The Terrapin Cuisine Crew

Restaurant Reviews In College Park

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Background

Users

- Customers who chose to place a review for one of our selected College Park MD restaurants

Data

- Restaurant, Reviewer, Cuisine, Features
- From Yelp, Google, and Tripadvisor

Mission Statements

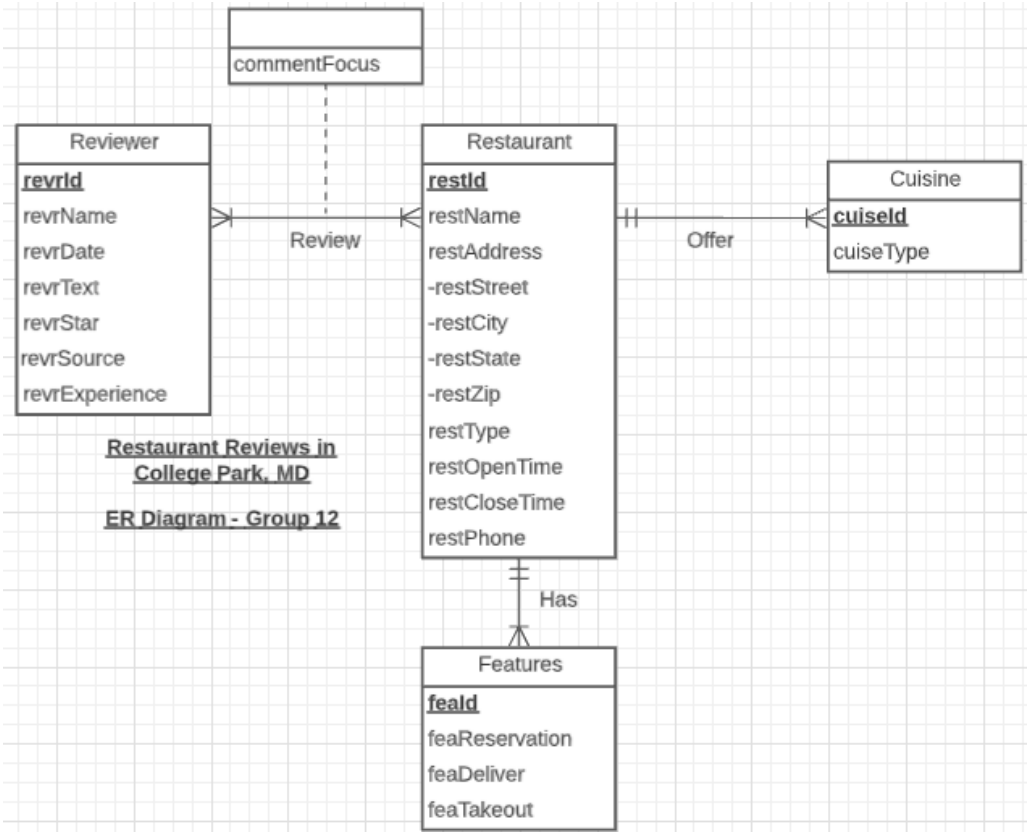
- To analyze online reviews of restaurants in College Park, MD in order to gain insights on restaurant ratings and customers

- To collect, sort, and analyze the comment focuses of online restaurant reviews in order to assist database users in ordering from College Park, MD owned restaurants based on different dimensions

Mission Objectives

- To find the positive feedback rate of each restaurant in 2021 (4-5)
- To find the restaurant that offers the most features in College Park, MD
- To find the average rating of each restaurant
- To find which aspects of each restaurant are rated positively and negatively

ER Diagram - LucidChart



Logical Database Design: Relational Schema

Relations:

Restaurant (**restId**, restName, restStreet, restCity, restState, restZip, restOpenTime, restCloseTime, restPhone)

Reviewer (**revrId**, revrName, revrDate, revrText, revrStar, revrSource, revrExperience, *restId*)

Cuisine (**cuisId**, cuisType, *restId*)

Features(**FeaId**, FeaReservation, FeaDeliver, FeaTakeOut, *restId*)

