By Kareem Shaaban

SQL

ASSIGNMENT NUM.4 WITH TDI

Text Functions

In this assignment, you will delve into the crucial concepts of SQL text functions, which are essential for manipulating and formatting text data within your databases. Understanding how to use these functions will allow you to transform and analyze text data more effectively. This week, you will be using a sales dataset to practice applying various text functions in SQL. You will also combine these functions with aggregate functions, GROUP BY, ORDERBY, and WHEREclauses to extract meaningful insights from your data

1 **Convert all customer names to lowercase and display the result, ordering by the lowercase customer name**

Query

```
SELECT
    DISTINCT(LOWER(Customer_Name)) AS NAME
FROM SALES
ORDER BY NAME;
```

Output

MS SQL server view

2 **Convert all customer names to uppercase and display the total sales foreach customer, grouped by the uppercase name**

Query

```
SELECT
    UPPER(Customer_Name) AS NAME,
    ROUND(SUM(Sales),2) AS TotalSales
FROM SALES
GROUP BY UPPER(Customer_Name);
```

Output

Results | Messages

	NAME	TotalSales
1	MICHAEL CHEN	3805.71
2	BRIAN MOSS	7294.19
3	TAMARA CHAND	19052.22
4	JUSTIN MACKENDRICK	2833.93
5	DOUG BICKFORD	1989.05
6	JESUS OCAMPO	1090.84
7	SHERI GORDON	1884.80
8	JOHN HUSTON	528.91
9	SEAN MILLER	25043.05
10	LIZ CARLISLE	2095.06
11	BENJAMIN PATTERSON	1181.49
12	SHAHID HOPKINS	2180.72
13	TRACY COLLINS	742.56
14	EUGENE MOREN	4588.44
15	ALICE MCCARTHY	814.01
16	NATALIE FRITZLER	8322.83
17	ARTHUR PRICHER	3223.56

Query executed successfully.

MS SQL server view

3 **Concatenate the customer name and city with a comma and space between them,and order the results by the combined string**

Query

```
SELECT
    DISTINCT(CONCAT(Customer_Name,' , ',City)) AS "NAME , CITY"
FROM SALES
ORDER BY "NAME , CITY";
```

Output

Results | Messages

	NAME , CITY
1	Aaron Bergman , Arlington
2	Aaron Bergman , Oklahoma City
3	Aaron Bergman , Seattle
4	Aaron Hawkins , Gulfport
5	Aaron Hawkins , Los Angeles
6	Aaron Hawkins , New York City
7	Aaron Hawkins , Philadelphia
8	Aaron Hawkins , San Francisco
9	Aaron Hawkins , Troy
10	Aaron Smayling , Arlington
11	Aaron Smayling , Austin
12	Aaron Smayling , Jacksonville
13	Aaron Smayling , New York City
14	Aaron Smayling , Pasadena
15	Aaron Smayling , Redmond
16	Aaron Smayling , San Francisco

Query executed successfully.

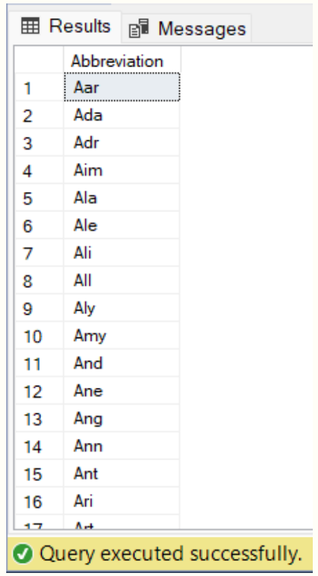
MS SQL server view

4 **Extract the first three characters of the customer names and display the result, ordering by the substring**

Query

```
SELECT
    DISTINCT(SUBSTRING(Customer_Name,1,3)) AS Abbreviation
FROM SALES
ORDER BY Abbreviation;
```

Output



MS SQL server view

5

Get the first character of the customer names COMBINED WITH LAST NAME and calculate the total salesfor these grouped names

Query

```
SELECT
    CONCAT(SUBSTRING(Customer_Name,1,1),'.',SUBSTRING(Customer_Name,CHARINDEX(' ',Customer_Name)+1,LEN(Customer_Name))) AS NAME,
    ROUND(SUM(Sales),2) AS TotalSales
FROM SALES
GROUP BY CONCAT(SUBSTRING(Customer_Name,1,1),'.',SUBSTRING(Customer_Name,CHARINDEX(' ',Customer_Name)+1,LEN(Customer_Name)))
ORDER BY TotalSales DESC;
```

Output

Results | Messages

	NAME	TotalSales
1	S.Miller	25043.05
2	T.Chand	19052.22
3	R.Buch	15117.34
4	T.Ashbrook	14595.62
5	A.Barton	14473.57
6	K.Lonsdale	14175.23
7	S.Chand	14142.33
8	H.Lopez	12873.30
9	S.Engle	12209.44
10	C.Conant	12129.07
11	J.Lee	12003.62
12	T.Sumrall	11891.75
13	G.Tran	11820.12
14	B.Martin	11789.63
15	S.Vernon	11470.95
16	C.Jumper	11164.97
17	C.Ludtke	10880.55

Query executed successfully.

