

DATA ANALYSIS FOR ONLINE FOOD DELIVERY APPLICATION USING SQL

Dataset: Jomato

Dataset: Jomato About the dataset: You work for a data analytics company, and your client is a food delivery platform similar to Jomato. They have provided you with a dataset containing information about various restaurants in a city. Your task is to analyze this dataset using SQL queries to extract valuable insights and generate reports for your client.

Tasks to be performed

- 1. Create a user-defined functions to stuff the Chicken into ‘Quick Bites.’ E.g.: ‘Quick Chicken Bites.’**

Query - Create Function QuickBites(@Stuffing Varchar(100))

Returns Varchar(180) as begin declare @Dish Varchar(180) Set @Dish = 'Quick' + @Stuffing + 'Bites' Return @Dish End

Go

The screenshot shows the SSMS interface. The Object Explorer on the left lists databases like AdventureWorks2012, Class_practice, EmployeeDB, SQL_MandatoryAssignment_2, and SQLMandatoryAssignment1. The main window displays a T-SQL script for creating a function named QuickBites. The script defines a function that takes a parameter @Stuffing of type Varchar(100), returns a Varchar(150) value, and concatenates 'Quick' with the input and 'Bites'. The execution message indicates the command completed successfully.

```
Create Function QuickBites(@Stuffing Varchar(100))
Returns Varchar(150)
as
begin
declare @Dish Varchar(180)
Set @Dish = 'Quick' + @Stuffing + 'Bites'
Return @Dish
End
Go
```

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Messages

Commands completed successfully.

Completion time: 2024-10-10T11:49:12.7466665-05:00

Query To check

```
SELECT dbo.QuickBites('Chicken')
```

```
SELECT dbo.QuickBites('Paneer')
```

The screenshot shows the SQL Server Management Studio interface. On the left, the Object Explorer pane displays a tree view of databases, including PRITU-THAKUR\SQLEXPRESS2019 (SQL Server), Databases, System Databases, Database Snapshots, AdventureWorks2012, Class_practice, EmployeeDB, and SQL_MandatoryAssignment_2. Under SQL_MandatoryAssignment_2, there are Database Diagrams, Tables, Views, External Resources, Synonyms, Programmability, Stored Procedures, Functions, Table-valued Functions, Scalar-valued Function, dbo.QuickBites, Aggregate Functions, System Functions, Database Triggers, and Assemblies. The Functions node is expanded, and dbo.QuickBites is selected. On the right, the SQL Query window titled 'SQLQuery2.sql - PR...THAKUR\pritu (71)*' contains the following SQL code:

```
SELECT dbo.QuickBites('Chicken')
SELECT dbo.QuickBites('Paneer')
```

The results pane shows two rows of output:

	Results
1	(No column name) QuickChickenBites
1	(No column name) QuickPaneerBites

The first row ('QuickChickenBites') is highlighted with a green oval, and the second row ('QuickPaneerBites') is also highlighted with a green oval.

2. Use the function to display the restaurant name and cuisine type which has the maximum number of Rating.

Query: 1st Method when using **No_of_Rating** column for making the function from table.

```
CREATE FUNCTION MaxNo_of_Rating()
RETURNS TABLE
AS
RETURN
(
    SELECT TOP 50
        RestaurantName,
        CuisinesType,
        No_of_Rating
    FROM
        Jomato
    ORDER BY
        No_of_Rating DESC
)
```

```
Select * from MaxNo_of_Rating()
```

```

-----Use the function to display the restaurant name and cuisin
CREATE FUNCTION MaxNo_of_Rating()
RETURNS TABLE
AS
RETURN
(
    SELECT TOP 50
        RestaurantName,
        CuisinesType,
        No_of_Rating
    FROM
        Jomato
    ORDER BY
        No_of_Rating DESC
)

Select * from MaxNo_of_Rating()

```

	RestaurantName	CuisinesType	No_of_Rating
1	Byg Brewski Brewing Company	Continental, North Indian, Italian, South Indian, Fin...	16345
2	Toit	Italian, American, Pizza	14956
3	The Black Pearl	North Indian, European, Mediterranean	10413
4	Big Pitcher	American, Continental, North Indian, Mediterranean	9272
5	Arbor Brewing Company	American, Continental, Salad	8375
6	Prost Brew Pub	American, Continental, North Indian, Salad	7854
7	Church Street Social	American, North Indian, Chinese, Finger Food, Mo...	7544
8	Hoot	Continental, Italian, North Indian	7193
9	Flechazo	Asian, Mediterranean, North Indian, BBQ	7154
10	The Hole in the Wall Cafe	Cafe, American, Burger	7113
11	Vapour Pub & Brewery	North Indian, Continental, Chinese	6907
12	Biergarten	Continental, European, BBQ, Chinese, Asian	6865
13	TBC Sky Lounge	Continental, Asian, Italian, North Indian	6745
14	Fenny's Lounge And Kitchen	Mediterranean, Pizza, Continental, Seafood, Salad	6348
15	Brew and Barbeque - A Micro...	Continental, North Indian, BBQ, Steak	5894
16	Windmills Craftworks	American, North Indian, Salad	5890
17	Hard Rock Cafe	American, RRQ	5262

Query: 2nd Method – when No_of Rating Column is not used, but just Ratings are used to create the function.