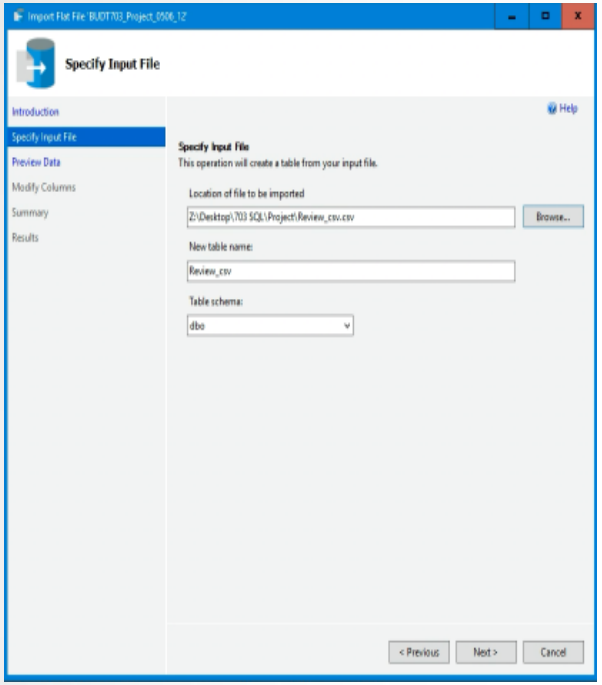
Review (***restId*, *revrId***, commentFocus)

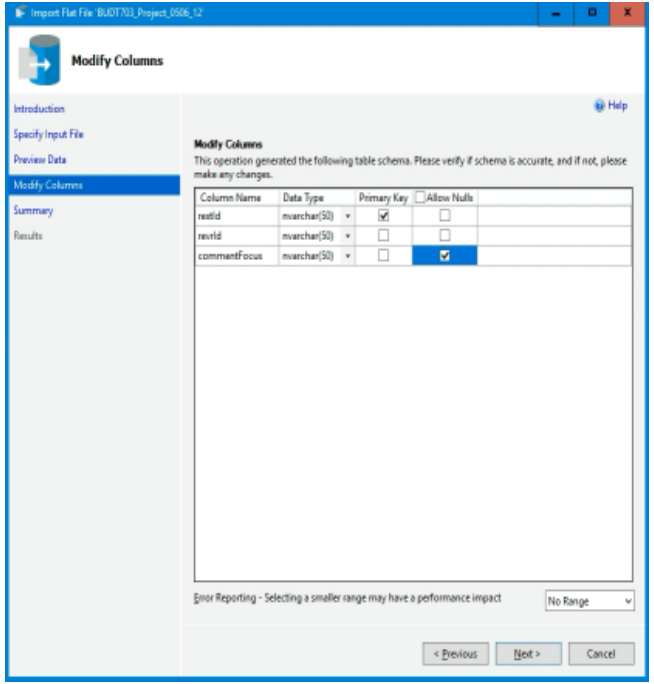
Create Table

```
CREATE TABLE [G12.Cuisine] (
            cuisId CHAR(4),
            cuisType VARCHAR(20),
            restId CHAR(10),
            CONSTRAINT pk_Cuisine_cuisId PRIMARY KEY (cuisId),
            CONSTRAINT fk_Cuisine_restId FOREIGN KEY (restId)
                        REFERENCES [G12.Restaurant](restId)
                        ON DELETE CASCADE ON UPDATE CASCADE)
```

	cuisId	cuisType	restId
1	C001	American	R100000
2	C002	Chinese	R100001
3	C003	Ramen	R100002
4	C004	Vegetarian	R100003
5	C005	Indian & Mexican	R100004
6	C006	Brunch	R100005
7	C007	Brunch	R100006
8	C008	Diners	R100007
9	C009	Greek	R100008
10	C010	Brunch	R100009
11	C011	Fastfood	R100010
12	C012	Brunch	R100012
13	C013	Sandwich	R100011

Import CSV file





Change the data type and add the foreign key

```
ALTER TABLE [G12.Reviewer]
ALTER COLUMN revrId CHAR(10) NOT NULL;
ALTER TABLE [G12.Reviewer]
ALTER COLUMN revrName VARCHAR(50);
ALTER TABLE [G12.Reviewer]
ALTER COLUMN revrDate DATE;
ALTER TABLE [G12.Reviewer]
ALTER COLUMN revrText VARCHAR(8000);
ALTER TABLE [G12.Reviewer]
ALTER COLUMN revrStar integer;
ALTER TABLE [G12.Reviewer]
ALTER COLUMN revrSource VARCHAR(20);
ALTER TABLE [G12.Reviewer]
ALTER COLUMN revrExperience_Positive_or_Negative CHAR(2);
ALTER TABLE [G12.Reviewer]
ALTER COLUMN restId CHAR(10);

ALTER TABLE [G12.Reviewer] ADD FOREIGN KEY (restId) REFERENCES [G12.restaurant](restId)
```

