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- DATA DESCRIPTION
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Data description: The following dataset of different restaurants was used for the task of drawing different insights about the restaurants in various aspects such as ratings, parking availabilities, cuisines etc. it includes the following tables:

- Chefmozaccepts-Location Wise availability of Payment Modes
- Chefmozcuisine -Location Wise availability of Cuisine

- Chefmozhours4 - Working Hours of Restaurant
- Chefmozparking - Parking availability at restaurants at different places
- Geoplaces2 - Location Wise Summary of dress code, country, state, etc.
- Rating_final - User wise rating to the restaurants in diff locations
- Usercuisine - User had which Cuisine.
- User payment - User used which payment mode.
- Userprofile - Users personal details like a smoker, drink level, interest, religion, etc.

List of Tables:

1) geoplaces2:

Column name:	Data Type	Describe	NULL
Place id	Integer	ID for place of the restaurants	Yes
Latitude	real	Latitude measurement values of the place	Yes
Longitude	real	Longitude measurement values of the place	Yes
the_geom_meter	text	The geo meter letters	Yes
Name	Varchar	Restaurants name	Yes
Address	Text	Address of place (restaurants)	Yes
City	Varchar	Name of the city	Yes
State	Varchar	Name of the State	Yes
Country	Varchar	Name of the Country	Yes
Fax	varchar	No data inside it.	Yes
Zip	integer	Zip code number	Yes
Alcohol	Varchar	Whether alcohol is served or not and what type of alcohol served	Yes
Smoking_area	varchar	Whether smoking allowed or not and where they can smoke.	Yes
Dress_code	Varchar	Type of dress	Yes
Accessibility	Varchar	Tells the accessibility whether have complete access or partially etc	Yes
Price	Varchar	Tells price medium, Low and High.	Yes
URL	Varchar	USR of the place restaurant	Yes
Rambience	Varchar	What type of ambiance	Yes
franchise	varchar	Type of franchise	Yes
Area	Varchar	Type of area whether it is closed or open	Yes
Other_Services	varchar	Other services provided by the restaurant	Yes

Field	Type	Null	Key	Default	Extra
placeID	int	YES		NULL	
latitude	double	YES		NULL	
longitude	double	YES		NULL	
the_geom_meter	text	YES		NULL	
name	text	YES		NULL	
address	text	YES		NULL	
city	text	YES		NULL	
state	text	YES		NULL	
country	text	YES		NULL	
fax	text	YES		NULL	
zip	text	YES		NULL	
alcohol	text	YES		NULL	
smoking_area	text	YES		NULL	
dress_code	text	YES		NULL	
accessibility	text	YES		NULL	
price	text	YES		NULL	
url	text	YES		NULL	
Rambience	text	YES		NULL	
franchise	text	YES		NULL	
area	text	YES		NULL	
other_services	text	YES		NULL	

This table consists of 21 columns. Out of these 21 rows, the columns latitude and longitude consists of float values. Placeid contains the values with int datatype. The rest of thr columns are of char datatype.All columns contain null values.

Chefmozaccepts:

Column Name	Data type	Description	NULL
Place ID	Integer	Place id for the place	Yes
payment	Varchar	Type of the payments	Yes

Field	Type	Null	Key	Default	Extra
placeID	int	YES		NULL	
Rpayment	text	YES		NULL	

This table consists of 2 columns.one column has int datatype and the other column has char datatype.

Chefmozcuisine:

Column Name	Data type	Description	NULL
Place ID	Integer	Place id for the place	Yes
Rcuisine	Varchar	Type of the cuisine	Yes

Field	Type	Null	Key	Default	Extra
placeID	int	YES		NULL	
Rcuisine	text	YES		NULL	

Userprofile:

Column name:	Data Type	description	NULL
User ID	Integer	ID for User	Yes
Latitude	real	Latitude measurement values of the place of the user	Yes
Yes Longitude	Yes real	Longitude measurement values of the place of the user	Yes
Smoker	Varchar	Boolean type True or False	Yes
Drive Level	Varchar	Type of the drinking condition	Yes
dress_preference	Varchar	Type of dress preference	Yes
ambience	Varchar	Type of ambience	Yes
transport	Varchar	Type of transport the user is using	Yes
marital_status	Varchar	Type of Martial Status	Yes
hijos	varchar	Type of Hijos like independent or kids	Yes
birth_year	integer	Year of the birth	Yes
interest	Varchar	User is interested	Yes
personality	varchar	Type of personality of the user	Yes
religion	Varchar	Type of user religion	Yes
activity	Varchar	User activity what he does	Yes
color	Varchar	User interest color	Yes
Weight	Integer	Weight of the user	Yes
Budget	Varchar	Type Budget medium, Low and High.	Yes
Height	Integer	Height of the user in meters	Yes

