Insight.

College Park Restaurant Review Analysis
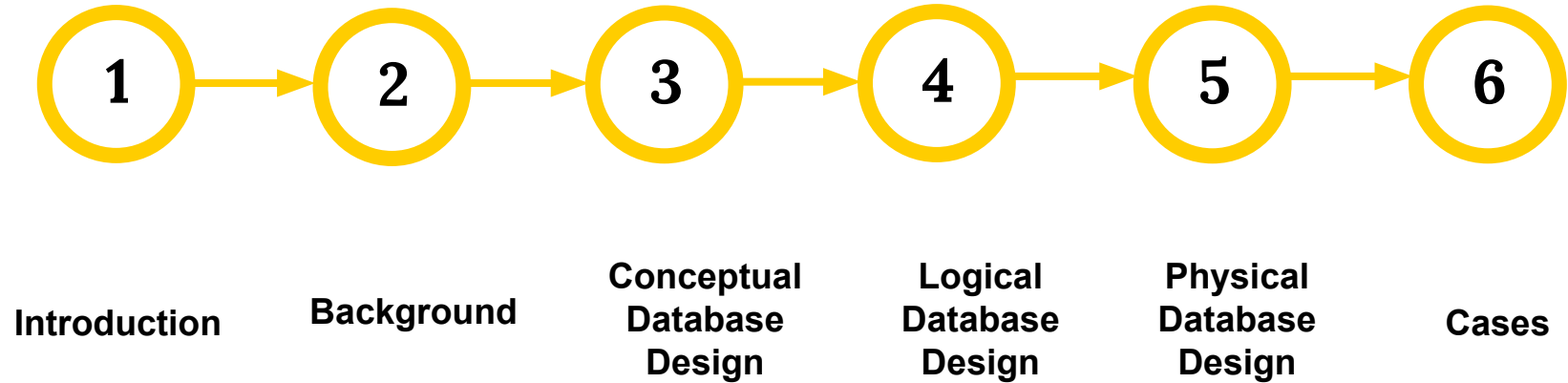
Team: 0507_06
Present Date: December 6
Member: Rui Jin, Aditya Jadeja, Sai Vaishnav Vinjamuri, Yun-Jung Fan, Ying-Ting Lin

1 Introduction

Mission Objectives

Mission Statements

by collecting and integrating restaurant reviews from Google Maps and Yelps...

For Restaurants

We help restaurants improve by analyzing and getting insight from customers' reviews.

For Customers

We provide reliable information about restaurants, for customers to make better and quicker decisions.

Background

2

User & Data Sources

Users

Restaurant

- To find out what customers value the most
- To find out customers who tend to leave good or bad comments

Customer

- To compare evaluations from different platforms about a certain restaurant
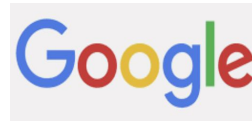- To find out the top ten famous restaurants in each category

Data Sources

Data Sources

	URL	Restaurant	Genre	Total_reviews	SeriviceOption	Review
0	https://maps.google.com/?cid=2486673317011209047	Nene's Restaurant	Restaurant	22	[{'Index': 1, 'SeriviceOption': 'Serves dine-i...	[{'Index': 1, 'Author_name': ' E A ', 'Review_...
1	https://maps.google.com/?cid=6705066049573664365	Subway	Sandwich shop	77	[{'Index': 1, 'SeriviceOption': 'Serves dine-i...	[{'Index': 1, 'Author_name': ' Jenny Deer ', '...
2	https://maps.google.com/?cid=9607263473122469125	POH-YO Charcoal Chicken	Chicken restaurant	99	[{'Index': 1, 'SeriviceOption': 'Serves dine-i...	[{'Index': 1, 'Author_name': ' Mohammad Habibu...
3	https://maps.google.com/?cid=10686788065506253982	College Park Grill	Restaurant	191	[{'Index': 1, 'SeriviceOption': 'Serves dine-i...	[{'Index': 1, 'Author_name': ' Kevin Sullivan ...
4	https://maps.google.com/?cid=7617917353403423440	IKEA Restaurant	Swedish restaurant	1309	[{'Index': 1, 'SeriviceOption': 'Serves dine-i...	[{'Index': 1, 'Author_name': ' Paul Kervin ', ...