Create function Maximum_rating()

returns table

return

Select RestaurantName,CuisinesType,Rating from Jomato
where Rating = (Select MAX(Rating) from Jomato)

Select * from dbo.Maximum_rating()

```

Create function Maximum_rating()
returns table
return
    Select RestaurantName,CuisinesType,Rating from Jomato
    where Rating = (Select MAX(Rating) from Jomato)

Select * from dbo.Maximum_rating()

```

The screenshot shows a SQL query window in SSMS. The code creates a function named Maximum_rating() that returns a table with columns RestaurantName, CuisinesType, and Rating. It selects data from the Jomato table where the rating is equal to the maximum rating in the table. A select statement is also shown to demonstrate the function's output.

	RestaurantName	CuisinesType	Rating
1	Asia Kitchen By Mainland China	Asian, Chinese, Thai, Momos	4.90000009536743
2	Byg Brewski Brewing Company	Continental, North Indian, Italian, South India...	4.90000009536743
3	Sant??de??ed??ede??d??ede?ed??de??d??ede?ed??ede?...	Healthy Food, Salad, Mediterranean	4.90000009536743

3.Create a Rating Status column to display the rating as 'Excellent' if it has more than 4 star rating, 'Good' if it has above 3.5 and below 5 star (writing query assuming this to be 4)rating, 'Average' if it is above 3 and below 3.5 and 'Bad' if it is below 3 star rating.

Query: SELECT

```

RestaurantName,CuisinesType,Rating,
CASE
    WHEN Rating > 4 THEN 'Excellent'
    WHEN Rating > 3.5 AND Rating <= 4 THEN 'Good'
    WHEN Rating > 3 AND Rating <= 3.5 THEN 'Average'
    WHEN Rating < 3 THEN 'Bad'
END AS Rating_Status
FROM [dbo].[Jomato]

```

SQLQuery1.sql - PR...THAKUR\pritu (60)*

```

SELECT
    RestaurantName, CuisinesType, Rating,
    CASE
        WHEN Rating > 4 THEN 'Excellent'
        WHEN Rating > 3.5 AND Rating <= 4 THEN 'Good'
        WHEN Rating > 3 AND Rating <= 3.5 THEN 'Average'
        WHEN Rating < 3 THEN 'Bad'
    END AS Rating_Status
FROM
    [dbo].[Jomato]

```

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	RestaurantName	CuisinesType	Rating	Rating_Status
1	L-81 Cafe	Fast Food, Beverages	3.90000009536743	Good
2	refuel	Cafe, Beverages	3.70000004768372	Good
3	Biryani Central	Biryani, Mughlai, Chinese	2.70000004768372	Bad
4	The Bbq	BBQ, Continental, North Indian, Chinese, Beverages	2.79999995231628	Bad
5	The Bbq	Mughlai, Biryani, Chinese, North Indian	3.40000009536743	Average
6	Italy	Italian	4.09999990463257	Excellent
7	North Parontha Hut	North Indian	2.79999995231628	Bad
8	1000 B.C	Arabian, Sandwich, Rolls, Burger	3.20000004768372	Average
9	1Q1	Biryani, North Indian	3.70000004768372	Good
10	11 to 11 Express Biryani	Biryani, Kebab	3.5	Average
11	1131 Bar + Kitchen	Continental, Asian, Italian, North Indian	4.40000009536743	Excellent
12	12th Main - Grand Mercure	European, Asian	4.09999990463257	Excellent
13	1441 Pizzeria	Pizza, Salad	4.09999990463257	Excellent
14	1522 - The Pub	Chinese, Continental, North Indian	4.19999980926514	Excellent
15	154 Breakfast Club	Cafe, Continental	4	Good
16	1722 Urban Bistro	North Indian, Chinese, Fast Food, Biryani	4.09999990463257	Excellent
17	18+ Ice Cafe	Cafe, Fast Food, Chinese, Beverages	3.5	Average

4. Find the Ceil, floor and absolute values of the rating column and display the current date and separately display the year, month name and day.

