

SQL Server Tutorial

Part 111 - Difference between RANK DENSE_RANK & ROW_NUMBER in SQL

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In this session we will learn

- Difference between RANK, DENSE_RANK and ROW_NUMBER functions 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 108 - Over clause in SQL Server

Part 109 - Row_Number function in SQL Server

Part 110 - RANK and DENSE_RANK in SQL Server

RANK, DENSE_RANK & ROW_NUMBER

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

<http://pragimtech.com/order.aspx>

Similarities between RANK, DENSE_RANK and ROW_NUMBER functions

- Returns an increasing integer value starting at 1 based on the ordering of rows imposed by the ORDER BY clause (if there are no ties)
- ORDER BY clause is required
- PARTITION BY clause is optional
- When the data is partitioned, the integer value is reset to 1 when the partition changes

Id	Name	Gender	Salary		Name	Salary	Gender	RowNumber	Rank	DenseRank
1	Mark	Male	6000		John	8000	Male	1	1	1
2	John	Male	8000		Mark	6000	Male	2	2	2
3	Pam	Female	4000		Sara	5000	Female	3	3	3
4	Sara	Female	5000		Pam	4000	Female	4	4	4
5	Todd	Male	3000		Todd	3000	Male	5	5	5

```
SELECT Name, Salary, Gender,  
ROW_NUMBER() OVER (ORDER BY Salary DESC) AS RowNumber,  
RANK() OVER (ORDER BY Salary DESC) AS [Rank],  
DENSE_RANK() OVER (ORDER BY Salary DESC) AS DenseRank  
FROM Employees
```

RANK, DENSE_RANK & ROW_NUMBER

You will only see the difference when there are ties

Id	Name	Gender	Salary		Name	Salary	Gender	RowNumber	Rank	DenseRank
1	Mark	Male	8000		Mark	8000	Male	1	1	1
2	John	Male	8000		John	8000	Male	2	1	1
3	Pam	Female	8000		Pam	8000	Female	3	1	1
4	Sara	Female	4000		Sara	4000	Female	4	4	2
5	Todd	Male	3500		Todd	3500	Male	5	5	3

Difference between RANK, DENSE_RANK and ROW_NUMBER functions

- **ROW_NUMBER** : Returns an increasing unique number for each row starting at 1, even if there are duplicates.
- **RANK** : Returns an increasing unique number for each row starting at 1. When there are duplicates, same rank is assigned to all the duplicate rows, but the next row after the duplicate rows will have the rank it would have been assigned if there had been no duplicates. So RANK function skips rankings if there are duplicates.
- **DENSE_RANK** : Returns an increasing unique number for each row starting at 1. When there are duplicates, same rank is assigned to all the duplicate rows but the DENSE_RANK function will not skip any ranks. This means the next row after the duplicate rows will have the next rank in the sequence.

Additional Resources

PRAGIM Home Page:

www.PragimTech.com

Resources:

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

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