

SQL Server Tutorial

Part 114 - Lead and Lag functions in SQL Server 2012

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In this session we will learn

- Lead and Lag functions in SQL Server 2012

Link to Dot Net Basics, ASP.NET, C#, ADO.NET and SQL Server video series

<http://www.youtube.com/user/kudvenkat/playlists>

Suggested Videos

Part 111 - Difference between rank dense_rank and row_number in SQL

Part 112 - Calculate running total in SQL Server 2012

Part 113 - NTILE function in SQL Server

Lead & Lag functions in SQL Server

If you are in need of the DVD with all the videos and PPT's, please visit

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Lead and Lag functions

- Introduced in SQL Server 2012
- Lead function is used to access subsequent row data along with current row data
- Lag function is used to access previous row data along with current row data
- ORDER BY clause is required
- PARTITION BY clause is optional

Syntax:


```
LEAD(Column_Name, Offset, Default_Value) OVER (ORDER BY Col1, Col2, ...)  
LAG (Column_Name, Offset, Default_Value) OVER (ORDER BY Col1, Col2, ...)
```

Offset	Number of rows to lead or lag
Default_Value	The default value to return if the number of rows to lead or lag goes beyond first row or last row in a table or partition. If default value is not specified NULL is returned.

Lead & Lag functions in SQL Server

Lead and Lag functions example WITHOUT partitions : This example Leads 2 rows and Lags 1 row from the current row

```
SELECT Name, Gender, Salary,  
       LEAD(Salary, 2, -1) OVER (ORDER BY Salary) AS Lead_2,  
       LAG(Salary, 1, -1) OVER (ORDER BY Salary) AS Lag_1  
FROM Employees
```

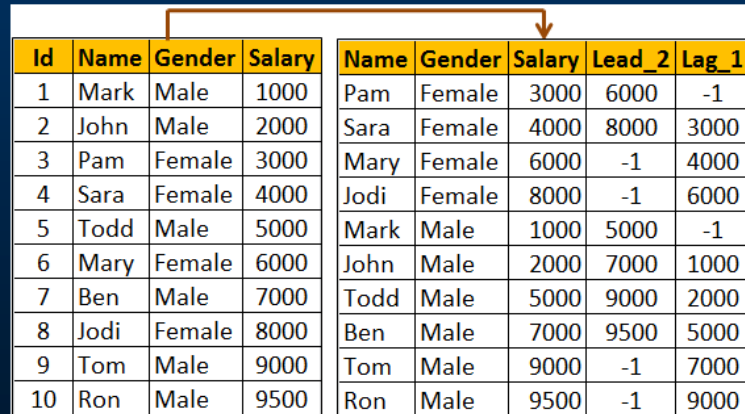


Id	Name	Gender	Salary	Name	Gender	Salary	Lead_2	Lag_1
1	Mark	Male	1000	Mark	Male	1000	3000	-1
2	John	Male	2000	John	Male	2000	4000	1000
3	Pam	Female	3000	Pam	Female	3000	5000	2000
4	Sara	Female	4000	Sara	Female	4000	6000	3000
5	Todd	Male	5000	Todd	Male	5000	7000	4000
6	Mary	Female	6000	Mary	Female	6000	8000	5000
7	Ben	Male	7000	Ben	Male	7000	9000	6000
8	Jodi	Female	8000	Jodi	Female	8000	9500	7000
9	Tom	Male	9000	Tom	Male	9000	-1	8000
10	Ron	Male	9500	Ron	Male	9500	-1	9000

Lead & Lag functions in SQL Server

Lead and Lag functions example WITH partitions : Notice that in this example, Lead and Lag functions return default value if the number of rows to lead or lag goes beyond first row or last row in the partition.

```
SELECT Name, Gender, Salary,  
       LEAD(Salary, 2, -1) OVER (PARTITION By Gender ORDER BY Salary) AS Lead_2,  
       LAG(Salary, 1, -1) OVER (PARTITION By Gender ORDER BY Salary) AS Lag_1  
FROM Employees
```



Id	Name	Gender	Salary	Name	Gender	Salary	Lead_2	Lag_1
1	Mark	Male	1000	Pam	Female	3000	6000	-1
2	John	Male	2000	Sara	Female	4000	8000	3000
3	Pam	Female	3000	Mary	Female	6000	-1	4000
4	Sara	Female	4000	Jodi	Female	8000	-1	6000
5	Todd	Male	5000	Mark	Male	1000	5000	-1
6	Mary	Female	6000	John	Male	2000	7000	1000
7	Ben	Male	7000	Todd	Male	5000	9000	2000
8	Jodi	Female	8000	Ben	Male	7000	9500	5000
9	Tom	Male	9000	Tom	Male	9000	-1	7000
10	Ron	Male	9500	Ron	Male	9500	-1	9000

Additional Resources

PRAGIM Home Page:

www.PragimTech.com

Resources:

C#, ADO.NET, ASP.NET, SQL Server & MVC youtube Playlists

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