MS SQL server view

6 Get the last three characters of the customer names and display the result, ordering by the last three characters

Query

```
SELECT
    DISTINCT(SUBSTRING(Customer_Name,LEN(Customer_Name)-2, LEN(Customer_Name))) AS Last3Characters
FROM SALES
ORDER BY Last3Characters;
```

Output

MS SQL server view

7 **Replace all spaces in customer names with underscores and calculate the total quantity of items ordered by each modified name**

Query

```
SELECT
    REPLACE(Customer_Name,' ','_') AS NAME,
    SUM(CONVERT(INT, Quantity)) AS TotalQuantity
FROM SALES
GROUP BY REPLACE(Customer_Name,' ','_')
ORDER BY NAME;
```

Output

Results | Messages

	NAME	TotalQuantity
1	Aaron_Bergman	13
2	Aaron_Hawkins	54
3	Aaron_Smayling	48
4	Adam_Bellavance	56
5	Adam_Hart	75
6	Adam_Shillingsburg	81
7	Adrian_Barton	73
8	Adrian_Hane	65
9	Adrian_Shami	9
10	Aimee_Bixby	37
11	Alan_Barnes	48
12	Alan_Dominguez	40
13	Alan_Haines	28
14	Alan_Hwang	53
15	Alan_Schoenberger	41
16	Alan_Shonely	39

Query executed successfully.

MS SQL server view

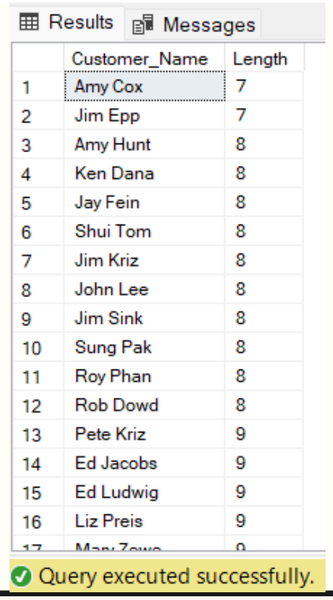
8 **Find the length of each customer name and display the result, ordering by the length**

Query

```
SELECT
    DISTINCT(Customer_Name),
    LEN(Customer_Name) AS Length
FROM SALES
ORDER BY Length;
```

Output

MS SQL server view



	Customer_Name	Length
1	Amy Cox	7
2	Jim Epp	7
3	Amy Hunt	8
4	Ken Dana	8
5	Jay Fein	8
6	Shui Tom	8
7	Jim Kriz	8
8	John Lee	8
9	Jim Sink	8
10	Sung Pak	8
11	Roy Phan	8
12	Rob Dowd	8
13	Pete Kriz	9
14	Ed Jacobs	9
15	Ed Ludwig	9
16	Liz Preis	9

9 **Remove leading and trailing spaces from customer names (if any) and display the result, ordering by the trimmed names**

Query

```
SELECT DISTINCT(TRIM(Customer_Name)) AS NAME
FROM SALES
ORDER BY NAME;
```

Output

Results | Messages

	NAME
1	Aaron Bergman
2	Aaron Hawkins
3	Aaron Smayling
4	Adam Bellavance
5	Adam Hart
6	Adam Shillingsburg
7	Adrian Barton
8	Adrian Hane
9	Adrian Shami
10	Aimee Bixby
11	Alan Barnes
12	Alan Dominguez
13	Alan Haines
14	Alan Hwang
15	Alan Schoenberger
16	Alan Shonely
17	Alejandro Ballentine

Query executed successfully.

MS SQL server view

10 **Remove leading spaces from customer names and display the result where the customer name starts with 'A', ordering by the trimmed names**

Query

```
SELECT
    DISTINCT(LTRIM(Customer_Name)) AS "LEADING"
FROM SALES
WHERE
    LTRIM(Customer_Name) LIKE 'A%'
ORDER BY "LEADING";
```

Output

MS SQL server view

11 **Remove trailing spaces from customer names and display the result where the length of the customer name is greater than 10, ordering by the trimmed names**

Query

```
SELECT
    DISTINCT(RTRIM(Customer_Name)) AS "TRAILING"
FROM SALES
WHERE
    LEN(RTRIM(Customer_Name)) = 10
ORDER BY "TRAILING"
```

Output

Results | Messages

	TRAILING
1	Alan Hwang
2	Alex Avila
3	Andy Yotov
4	Ann Steele
5	Anna Chung
6	Anne Pryor
7	Art Foster
8	Barry Pond
9	Ben Ferrer
10	Beth Paige
11	Bill Tyler
12	Brad Eason
13	Brian Derr
14	Brian Moss
15	Bruce Geld
16	Cari Sayre
17	Carl Weiss

Query executed successfully.

MS SQL server view

12 **Display customer names, replacing NULL values with 'Unknown', TotalPurchase and order by TotalPurchase**

Query

```
SELECT
    CASE WHEN Customer_Name IS NULL THEN 'Unknown'
    ELSE Customer_Name END AS "NAME",
    COUNT(*) AS TotalPurchase
FROM SALES
GROUP BY
    CASE WHEN Customer_Name IS NULL THEN 'Unknown'
    ELSE Customer_Name END
ORDER BY TotalPurchase DESC;
```

Output

MS SQL server view

Results | Messages

	NAME	TotalPurchase
1	William Brown	37
2	Paul Prost	34
3	John Lee	34
4	Matt Abelman	34
5	Chloris Kastensmidt	32
6	Seth Vernon	32
7	Edward Hooks	32
8	Jonathan Doherty	32
9	Emily Phan	31
10	Zuschuss Carroll	31
11	Arthur Prichep	31
12	Lena Cacioppo	30
13	Dean percer	29
14	Brian Moss	29
15	Greg Tran	29
16	Ken Lonsdale	29

Query executed successfully.

DONE :)

Presented By Kareem Shaaban