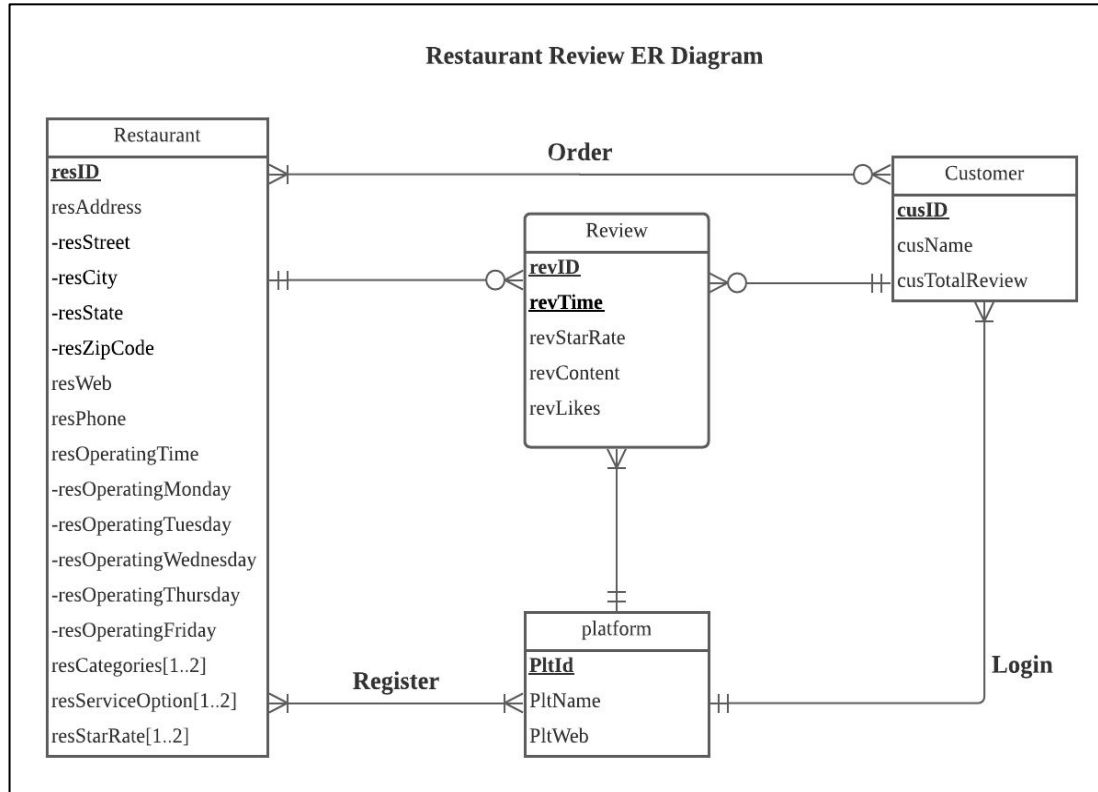|	url	review_count	categories	rating	coordinates	transactions	price	location	phone	display_phone
	https://www.yelp.com/biz/milk-and-honey-cafe-c...	2429	[{'alias': 'breakfast_brunch', 'title': 'Break...	4.0	{'latitude': 39.02329, 'longitude': -76.92424}	[pickup, delivery]	$$	{'address1': '10280 Baltimore Ave', 'address2'...	+13014772195	(301) 477-2195
	https://www.yelp.com/biz/marathon-deli-college...	388	[{'alias': 'delis', 'title': 'Delis'}, {'alias...	4.0	{'latitude': 38.981351, 'longitude': -76.938178}	[pickup, delivery]	$$	{'address1': '7412 Baltimore Ave', 'address2':...	+13019276717	(301) 927-6717
	https://www.yelp.com/biz/nuvegan-cafe-college-...	461	[{'alias': 'vegan', 'title': 'Vegan'}, {'alias...	4.0	{'latitude': 38.9911506644499, 'longitude': -7...	[pickup, delivery]	$$	{'address1': '8150 Baltimore Ave', 'address2':...	+12405537567	(240) 553-7567