Field	Type	Null	Key	Default	Extra
userID	text	YES		NULL	
latitude	double	YES		NULL	
longitude	double	YES		NULL	
smoker	text	YES		NULL	
drink_level	text	YES		NULL	
dress_preference	text	YES		NULL	
ambience	text	YES		NULL	
transport	text	YES		NULL	
marital_status	text	YES		NULL	
hijos	text	YES		NULL	
birth_year	int	YES		NULL	
interest	text	YES		NULL	
personality	text	YES		NULL	

religion	text	YES	NULL
activity	text	YES	NULL
color	text	YES	NULL
weight	int	YES	NULL
budget	text	YES	NULL
height	double	YES	NULL

chefmozhours4:

Column Name	Data type	Description	NULL
Place ID	Integer	Place id for the place	Yes
Hours	Time	Time of the working in a day	Yes
Days	Text	Working days	Yes

Field	Type	Null	Key	Default	Extra
placeID	int	YES		NULL	
hours	text	YES		NULL	
days	text	YES		NULL	

Chefmozparking:

Column Name	Data type	Description	NULL
Place ID	Integer	Place id for the place	Yes
Parking lot	Varchar	Describes the type of the parking	Yes

Field	Type	Null	Key	Default	Extra
placeID	int	YES		NULL	
parking_lot	text	YES		NULL	

rating_final:

Column Name	Data type	Description	NULL
User ID	Varchar	Id for the user	Yes
Place ID	Integer	Place id for the place	Yes
Rating	integer	Rating given by the user	Yes
Food_Rating	Integer	Food rating given by the user	Yes
Service_Rating	integer	Service rating given by the user	Yes

Field	Type	Null	Key	Default	Extra
userID	text	YES		NULL	
placeID	int	YES		NULL	
rating	int	YES		NULL	
food_rating	int	YES		NULL	
service_rating	int	YES		NULL	

Usercuisine:

Column Name	Data type	Description	NULL
User ID	Varchar	User id for the user	Yes
Rcuisine	Varchar	Type of the cuisines	Yes

Field	Type	Null	Key	Default	Extra
userID	text	YES		NULL	
Rcuisine	text	YES		NULL	

Userpayment:

Column Name	Data type	Description	NULL
User ID	Varchar	User id for the user	Yes
Upayment	Varchar	Type of the payment	Yes

Field	Type	Null	Key	Default	Extra
userID	text	YES		NULL	
Upayment	text	YES		NULL	

1) Objective:

To find out the total visits to all restaurants under all alcohol categories available.

Query:

```
SELECT a.placeID,a.name, a.alcohol, COUNT(b.userid) AS total_visits
FROM geoplaces2 a JOIN rating_final b
ON a.placeID = b.placeID
where a.alcohol not like "%NO_Alcohol%"
GROUP BY alcohol, a.placeID, a.name
ORDER BY total_visits DESC;
```

Output:

Number of rows: 43

placeID	name	alcohol	total_visits
135032	Cafeteria y Restaurant El Pacifico	Wine-Beer	28
135052	La Cantina Restaurante	Full_Bar	25
132862	La Posada del Virrey	Wine-Beer	18
135041	Luna Cafe	Wine-Beer	17
132921	crudalia	Wine-Beer	17
135028	La Virreina	Wine-Beer	15
135057	El Herradero Restaurante and Bar	Wine-Beer	15
132856	Unicols Pizza	Wine-Beer	14
135076	Restaurante Pueblo Bonito	Wine-Beer	13
135045	Restaurante la Gran Via	Wine-Beer	13
132723	Gordas de morales	Full_Bar	12
135066	Restaurante Guerra	Wine-Beer	12
135069	Abondance Restaurante Bar	Wine-Beer	12
135026	la Cantina	Full_Bar	11

