) as avg_price,
       group_concat(distinct r.name) as rest_names
from chefs c
inner join works w on c.chefid = w.chefid
inner join restaurants r on w.restid = r.restid
inner join serves s on r.restid = s.restid
inner join foods f on s.foodid = f.foodid
group by chef_name
order by avg_price desc
;
```

This query selects the chef name, average food price for the chef, and uses group_concat with distinct to place all of the unique restaurants where the chef works into one cell as rest_names. It then joins chefs to restaurants using the works relationship and joins restaurants to foods using the serves relationship. It groups by chef name since that's what we're observing and orders by average price descending so the highest averages come first.