3 # Conceptual Database Design

ER Diagram

📌 ER Diagram

Restaurant Review ER Diagram

Restaurant
resID
resAddress
-resStreet
-resCity
-resState
-resZipCode
resWeb
resPhone
resOperatingTime
-resOperatingMonday
-resOperatingTuesday
-resOperatingWednesday
-resOperatingThursday
-resOperatingFriday
resCategories[1..2]
resServiceOption[1..2]
resStarRate[1..2]

Review
revID
revTime
revStarRate
revContent
revLikes

Customer
cusID
cusName
cusTotalReview

platform
PltId
PltName
PltWeb

Order

Register

Login

ER diagram is made of four entities

- Review
- Platform
- Customer
- Restaurant

4

Logical Database Design

Relational Schema

Relational Schema

Restaurant

resID	resStreet	resCity	resState	resZipCode	resStarRate	resWeb	resPhone

resOperatingMonday	resOperatingTuesday	resOperatingWednesday	resOperatingThursday	resOperatingFirday

RestaurantCategory

resID	resServiceOption

Customer

cusID	cusName	reviewNumber	PltId

Review

revID	revStarRate	revContent	resID	PltId	cusId

Platform

PltId	pltName	pltWeb

Order

resID	cusID

Register

resID	PltId

5 Physical Database Design

📌 Real Table

```sql
CREATE TABLE [Insight.Customer] (
    cusId CHAR (9) NOT NULL,
    cusName VARCHAR (40),
    cusReviewNumber VARCHAR (250),
    pltId CHAR (3),
    CONSTRAINT pk_Customer_cusId PRIMARY KEY (cusId),
    CONSTRAINT fk_Customer_pltId FOREIGN KEY (pltId)
        REFERENCES [Insight.Platform] (pltId)
        ON DELETE CASCADE ON UPDATE CASCADE )
```

→

	cusID	cusName	reviewNumber	pltId
1	C001	E A	50	P01
2	C002	Ray Weil	40	P01
3	C003	Melissa Stefun	64	P01
4	C004	Mohammad Habibur Rahaman	2	P01
5	C005	Krishna Bhavithavya Kidambi	268	P01
6	C006	Anthony Kanuk	5	P01
7	C007	Kevin Sullivan	53	P01
8	C008	Greg Karbett	97	P01
9	C009	Mike Sampson	92	P01
10	C010	Paul Kervin	179	P01
11	C011	Evan Russo	13	P01
12	C012	Tsolmon Otgon	40	P01
13	C013	Joel Tannesen	46	P01
14	C014	dominique williams	6	P01
15	C015	I Po	266	P01

