

SQL Server Tutorial

Part 109 - ROW_NUMBER Function

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In this session we will learn

- Row_Number 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 106 - Grouping_Id function in SQL Server

Part 107 - Debugging SQL Server stored procedures

Part 108 - Over clause in SQL Server

ROW_NUMBER 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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Row_Numberfunction

- Introduced in SQL Server 2005
- Returns the sequential number of a row starting at 1
- ORDER BY clause is required
- PARTITION BY clause is optional
- When the data is partitioned, row number is reset to 1 when the partition changes

Syntax: `ROW_NUMBER() OVER (ORDER BY Col1, Col2)`

ROW_NUMBER function in SQL Server

Row_Number function without PARTITION BY : In this example, data is not partitioned, so ROW_NUMBER will provide a consecutive numbering for all the rows in the table based on the order of rows imposed by the ORDER BY clause.

Id	Name	Gender	Salary		Name	Gender	Salary	RowNumber
1	Mark	Male	5000		Pam	Female	5500	1
2	John	Male	4500		Sara	Female	4000	2
3	Pam	Female	5500		Mary	Female	5000	3
4	Sara	Female	4000		Jodi	Female	7000	4
5	Todd	Male	3500	→	Tom	Male	5500	5
6	Mary	Female	5000		Ron	Male	5000	6
7	Ben	Male	6500		Ben	Male	6500	7
8	Jodi	Female	7000		Todd	Male	3500	8
9	Tom	Male	5500		Mark	Male	5000	9
10	Ron	Male	5000		John	Male	4500	10

```
SELECT Name, Gender, Salary,  
       ROW_NUMBER() OVER (ORDER BY Gender) AS RowNumber  
FROM   Employees
```

Please note: If ORDER BY clause is not specified you will get the following error

The function 'ROW_NUMBER' must have an OVER clause with ORDER BY

ROW_NUMBER function in SQL Server

Row_Number function with PARTITION BY : In this example, data is partitioned by Gender, so ROW_NUMBER will provide a consecutive numbering only for the rows with in a parttion. When the partition changes the row number is reset to 1

Id	Name	Gender	Salary		Name	Gender	Salary	RowNumber
1	Mark	Male	5000		Pam	Female	5500	1
2	John	Male	4500		Sara	Female	4000	2
3	Pam	Female	5500		Mary	Female	5000	3
4	Sara	Female	4000		Jodi	Female	7000	4
5	Todd	Male	3500	→	Tom	Male	5500	1
6	Mary	Female	5000		Ron	Male	5000	2
7	Ben	Male	6500		Ben	Male	6500	3
8	Jodi	Female	7000		Todd	Male	3500	4
9	Tom	Male	5500		Mark	Male	5000	5
10	Ron	Male	5000		John	Male	4500	6

```
SELECT Name, Gender, Salary,  
       ROW_NUMBER() OVER (PARTITION BY Gender ORDER BY Gender) AS RowNumber  
FROM   Employees
```

Use case for Row_Number function : Deleting all duplicate rows except one
Part 4 of SQL Server Interview Questions and Answers video series

Additional Resources

PRAGIM Home Page:

www.PragimTech.com

Resources:

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

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