CASE 1: Business Transaction & Application

CASE 1: How many negative/positive reviews each restaurant received? And what about their rate?

```
GO
CREATE VIEW V2
AS
SELECT t1.restName, q1.cn 'Total reviews', q1.neg 'Number of Negative',ROUND
  (CAST(q1.neg AS FLOAT)/q1.cn,2) 'Negative Rate', q1.pos 'Number of Positive',
  ROUND(CAST(q1.neg AS FLOAT)/q1.cn ,2) 'Positive Rate'
FROM [G12.Restaurant] t1,(
    SELECT r3.restId, COUNT(r3.revrId) 'cn', q.ne 'neg',q.po 'pos'
    FROM [G12.Reviewer] r3, (
        SELECT r2.restId, COUNT(revrExperience_Positive_or_Negative ) ne, p.po
        FROM [G12.Reviewer] r2, (
                SELECT r1.restId, COUNT(revrExperience_Positive_or_Negative ) po
                        FROM [G12.Reviewer] r1
                        WHERE revrExperience_Positive_or_Negative = 'P'
                        GROUP BY r1.restId ) p
        WHERE r2.restId = p.restId
        GROUP BY r2.restId, revrExperience_Positive_or_Negative , p.po
        HAVING revrExperience_Positive_or_Negative = 'N') q
    WHERE r3.restId = q.restId
    GROUP BY r3.restId, q.ne,q.po) q1
WHERE t1.restId = q1.restId
GROUP BY t1.restName, q1.cn,q1.neg,q1.pos
```

CASE 1: Business Transaction & Application (Cont)

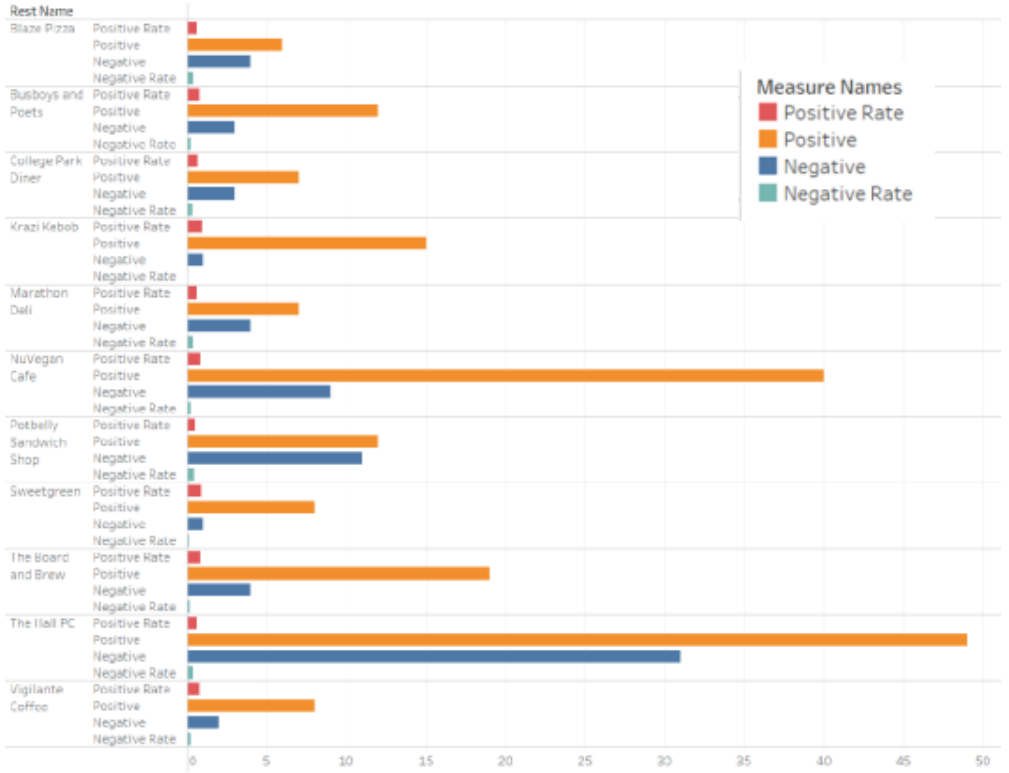
CASE 1: How many negative/positive reviews each restaurant received? And what about their rate?