135106	El Rincón de San Francisco	Wine-Beer	10
135071	Restaurante la Cantina	Full_Bar	9
135065	El angel Restaurante	Wine-Beer	9
135059	Restaurant Bar Hacienda los Mar...	Wine-Beer	9
134996	Sanborns Casa Piedra	Wine-Beer	9
135050	Restaurante la Estrella de Dima	Wine-Beer	8
134986	Restaurant Las Mananitas	Wine-Beer	8
135027	Restaurant Orizatlan	Wine-Beer	8
132875	shi ro ie	Wine-Beer	8
135001	Vips	Wine-Beer	7
135104	vips	Full_Bar	7
132767	Restaurant Familiar El Chino	Wine-Beer	6
135048	Restaurante Bar Fu-hao	Wine-Beer	6
132854	Sirlone	Wine-Beer	6
134983	Restaurant and Bar and Clothesli...	Full_Bar	5
132955	emilianos	Wine-Beer	5
132925	el pueblito	Wine-Beer	5
134992	Restaurant Teely	Wine-Beer	4
135109	Paniroles	Wine-Beer	4
135018	El Oceano Dorado	Full_Bar	4
135074	Restaurante la Parroquia Potosina	Wine-Beer	4
134987	Chilis Cuernavaca	Wine-Beer	4
135073	Restaurante Bar El Gallinero	Wine-Beer	4
132773	El cotorreo	Wine-Beer	4
132937	rockabilly	Full_Bar	4
135040	Restaurant los Compadres	Wine-Beer	4
132766	Mikasa	Wine-Beer	3
134975	Rincon del Bife	Full_Bar	3

Description:

This query uses inner join between the geoplaces2 table and the rating_final table on the common field of the place ID. WHERE clause filters the result set to only include places that serve alcohol.GROUP BY groups the result set by the alcohol availability status, place ID, and name to ensure that the aggregate function (COUNT) is applied to each group separately.

Inference:

From the data it can be seen that majority of the restaurants serve the wine-beer type of alcohol. Most of the visits were made to Cafeteria y Restaurant El Pacifico which serves the alcohol under wine-beer category. Further, in the full_bar category, La Cantina Restaurant has the maximum number of visits. The restaurants that are least visited are 'Mikasa' and 'Rincon del Bife' under wine-beer and full bar categories respectively.

This analysis helps in analyzing the popularity of places that serve alcohol and identifying the number of users who have rated those places.

2) Objective:

find out the average rating according to alcohol and price so that we can understand the rating in respective price categories as well.

Query:


```

SELECT distinct b.placeID,b.name, b.alcohol, b.price,
    AVG(a.rating) OVER(PARTITION BY b.alcohol) as `rating according to alcohol`,
    AVG(a.rating) OVER(PARTITION BY b.price) as `rating according to price`
FROM rating_final a JOIN geoplaces2 b
ON a.placeID = b.placeID
WHERE b.alcohol NOT LIKE "%NO_Alcohol%"
ORDER BY AVG(a.rating) OVER(PARTITION BY b.alcohol) DESC,
    AVG(a.rating) OVER(PARTITION BY b.price) DESC;

