

SQL Server Tutorial

Part 118 - LAST_VALUE function in SQL Server

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In this session we will learn

- LAST_VALUE function in SQL Server

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 115 - FIRST_VALUE function in SQL Server

Part 116 - Window functions in SQL Server

Part 117 - Difference between ROWS and RANGE

LAST_VALUE function in SQL Server

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

- Introduced in SQL Server 2012
- Retrieves the last value from the specified column
- ORDER BY clause is required
- PARTITION BY clause is optional
- ROWS or RANGE clause is optional, but for it to work correctly you may have to explicitly specify a value

Syntax: `LAST_VALUE(Column_Name) OVER (ORDER BY Col1, Col2, ...)`

LAST_VALUE function in SQL Server

LAST_VALUE function not working as expected: In the following example, LAST_VALUE function does not return the name of the highest paid employee. This is because we have not specified an explicit value for ROWS or RANGE clause. As a result it is using it's default value `RANGE BETWEEN UNBOUNDED PRECEDING AND CURRENT ROW`

```
SELECT Name, Gender, Salary,  
       LAST_VALUE(Name) OVER (ORDER BY Salary) AS LastValue  
FROM Employees
```

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

LAST_VALUE function in SQL Server

LAST_VALUE function working as expected : LAST_VALUE function in this case returns the name of the highest paid employee as expected, as we have set an explicit value for ROWS or RANGE clause to `ROWS BETWEEN UNBOUNDED PRECEDING AND UNBOUNDED FOLLOWING`

This tells the **LAST_VALUE function** that it's window starts at the first row and ends at the last row in the result set

```
SELECT Name, Gender, Salary,  
       LAST_VALUE(Name) OVER (ORDER BY Salary ROWS BETWEEN UNBOUNDED PRECEDING  
                             AND UNBOUNDED FOLLOWING) AS LastValue  
FROM Employees
```

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

LAST_VALUE function in SQL Server

LAST_VALUE function example with partitions : In the following example, LAST_VALUE function returns the name of the highest paid employee from the respective partition

```
SELECT Name, Gender, Salary,  
       LAST_VALUE(Name) OVER (PARTITION BY Gender ORDER BY Salary ROWS BETWEEN  
                               UNBOUNDED PRECEDING AND UNBOUNDED FOLLOWING) AS LastValue  
FROM Employees
```

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

Additional Resources

PRAGIM Home Page:

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Resources:

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