Top 3:

Krazi Kebob (93.79%)
Sweetgreen (88.89%)
The Board and Brew (82.61%)

Results | Messages

	restName	Total reviews	Number of Negative	Negative Rate	Number of Positive	Positive Rate
1	Blaze Pizza	10	4	0.4	6	0.6
2	Busboys and Poets	15	3	0.2	12	0.8
3	College Park Diner	10	3	0.3	7	0.7
4	Krazi Kebob	16	1	0.06	15	0.94
5	Marathon Deli	11	4	0.36	7	0.64
6	NuVegan Cafe	49	9	0.18	40	0.82
7	Potbelly Sandwich Shop	23	11	0.48	12	0.52
8	Sweetgreen	9	1	0.11	8	0.89
9	The Board and Brew	23	4	0.17	19	0.83
10	The Hall PC	80	31	0.39	49	0.61
11	Vigilante Coffee	10	2	0.2	8	0.8



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CASE 2: Business Transaction & Application

What is the distribution of reviews which higher than 4 stars for each restaurants ?

The distribution is categorized within ‘environment/ food/ service’

```
GO
CREATE VIEW V5
AS
SELECT g.restName, g.restId,ISNULL(sef.environment, 0) 'environment', ISNULL
  (sef.food,0) 'food', ISNULL(sef.service,0) 'service'
FROM [G12.Restaurant] g, (
    SELECT ISNULL(f1.restId, se.restId) 'restId', f1.food, se.environment,
      se.service
    FROM (
        SELECT i.restId , COUNT(f.commentFocus) 'food'
                FROM [G12.Restaurant] i, focus f
                WHERE I.restId =f.restId
                GROUP BY i.restId, f.commentFocus
                HAVING f.commentFocus ='FOOD') f1
        FULL JOIN (
            SELECT s.restId, s.service, e.environment
            FROM (
                SELECT i.restId , COUNT(f.commentFocus) 'service'
                FROM [G12.Restaurant] i, focus f
                WHERE I.restId =f.restId
                GROUP BY i.restId, f.commentFocus
                HAVING f.commentFocus ='SERVICE') s
            FULL OUTER JOIN (
                SELECT i.restId , COUNT(f.commentFocus) 'environment'
                FROM [G12.Restaurant] i, focus f
                WHERE I.restId =f.restId
                GROUP BY i.restId, f.commentFocus
                HAVING f.commentFocus ='ENVIRONMENT') e
            ON s.restId=e.restId) se
        ON se.restId = f1.restId) sef
WHERE g.restId=sef.restId
```

```
GO
CREATE VIEW
focus
AS
    SELECT y1.restId,v.commentFocus,Y1.revrId
        FROM [G12.Review] v ,(
            SELECT e.restId, e.revrId
            FROM [G12.Reviewer] e
            WHERE e.revrStar >3
            GROUP BY e.restId, e.revrId) y1
        WHERE y1.revrId =v.revrId
```

CASE 2: Business Transaction & Application（Cont ）

What is the relative distribution of reviews which higher than 4 stars for each restaurants ?
The distribution is categorized within ‘environment/ food/ service’

	restName	restId	environment	food	service
1	Blaze Pizza	R100010	0	5	1
2	Busboys and Poets	R100012	5	4	3
3	College Park Diner	R100007	0	4	0
4	Krazi Kebob	R100004	0	13	0
5	Marathon Deli	R100008	0	5	2
6	Northwest Chinese Food	R100001	0	7	0
7	NuVegan Cafe	R100009	7	31	2
8	Potbelly Sandwich Shop	R100011	0	7	3
9	QU JAPAN	R100002	3	6	1
10	Sweetgreen	R100003	0	7	1
11	The Board and Brew	R100005	6	7	6
12	The Hall PC	R100000	5	31	13
13	Vigilante Coffee	R100006	3	4	1

	Comment Focus		
Rest Name	ENVIRONMENT	FOOD	SERVICE
Blaze Pizza		5	1
Busboys and Poets	5	4	3
College Park Diner	3	4	
Krazi Kebob	2	13	
Marathon Deli		5	2
Northwest Chinese ..		7	
NuVegan Cafe	7	31	2
Potbelly Sandwich S..		7	3
QU JAPAN	3	6	1
Sweetgreen		7	1
The Board and Brew	6	7	6
The Hall PC	5	31	13
Vigilante Coffee	3	4	1

Thank you!
Questions?