```

Output: number of rows=43

placeID	name	alcohol	price	rating according to alcohol	rating according to price
135026	la Cantina	Full_Bar	high	1.2625	1.3091
134975	Rincon del Bife	Full_Bar	high	1.2625	1.3091
134983	Restaurant and Bar and Clothesline Carlos N Ch...	Full_Bar	high	1.2625	1.3091
135052	La Cantina Restaurante	Full_Bar	high	1.2625	1.3091
135018	El Oceano Dorado	Full_Bar	medium	1.2625	1.2416
135071	Restaurante la Cantina	Full_Bar	medium	1.2625	1.2416
132723	Gordas de morales	Full_Bar	medium	1.2625	1.2416
135104	vips	Full_Bar	medium	1.2625	1.2416
132937	rockabilly	Full_Bar	low	1.2625	1.0893
134986	Restaurant Las Mananitas	Wine-Beer	high	1.2445	1.3091
135073	Restaurante Bar El Gallinero	Wine-Beer	high	1.2445	1.3091
134992	Restaurant Teely	Wine-Beer	high	1.2445	1.3091
135045	Restaurante la Gran Via	Wine-Beer	high	1.2445	1.3091
135066	Restaurante Guerra	Wine-Beer	high	1.2445	1.3091
132875	shi ro ie	Wine-Beer	high	1.2445	1.3091
132862	La Posada del Virrey	Wine-Beer	high	1.2445	1.3091
135065	El angel Restaurante	Wine-Beer	high	1.2445	1.3091
135047	Restaurante Casa de las Flores	Wine-Beer	high	1.2445	1.3091
135048	Restaurante Bar Fu-hao	Wine-Beer	high	1.2445	1.3091
135050	Restaurante la Estrella de Dima	Wine-Beer	high	1.2445	1.3091
135040	Restaurant los Compadres	Wine-Beer	high	1.2445	1.3091
135076	Restaurante Pueblo Bonito	Wine-Beer	high	1.2445	1.3091
135074	Restaurante la Parroquia Potosina	Wine-Beer	high	1.2445	1.3091
135106	El Rincón de San Francisco	Wine-Beer	medium	1.2445	1.2416
134996	Sanborns Casa Piedra	Wine-Beer	medium	1.2445	1.2416
135057	El Herradero Restaurante and Bar	Wine-Beer	medium	1.2445	1.2416
135041	Luna Cafe	Wine-Beer	medium	1.2445	1.2416
135032	Cafeteria y Restaurant El Pacifico	Wine-Beer	medium	1.2445	1.2416
135028	La Virreina	Wine-Beer	medium	1.2445	1.2416
132854	Sirlone	Wine-Beer	medium	1.2445	1.2416
135001	Vips	Wine-Beer	medium	1.2445	1.2416
135027	Restaurant Orizatlan	Wine-Beer	medium	1.2445	1.2416
132766	Mikasa	Wine-Beer	medium	1.2445	1.2416
132767	Restaurant Familiar El Chino	Wine-Beer	medium	1.2445	1.2416
132767	Restaurant Familiar El Chino	Wine-Beer	medium	1.2445	1.2416
135109	Paniroles	Wine-Beer	medium	1.2445	1.2416
134987	Chilis Cuernavaca	Wine-Beer	medium	1.2445	1.2416
135059	Restaurant Bar Hacienda los Martinez	Wine-Beer	medium	1.2445	1.2416
132925	el pueblito	Wine-Beer	medium	1.2445	1.2416
132856	Unicols Pizza	Wine-Beer	low	1.2445	1.0893
132955	emilianos	Wine-Beer	low	1.2445	1.0893
132773	El cotorreo	Wine-Beer	low	1.2445	1.0893
135069	Abondance Restaurante Bar	Wine-Beer	low	1.2445	1.0893
132921	crudalia	Wine-Beer	low	1.2445	1.0893

Description:

This query partitions the result set by the alcohol availability and price using the OVER clause. Also, the result set is sorted by the average rating for each alcohol availability and by the average rating for each price group in descending order allowing the user to identify the places with the best ratings for each group.

The AVG function is used with the OVER clause to calculate the average rating for each alcohol availability group and each price group. This creates a separate group of rows for each group, and the AVG function is applied to each group to calculate the average rating.

Overall, this query is helpful in analyzing the relationship between the rating score, alcohol availability, and price of the places. The use of the AVG function allows for the efficient calculation of the average rating for each group, making the query faster and more efficient.

Inference:

The highest rating with respect to price, as well as the alcohol is given to the restaurants under the category of full-bar type. There are 4 restaurants which top the rating list with respect to both price and alcohol, which include la Cantina, Rincon del Bife, Restaurant and Bar and Clothesline Carlos N Charlies and La Cantina Restaurante even though the price is high.

Considering both the price ratings and alcohol ratings, lowest ratings are given to particularly 5 restaurants which belong under the wine-beer category of alcohol. The restaurants are Unicols Pizza, emilianos, El cotorreo , Abundance Restaurante Bar and crudalia. These restaurants have low ratings despite having low prices.

3) Objective:

To quantify that what are the parking availability as well in different alcohol categories along with the total number of restaurants.