100 %   Results   Messages

UDT703_Student_253 (61) | BUDT703_Project_0507_06 | 00:00:00 | 276 rows

6 **Cases**

Business Transaction in View

If a restaurant appears on more than 1 platforms, what are the average rating of each restaurant on all platforms and the rating of each restaurant on each platform?

```sql
CREATE VIEW [Restaurant Rating On Each Platform]
    AS
    SELECT r.resID, r.resName, avr.[AVG. Rating], t.resRating ,p.pltName
    FROM [Insight.Restaurant] r, [Insight.Register] g, [Insight.ResRating] t , [Insight.Platform] p, (SELECT t.resID, AVG(t.resRating) AS 'AVG. Rating'
                                                                                                      FROM [Insight.ResRating] t
                                                                                                      GROUP BY t.resID
                                                                                                      HAVING COUNT(t.resID) > 1) avr
    WHERE r.resID = g.resID AND g.PltId = t.pltId AND r.resID = t.resID AND g.PltId = p.pltId AND avr.resID = t.resID
GO


SELECT *
FROM [Restaurant Rating On Each Platform] r
ORDER BY r.[AVG. Rating] DESC
```
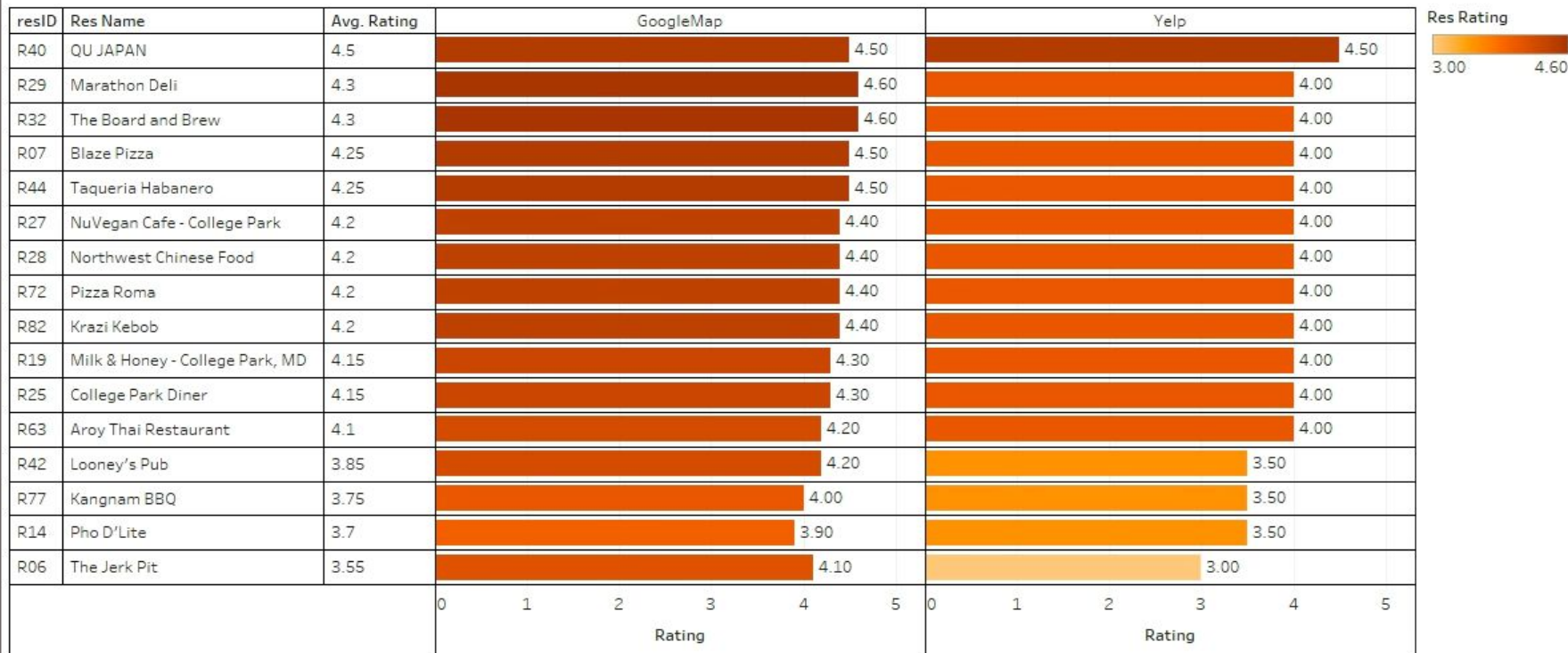
	resID	resName	AVG. Rating	resRating	pltName
1	R40	QU JAPAN	4.500000	4.5	GoogleMap
2	R40	QU JAPAN	4.500000	4.5	Yelp
3	R29	Marathon Deli	4.300000	4.6	GoogleMap
4	R29	Marathon Deli	4.300000	4.0	Yelp
5	R32	The Board and Brew	4.300000	4.6	GoogleMap
6	R32	The Board and Brew	4.300000	4.0	Yelp
7	R07	Blaze Pizza	4.250000	4.5	GoogleMap
8	R07	Blaze Pizza	4.250000	4.0	Yelp
9	R44	Taqueria Habanero	4.250000	4.5	GoogleMap
10	R44	Taqueria Habanero	4.250000	4.0	Yelp
11	R72	Pizza Roma	4.200000	4.4	GoogleMap
12	R72	Pizza Roma	4.200000	4.0	Yelp
13	R82	Krazi Kebob	4.200000	4.4	GoogleMap
14	R82	Krazi Kebob	4.200000	4.0	Yelp
15	R27	NuVegan Cafe - College Park	4.200000	4.4	GoogleMap

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Business Transaction in Tableau

If a restaurant appears on more than one platforms, what are the average rating of each restaurant on all platforms and the rating of each restaurant on each platform?