Query: SELECT

```

RestaurantName, Rating,
CEILING(Rating) AS Rating_Ceil,
FLOOR(Rating) AS Rating_Floor,

```

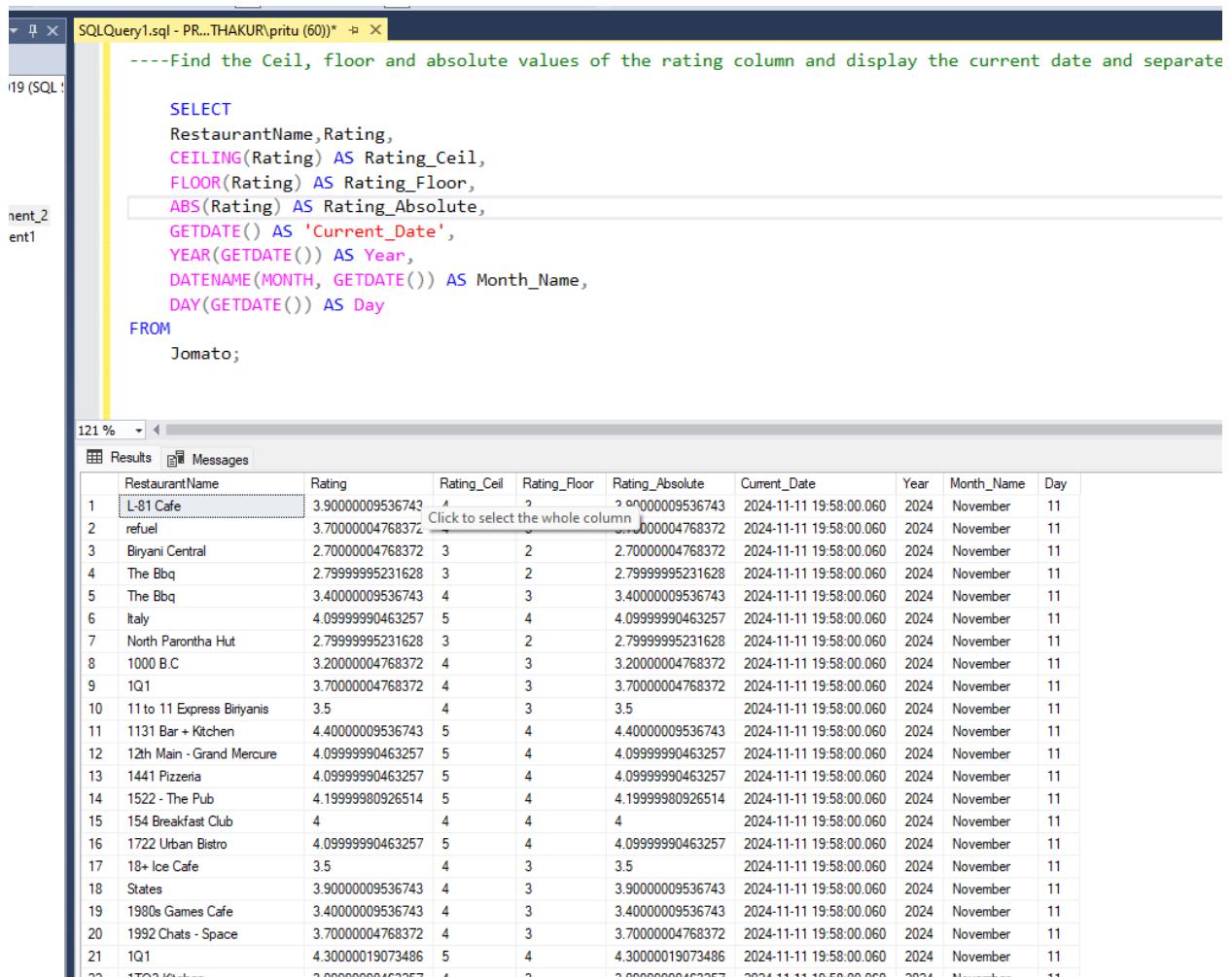
```

ABS(Rating) AS Rating_Absolute,
GETDATE() AS 'Current_Date',
YEAR(GETDATE()) AS Year,
DATENAME(MONTH, GETDATE()) AS Month_Name,
DAY(GETDATE()) AS Day

```

FROM

Jomato;



The screenshot shows a SQL Server Management Studio window with a query editor and a results grid.