Query:

```
SELECT a.alcohol AS alcohol_type, b.parking_lot,
       COUNT(DISTINCT a.placeID) AS total_restaurants,
       SUM(b.parking_lot IN
            ('public', 'yes', 'valet parking', 'fee', 'street', 'validated parking')) AS ParkingAvailable_count,
       SUM(b.parking_lot = 'none') AS NoParking_count
FROM geoplaces2 a LEFT JOIN chefmozparking b
ON a.placeID = b.placeID
WHERE a.alcohol NOT LIKE '%NO_Alcohol%'
GROUP BY a.alcohol, b.parking_lot;
```

Output:

alcohol_type	parking_lot	total_restaurants	ParkingAvailable_count	NoParking_count
Full_Bar	none	3	0	3
Full_Bar	public	1	1	0
Full_Bar	valet parking	1	1	0
Full_Bar	yes	4	4	0
Wine-Beer	none	12	0	12
Wine-Beer	public	2	2	0
Wine-Beer	valet parking	2	2	0
Wine-Beer	yes	18	18	0

Description:

This SQL query retrieves the total number of restaurants for each alcohol availability and parking lot combination, and the count of restaurants that have parking available or no parking at all.

The query achieves this by using a LEFT JOIN between the geoplaces2 table (a) and the chefmozparking table (b) on the common field of the place ID (placeID). The WHERE clause filters the result set to only include places that serve alcohol, as indicated by the "NO_Alcohol" flag in the alcohol column.

The SELECT clause specifies the columns to be retrieved from the tables: the alcohol availability status, parking lot type, total number of restaurants, the count of restaurants that have parking available, and the count of restaurants that have no parking.

Inference:

From the data it can be inferred that there are a total of three Full-bar restaurants with no parking availability. In case of wine-beer restaurants there are 12 restaurants which do not have parking facilities.

4) Objective:

To Also take out the percentage of different cuisine in each alcohol type.

Query:

```
SELECT
  a.alcohol AS alcohol_type,
  b.rcuisine AS cuisine_type,
  COUNT(DISTINCT a.placeid) AS total_restaurants,
  SUM(p.parking_lot
    IN ('public', 'yes', 'valet parking', 'fee', 'street','validated parking')) AS parking_available_count,
  SUM(p.parking_lot = 'none') AS no_parking_count,
  ROUND(COUNT(DISTINCT a.placeid) / SUM(COUNT(DISTINCT a.placeid)) OVER (PARTITION BY a.alcohol) * 100, 2) AS cuisine_percentage
FROM geoplaces2 a
JOIN chefmozCuisine b ON a.placeid = b.placeid
JOIN chefmozparking p ON a.placeid = p.placeid
WHERE a.alcohol NOT LIKE '%NO_Alcohol%' AND a.country <> '?'
GROUP BY a.alcohol, b.rcuisine
ORDER BY a.alcohol, cuisine_percentage DESC;
```

Output:

alcohol_type	cuisine_type	total_restaurants	parking_available_count	no_parking_count	cuisine_percentage
Full_Bar	Bar	5	2	3	45.45
Full_Bar	Bar_Pub_Brewery	4	2	2	36.36
Full_Bar	Mexican	2	2	0	18.18
Wine-Beer	Bar	6	5	1	31.58
Wine-Beer	International	3	3	0	15.79
Wine-Beer	Mexican	3	0	3	15.79
Wine-Beer	Cafeteria	2	1	1	10.53
Wine-Beer	Contemporary	2	2	0	10.53
Wine-Beer	Bar_Pub_Brewery	1	1	0	5.26
Wine-Beer	Italian	1	0	1	5.26
Wine-Beer	Japanese	1	1	0	5.26

Description:

The SELECT statement selects several columns from the tables and applies some calculations to them. It selects the "alcohol" column from the "geoplaces2" table and renames it as "alcohol_type". It also selects the "rcuisine" column from the "chefmozCuisine" table and renames it as "cuisine_type". The query then counts the number of distinct "placeid" values from the "geoplaces2" table and renames this as "total_restaurants".

The query then uses the SUM () function to count the number of distinct "placeid" values where parking is available, and where there is no parking, using conditional logic to filter these based on the "parking_lot" column from the "chefmozparking" table. The query then performs a calculation using the COUNT () function and the SUM () function to determine the percentage of restaurants in the area offering each type of cuisine, rounded to two decimal places using the ROUND () function.

Finally, the WHERE clause filters out any rows where "alcohol" is not specified or "country" is unknown, and the GROUP BY clause groups the results by "alcohol_type" and "cuisine_type". The ORDER BY clause sorts the results first by "alcohol_type" and then by the "cuisine_percentage" in descending order.