resID	Res Name	Avg. Rating	GoogleMap	Yelp
R40	QU JAPAN	4.5	4.50	4.50
R29	Marathon Deli	4.3	4.60	4.00
R32	The Board and Brew	4.3	4.60	4.00
R07	Blaze Pizza	4.25	4.50	4.00
R44	Taqueria Habanero	4.25	4.50	4.00
R27	NuVegan Cafe - College Park	4.2	4.40	4.00
R28	Northwest Chinese Food	4.2	4.40	4.00
R72	Pizza Roma	4.2	4.40	4.00
R82	Krazi Kebob	4.2	4.40	4.00
R19	Milk & Honey - College Park, MD	4.15	4.30	4.00
R25	College Park Diner	4.15	4.30	4.00
R63	Aroy Thai Restaurant	4.1	4.20	4.00
R42	Looney's Pub	3.85	4.20	3.50
R77	Kangnam BBQ	3.75	4.00	3.50
R14	Pho D'Lite	3.7	3.90	3.50
R06	The Jerk Pit	3.55	4.10	3.00

Res Rating
3.00   4.60

If there are more than three restaurants in the category, what is the information of the top three restaurants in each category?

```sql
--Q2) If there are more than three restaurant in the category, what is the information of the top three restaurants in each category?
CREATE VIEW [Top 3 Restaurant In Each Platform] AS
    SELECT *
    FROM (SELECT T.resCategories,
                 ROW_NUMBER() OVER (PARTITION BY T.resCategories ORDER BY T.resStarRate DESC) AS 'rank',
                 T.resID,T.resName,
                 T.resStarRate,
                 T.resStreet,
                 T.resCity,
                 T.resState,
                 T.resZip,
                 T.resPhone,
                 T.resWeb
          FROM (SELECT r.resID,avg(a.resRating) as resStarRate ,c.resCategories,r.resName,r.resCity,r.resPhone,r.resState,r.resStreet, r.resWeb,r.resZip
                FROM [Insight.Restaurant] r, [Insight.RestaurantCategory] c, [Insight.ResRating] a
                WHERE r.resID=c.resID AND r.resID = a.resID AND c.resCategories IN (SELECT c.resCategories
                                                                                   FROM [Insight.RestaurantCategory] c
                                                                                   GROUP BY c.resCategories
                                                                                   HAVING COUNT(c.resCategories)>3)
                GROUP BY r.resID,c.resCategories,r.resName,r.resCity,r.resPhone,r.resState,r.resStreet,r.resWeb,r.resZip
                ) AS T
         ) AS T
    WHERE T.rank <= 3
WITH CHECK OPTION
GO

SELECT *
FROM [Top 3 Restaurant In Each Platform]
```

	resCategories	rank	resID	resName	resStarRate	resStreet	resCity	resState	resZip	resPhone	resWeb
1	Chinese restaurant	1	R28	Northwest Chinese Food	4.200000	7313 Baltimore Ave suite E	College Park	MD	20740	+1 240-714-4473	http://www.northwestchinesefood.com/
2	Chinese restaurant	2	R51	China Buffet	4.000000	9098 Baltimore Ave	College Park	MD	20740	+1 301-982-6600	NULL
3	Chinese restaurant	3	R55	Panda Express	3.900000	3972 Campus Dr	College Park	MD	20742	+1 301-314-6111	http://www.pandaexpress.com/
4	Fast food restaurant	1	R64	Chick-fil-A	4.300000	Stamp Union Food Court 3972 Campus Dr	College Park	MD	20742	+1 301-314-6568	https://www.chick-fil-a.com/maryland-collegepark
5	Fast food restaurant	2	R41	Taco Bell	4.000000	8428 Baltimore Ave	College Park	MD	20740	+1 301-982-7198	https://locations.tacobell.com/md/college-park/8...
6	Fast food restaurant	3	R71	Taco Bell	3.600000	Glenn L. Martin Hall Campus Dr	College Park	MD	20740	NULL	https://locations.tacobell.com/md/college-park/8...
7	Mexican restaurant	1	R44	Taqueria Habanero	4.250000	8145 Baltimore Ave Suite A&B	College Park	MD	20740	+1 240-241-4486	http://taqueriahabanero.com/
8	Mexican restaurant	2	R21	Chipotle Mexican Grill	4.200000	10250 Baltimore Ave Ste G	College Park	MD	20740	+1 240-387-7140	https://locations.chipotle.com/md/college-park/1...
9	Mexican restaurant	3	R43	Chipotle Mexican Grill	4.000000	7332 Baltimore Ave	College Park	MD	20740	+1 240-582-0015	https://locations.chipotle.com/md/college-park/7...
10	Pizza restaurant	1	R69	Potomac Pizza - College Park	4.300000	7777 Baltimore Ave	College Park	MD	20740	+1 240-582-5242	http://www.potomacpizza.com/
11	Pizza restaurant	2	R07	Blaze Pizza	4.250000	7419 Baltimore Ave	College Park	MD	20740	+1 301-392-2324	http://www.blazepizza.com/locations/college-park/
12	Pizza restaurant	3	R17	Ledo Pizza	4.200000	4509 Knox Rd	College Park	MD	20740	+1 301-422-8122	https://order.ledopizza.com/menu/ledo-pizza-colle...
13	Restaurant	1	R01	Nene's Restaurant	4.700000	9905 Rhode Island Ave	College Park	MD	20740	+1 301-254-9537	https://www.nenesrestaurant.com/
14	Restaurant	2	R30	Caribbean Cove DC	4.700000	9348 Cherry Hill Rd	College Park	MD	20740	+1 240-542-4965	http://caribbeancovecatering.com/
15	Restaurant	3	R47	Ritchie's Colombian Restaurant	4.700000	7313 Baltimore Ave suite H	College Park	MD	20740	+1 240-764-7422	https://ritchiescolombianc.wixsite.com/mysite