Query Editor:

```

----Find the Ceil, floor and absolute values of the rating column and display the current date and separate
SELECT
    RestaurantName, Rating,
    CEILING(Rating) AS Rating_Ceil,
    FLOOR(Rating) AS Rating_Floor,
    ABS(Rating) AS Rating_Absolute,
    GETDATE() AS 'Current_Date',
    YEAR(GETDATE()) AS Year,
    DATENAME(MONTH, GETDATE()) AS Month_Name,
    DAY(GETDATE()) AS Day
FROM
    Jomato;

```

Results Grid:

	RestaurantName	Rating	Rating_Ceil	Rating_Floor	Rating_Absolute	Current_Date	Year	Month_Name	Day
1	L-81 Cafe	3.90000009536743	4	2	3.90000009536743	2024-11-11 19:58:00.060	2024	November	11
2	refuel	3.70000004768372	3	2	3.70000004768372	2024-11-11 19:58:00.060	2024	November	11
3	Biryani Central	2.70000004768372	3	2	2.70000004768372	2024-11-11 19:58:00.060	2024	November	11
4	The Bbq	2.7999995231628	3	2	2.7999995231628	2024-11-11 19:58:00.060	2024	November	11
5	The Bbq	3.40000009536743	4	3	3.40000009536743	2024-11-11 19:58:00.060	2024	November	11
6	Italy	4.09999990463257	5	4	4.09999990463257	2024-11-11 19:58:00.060	2024	November	11
7	North Parontha Hut	2.7999995231628	3	2	2.7999995231628	2024-11-11 19:58:00.060	2024	November	11
8	1000 B.C	3.20000004768372	4	3	3.20000004768372	2024-11-11 19:58:00.060	2024	November	11
9	IQ1	3.70000004768372	4	3	3.70000004768372	2024-11-11 19:58:00.060	2024	November	11
10	11 to 11 Express Biryani	3.5	4	3	3.5	2024-11-11 19:58:00.060	2024	November	11
11	1131 Bar + Kitchen	4.40000009536743	5	4	4.40000009536743	2024-11-11 19:58:00.060	2024	November	11
12	12th Main - Grand Mercure	4.09999990463257	5	4	4.09999990463257	2024-11-11 19:58:00.060	2024	November	11
13	1441 Pizzeria	4.09999990463257	5	4	4.09999990463257	2024-11-11 19:58:00.060	2024	November	11
14	1522 - The Pub	4.19999980926514	5	4	4.19999980926514	2024-11-11 19:58:00.060	2024	November	11
15	154 Breakfast Club	4	4	4	4	2024-11-11 19:58:00.060	2024	November	11
16	1722 Urban Bistro	4.09999990463257	5	4	4.09999990463257	2024-11-11 19:58:00.060	2024	November	11
17	18+ Ice Cafe	3.5	4	3	3.5	2024-11-11 19:58:00.060	2024	November	11
18	States	3.90000009536743	4	3	3.90000009536743	2024-11-11 19:58:00.060	2024	November	11
19	1980s Games Cafe	3.40000009536743	4	3	3.40000009536743	2024-11-11 19:58:00.060	2024	November	11
20	1992 Chats - Space	3.70000004768372	4	3	3.70000004768372	2024-11-11 19:58:00.060	2024	November	11
21	IQ1	4.30000019073486	5	4	4.30000019073486	2024-11-11 19:58:00.060	2024	November	11
22	1700 Kitchens	3.00000004768372	4	3	3.00000004768372	2024-11-11 19:58:00.060	2024	November	11

5. Display the restaurant type and total average cost using rollup.

Query: SELECT RestaurantType,
SUM(AverageCost) AS TotAvgCost
FROM Jomato
GROUP BY
ROLLUP(RestaurantType)

```
-----Display the restaurant type and total average cost using rollup-----
SELECT RestaurantType,
SUM(AverageCost) AS TotAvgCost
FROM Jomato
GROUP BY
ROLLUP(RestaurantType)
```

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	RestaurantType	TotAvgCost
1	Bakery	53770
2	Bakery, Beverage Shop	250
3	Bakery, Cafe	4100
4	Bakery, Dessert Parlor	5200
5	Bakery, Quick Bites	6300
6	Bar	104400
7	Bar, Casual Dining	71750
8	Bar, Lounge	4900
9	Bar, Pub	850
10	Beverage Shop	24350
11	Beverage Shop, Cafe	500
12	Beverage Shop, Dessert Parlor	2050
13	Beverage Shop, Quick Bites	6700
14	Bhojanalya	300
15	Cafe	234150
16	Cafe, Bakery	6500
17	Cafe, Bar	1200
18	Cafe, Casual Dining	15500
19	Cafe, Dessert Parlor	10200
20	Cafe, Lounge	1000
21	Cafe, Quick Bites	4950
22	Casual Dining	1220950
23	Casual Dining, Bar	138650
24	Casual Dining, Cafe	26500
25	Casual Dining, Irani Cafee	1300