Inference:

From the data, It can be seen maximum varieties of cuisines are present in wine-beer type of restaurants. Majority of full bar and wine beer restaurants have bar cuisine. The cuisines with least percentage include bar pub brewery, Italian, Japanese and Mexican.

It can also be seen that all the restaurants with Mexican cuisine type have the parking availability. All the international and contemporary restaurants also have parking availability.

There is only one restaurant with Japanese cuisine. Even the Italian cuisine is served in only one restaurant.

5) Objective:

To take out the average rating of each state.

Query:

```

update geoplaces2 set state= replace(state,"san luis potos","San Luis Potosi");
update geoplaces2 set state= replace(state,"San Luis Potosii","San Luis Potosi");
SELECT
    a.state, ROUND(AVG(b.rating), 2) AS average_rating
FROM
    geoplaces2 a
    INNER JOIN
    rating_final b ON a.placeid = b.placeid where a.state <> "?"
GROUP BY state order by average_rating desc;

```

Output:

state	average_rating
s.l.p.	1.38
Morelos	1.36
mexico	1.24
SLP	1.23
San Luis Potosi	1.13
Tamaulipas	0.91

Description:

This query performs two operations. The first operation updates the "state" column in the "geoplaces2" table by replacing any instances of "san luis potos" and "San Luis Potosii" with "San Luis Potosi".

The second operation retrieves data from two tables, "geoplaces2" and "rating_final", and calculates the average rating of restaurants in each state, rounding the result to two decimal places. It joins the two tables using the placeid column, and then groups the results by state.

The result set is sorted in descending order by the average rating, which is rounded to two decimal places using the ROUND function.

The use of the GROUP BY clause and the AVG function allow for the aggregation and averaging of data across multiple rows. The sorting of the results by average rating provides additional insights into which states have the highest-rated places according to the data.

Inference:

The column state in geoplaces2 table required data cleaning as the strings "san luis potos" and "San Luis Potosii" were believed to be same as the string "San Luis Potosi". Hence, they were corrected.

Further it is seen that the highest rating is given to the state s.l.p which is presumed to be San Luis Potosi but due to uncertainty it is left unchanged since this has to be discussed and cross checked.

However, the state with the least rating is Tamaulipas.

6) Objective:

'Tamaulipas' Is the lowest average rated state. Quantify the reason why it is the lowest rated by providing the summary on the basis of State, alcohol, and Cuisine.

Query:

```
SELECT
    COUNT(gp.placeid) AS number_of_restaurants,
    Rcuisine,
    alcohol
FROM
    geoplaces2 gp
    INNER JOIN
    chefmozcuisine cc ON gp.placeid = cc.placeid
WHERE
    gp.state LIKE '%Tamaulipas%'
GROUP BY Rcuisine , alcohol;
```

Output:

number_of_restaurants	Rcuisine	alcohol
9	Mexican	No_Alcohol_Served
1	Pizzeria	No_Alcohol_Served
1	Armenian	No_Alcohol_Served
1	Italian	No_Alcohol_Served
1	Fast_Food	No_Alcohol_Served
1	Regional	No_Alcohol_Served

Description:

Here we filter the results by selecting only those restaurants that are located in Tamaulipas state using the WHERE clause and the LIKE operator. We also group the results by the type of cuisine and alcohol availability, and then count the number of restaurants in each group using the COUNT function.

Inference:

None of the restaurants in Tamaulipas serve alcohol. There are no international restaurants in Tamaulipas. Further, there are only 6 types of cuisines in Tamaulipas state, compared to other states like san luis potos which have 11 types of cuisines,

7) Objective:

To find the average weight, food rating, and service rating of the customers who have visited KFC and tried Mexican or Italian types of cuisine, and also their budget level is low.

Query:

```
select b.userid,avg(b.weight) as avg_weight , a.food_rating,a.service_rating from userprofile b,
(SELECT
    placeid, userid, food_rating, service_rating
FROM
    rating_final
WHERE
    placeid IN (SELECT
        placeid
        FROM
            geoplaces2
        WHERE
            placeid IN (SELECT
                placeid
                FROM
                    chefmozcuisine
                WHERE
                    Rcuisine LIKE '%mexican%'
                    OR Rcuisine LIKE '%italian%') and name like "%kfc%"
            AND price LIKE '%low%'))a where a.userid=b.userid group by b.userid ,food_rating,service_rating
order by avg_weight desc;
```

Output:

	userid	avg_weight	food_rating	service_rating
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Explanation:

The query retrieves the following information:

- b.userid: the user ID from the "userprofile" table.
- AVG (b. weight): the average weight from the "userprofile" table.
- a. food_rating: the food rating from the "rating_final" table.
- a. service_rating: the service rating from the "rating_final" table.