Query executed successfully. doitsqlx.rhsmith.umd.edu,97... BUDT703_Student_253 (166) BUDT703_Project_0507_06 00:00:00 18 rows

Business Transaction in Tableau

If there are more than three restaurant in the category, what is the information of the top three restaurants in each category?

Res Categories	Index	Res ID	Res Name	Address	Res Web	Res Phone	Avg. Rating
Chinese restaurant	1	R28	Northwest Chinese Food	7313 Baltimore Ave suite E ..	http://www.northwestchi..	+1 240-714-4473	4.20
	2	R51	China Buffet	9098 Baltimore Ave College..	Null	+1 301-982-6600	4.00
	3	R38	Eddie's Cafe	9823 Rhode Island Ave Coll..	http://www.collegeparke..	+1 301-345-1791	3.90
Fast food restaurant	1	R64	Chick-fil-A	Stamp Union Food Court 3..	https://www.chick-fil-a.c..	+1 301-314-6568	4.30
	2	R41	Taco Bell	8428 Baltimore Ave College..	https://locations.tacobell..	+1 301-982-7198	4.00
	3	R71	Taco Bell	Glenn L. Martin Hall Campu..	https://locations.tacobell..	Null	3.60
Mexican restaurant	1	R44	Taqueria Habanero	8145 Baltimore Ave Suite A..	http://taqueriahabanero...	+1 240-241-4486	4.25
	2	R21	Chipotle Mexican Grill	10250 Baltimore Ave Ste G ..	https://locations.chipotle..	+1 240-387-7140	4.20
	3	R11	Azteca Restaurant & Cantina	9505 Baltimore Ave College..	http://www.azteccantina..	+1 301-474-8226	4.00
Pizza restaurant	1	R69	Potomac Pizza - College Park	7777 Baltimore Ave College..	http://www.potomacpizz..	+1 240-582-5242	4.30
	2	R07	Blaze Pizza	7419 Baltimore Ave College..	http://www.blazepizza.co..	+1 301-392-2324	4.25
	3	R17	Ledo Pizza	4509 Knox Rd College Park ..	https://order.ledopizza.co..	+1 301-422-8122	4.20
Restaurant	1	R01	Nene's Restaurant	9905 Rhode Island Ave Coll..	https://www.nenesrestau..	+1 301-254-9537	4.70
	2	R30	Caribbean Cove DC	9348 Cherry Hill Rd College ..	http://caribbeancovecate..	+1 240-542-4965	4.70
	3	R47	Ritchie's Colombian Restaur..	7313 Baltimore Ave suite H..	https://ritchiescolombian..	+1 240-764-7422	4.70
Sandwich shop	1	R60	Potbelly Sandwich Shop	10260 Baltimore Ave Colle..	https://www.potbelly.co..	+1 301-474-3333	4.30
	2	R16	Potbelly Sandwich Shop	7422 Baltimore Ave College..	https://www.potbelly.co..	+1 301-209-0635	4.10
	3	R74	Jimmy John's	7410 A Baltimore Ave Colle..	https://locations.jimmyjo..	+1 301-927-7827	4.00