The query applies some filters and joins to retrieve the data. Here is what each part of the query does:

1. FROM userprofile b selects the "userprofile" table and assigns it the alias "b".

2. INNER JOIN (SELECT ...) a ON a.userid = b.userid: selects a subquery that retrieves data from the "rating_final" table and assigns it the alias "a". The subquery filters the data to only include rows where the "placeid" is associated with a restaurant that serves Mexican or Italian cuisine, is named "KFC", and has a low price. The subquery also selects the "placeid", "userid", "food_rating", and "service_rating" columns. The ON clause joins the subquery with the "userprofile" table using the "userid" column.
3. GROUP BY b.userid, a.food_rating, a.service_rating: groups the data by "userid", "food_rating", and "service_rating".
4. SELECT b.userid, AVG(b.weight) as avg_weight, a.food_rating, a.service_rating selects the "userid", the average weight of each user, and the "food_rating" and "service_rating" columns from the joined and grouped data.
5. ORDER BY avg_weight DESC: orders the results by the average weight in descending order.

The "EXPLAIN" statement is used to obtain information about how the MySQL server executes the query. It provides information such as the execution plan, the number of rows that the server expects to examine, and the estimated cost of the query.

Inference:

The query used a subquery to filter the data to only include rows where "placeid" is associated with a restaurant that serves Mexican or Italian cuisine, is named "KFC" and has a low price.

But it is seen that there are no customers who have visited KFC and tried Mexican or Italian types of cuisine.

CONCLUSION:

- majority of the restaurants serve the wine-beer type of alcohol. Most of the visits were made to Cafeteria y Restaurant El Pacifico which serves the alcohol under wine-beer category. Further, in the full_bar category, La Cantina Restaurant has the maximum number of visits. The restaurants that are least visited are 'Mikasa' and 'Rincon del Bife' under wine-beer and full bar categories respectively. Hence these are the restaurants which bag the popularity among all the other restaurants.
- The highest rating with respect to price, as well as the alcohol is given to the restaurants under the category of full-bar type. There are 4 restaurants which top the rating list with respect to both price and alcohol, which include la Cantina, Rincon del Bife, Restaurant and Bar and Clothesline Carlos N Charlies even though the price is high.
- Even though the majority of the restaurants are wine-beer type, in case of ratings, full-bar restaurants top the rating list. Specific restaurants such as la Cantina have high ratings because of which it is the highest visited restaurant. Whereas 'Rincon del Bife' is least visited and still has the highest rating. This might be because the restaurant is newly established and requires time to increase the visits.

- Considering both the price ratings and alcohol ratings, lowest ratings are given to particularly 5 restaurants which belong under the wine-beer category of alcohol. The restaurants are Unicols Pizza, emilianos, El cotorreo, Abondance Restaurante Bar and crudalia. These restaurants have low ratings despite having low prices. This might be because of low quality alcohol.
- Further, there are only 3 restaurants in full bar category which do not provide parking facilities. Whereas, in case of wine-beer restaurants, there are 12 restaurants without parking facility. This might be one of the reasons for high ratings of full bar restaurants compared to the wine beer restaurants.
- maximum varieties of cuisines are present in wine-beer type of restaurants. Majority of full bar and wine beer restaurants have bar cuisine. The cuisines with least percentage include bar pub brewery, Italian, Japanese and Mexican.
- It was seen that the state with lowest rating is “Tamaulipas”. There is uncertainty with respect to the highest rated state as it is inferred to be s.l.p and unclear about what it represents.
- The low ratings of Tamaulipas might be because None of the restaurants in Tamaulipas serve alcohol. There are no international restaurants in Tamaulipas. Further, there are only 6 types of cuisines in Tamaulipas state, compared to other states like san luis potos which have 11 types of cuisines. Hence the state must work on these aspects to increase its ratings.
- There are no customers who have visited KFC and tried Mexican or Italian types of cuisine.