Avg. Rating: 0 1 2 3 4 5

Business Transaction in View

> Who are the customers that leave more than one reviews for restaurants in College Park and what are their average star rate and review likes?

```sql
CREATE VIEW [Customers with more than 1 review] AS
    SELECT c.cusID, c.cusName, avr.[Number of Reviews] ,avr.[AVG. Star Rate], ROUND(AVG (CAST (r.revLike AS float)),2) as 'AVG. Review Likes'
    FROM [Insight.Customer] c, [Insight.Review] r, (select r.cusID, count(r.cusID) as 'Number of Reviews', ROUND(AVG(r.revStarRate),2) as 'AVG. Star Rate'
                                    FROM [Insight.Review] r
                                    GROUP BY r.cusID
                                    HAVING count(r.cusID) > 1
                                    ) avr
    WHERE c.cusID = r.cusID AND c.cusID = avr.cusID
    GROUP BY c.cusID, c.cusName, avr.[Number of Reviews], avr.[AVG. Star Rate]
GO

SELECT *
FROM [Customers with more than 1 review]
```

	cusID	cusName	Number of Reviews	AVG. Star Rate	AVG. Review Likes
1	C005	Krishna Bhavithavya Kidambi	7	4.140000	0.57
2	C108	Ronak Patel	4	4.750000	0.25
3	C174	Jasmin Hollywood	3	4.670000	0
4	C056	Brent L	2	4.000000	1
5	C081	Chris W.	2	5.000000	0.5
6	C104	Jack Bug	2	4.000000	0

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Who are the customers that leave more than one review for restaurants in College Park and what are their average star rate and review likes?

Cus ID	Cus Name	Number of Reviews	Avg. Star Rate	Avg. Review Likes
C005	Krishna Bhavithavya Kidambi	7	4.14	0.57
C108	Ronak Patel	4	4.75	0.25
C174	Jasmin Hollywood	3	4.67	0.00
C056	Brent L	2	4.00	1.00
C081	Chris W.	2	5.00	0.50
C104	Jack Bug	2	4.00	0.00

What are the reviews that come with the highest review like?

```sql
CREATE VIEW [Reviews with the highest review like ] AS
    SELECT res.resID, res.resName, T.revContent, T.revStarRate, T.revLike
    FROM (
        SELECT *,
            row_number() over(partition by T.resID order by T.revLike desc) as rn
        FROM dbo.[Insight.Review] as T
        ) T, [Insight.Restaurant] res
    WHERE T.rn = 1 and T.revLike != 0 and res.resID = T.resID
WITH CHECK OPTION
GO

SELECT *
FROM [Reviews with the highest review like]
ORDER BY revLike DESC
```

	resID	resName	revContent	revStarRate	revLike
1	R08	KOITÉ GRILL	Let me first say, that we did not visit this restaurant location. But, we stoppe...	5.0	8
2	R17	Ledo Pizza	First and foremost, this is NO longer the original Ledo(s). This is now a chai...	2.0	5
3	R11	Azteca Restaurant & Cantina	Delicious, inexpensive food! The food is great! The drinks are a little on the...	5.0	4
4	R01	Nene's Restaurant	I drove by this place several times during the pandemic in 2020 but didn't st...	5.0	3
5	R25	College Park Diner	Clean place, friendly, good food and service. You won't be disappointed.	5.0	3
6	R52	LaTao Hotpot College park	Lovely place and delicious food. Very entertaining to cook the food yoursel...	5.0	3
7	R54	Krazi Burrito	Decided to give them a try and we loved it. Staff was very friendly and wel...	4.0	3
8	R58	Paisano's	Love there food. Would eat here often before COVID-19 and teleworking. I...	5.0	3
9	R68	Noodles and Company	If you want to having dining hall food for $10, this is your place. The bad re...	1.0	3
10	R06	The Jerk Pit	There are a rack (a lot) of Jamaican culinary spots in the DC area. I've defi...	5.0	3
11	R73	sweetgreen	The audacity for this location to charge $2 to "add hot roasted sweet potat...	2.0	2
12	R55	Panda Express	Made online purchase and went to the store. It was closed an hour earlier...	1.0	2
13	R49	Mamma Lucia	Amazing Italian food if you call it what a joke I ordered veggie egg plant par...	1.0	2
14	R32	The Board and Brew	Friendly service and fun concept with the board game playing option!	4.0	2
15	R42	Looney's Pub	One of my favorite sports bars in college park. It's a college bar too so the...	5.0	2

Query executed successfully. doitsqlx.rhsmith.umd.edu,97... BUDT703_Student_253 (67) BUDT703_Project_0507_06 00:00:00 41 rows

Business Transaction in Tableau

What are the reviews that come with the highest review like?

Res ID	Res Name	Rev Content	Rev Star Rate	Rev Like
R08	KOITÉ GRILL	Let me first say, that we did not visit this restaurant location. But, we stopped by Koite Grill Stand at RFK Stadium Open Air Farmers' Market in DC and we ordered Lamb, Chicken with JOLLOF Rice, Purple Tea and a upside down Pineapple ...	5.000	8.000
R17	Ledo Pizza	First and foremost, this is NO longer the original Ledo(s). This is now a chain Ledo(s) restaurant, plain and simple. Now if that's your thing, good on you. But those of us who patronized the original and have eaten at the chains, know the ...	2.000	5.000
R11	Azteca Restaurant & Cantina	Delicious, inexpensive food! The food is great! The drinks are a little on the strong side (for me), but still good! The service here was a little slow even though there weren't many people in there, but they may have had a lot of carry out ...	5.000	4.000
R01	Nene's Restaurant	I drove by this place several times during the pandemic in 2020 but didn't stop in until 2021. Now I'm hooked...a regular, so to speak. Delicious Nigeria food cooked to perfection. I enjoyed the spicy goat meat with Jollof rice and ...	5.000	3.000
R06	The Jerk Pit	There are a rack (a lot) of Jamaican culinary spots in the DC area. I've definitely reviewed a couple of the more popular eateries in the area...except this one @jerkpit !! Located at 9078 Baltimore Ave., College Park M.D., this place can be ...	5.000	3.000
R25	College Park Diner	Clean place, friendly, good food and service. You won't be disappointed.	5.000	3.000
R52	LaTao Hotpot College park	Lovely place and delicious food. Very entertaining to cook the food yourself, mix the sauces and experiment. The staff is very friendly and quick. They also have karaoke rooms, in case you love to sing and want to spend couple of hours ...	5.000	3.000

Restaurant Name

(All) ▼

What are the restaurants with the most reviews ?

```sql
CREATE VIEW [Restaurants with highest number of reviews] AS
SELECT r.resID, r.resName, rev.[Number of Reviews]
    FROM [Insight.Restaurant] r, (select r.resID, count(r.resID) as 'Number of Reviews'
                                      FROM [Insight.Review] r
                                      GROUP BY r.resID
                                      HAVING count(r.resID) > 1
                                      ) rev
    WHERE  r.resID  = rev.resID
    GROUP BY r.resID, r.resName, rev.[Number of Reviews]
GO

SELECT *
FROM [Restaurants with highest number of reviews]
Order by [Number of Reviews] DESC
```

	resID	resName	Number of Reviews
1	R06	The Jerk Pit	6
2	R07	Blaze Pizza	6
3	R14	Pho D'Lite	6
4	R19	Milk & Honey - College Park, MD	6
5	R25	College Park Diner	6
6	R27	NuVegan Cafe - College Park	6
7	R28	Northwest Chinese Food	6
8	R29	Marathon Deli	6
9	R32	The Board and Brew	6
10	R40	QU JAPAN	6
11	R42	Looney's Pub	6
12	R44	Taqueria Habanero	6
13	R63	Aroy Thai Restaurant	6
14	R72	Pizza Roma	6
15	R77	Kangnam BBQ	6

✅ Query executed successfully.

Thanks!