**WEEK 4 Objectives:**

* Table expressions (CTE vs Temp Table vs Table Variable)
* Window Functions

**TASK 1: First, watch the following 17 Kudveknat SQL Videos.**

**Joins related concepts covered:**

1. [Derived table and CTE's](http://csharp-video-tutorials.blogspot.com/2012/09/derived-table-and-cte-in-sql-server.html)
2. [Common Table Expressions](http://csharp-video-tutorials.blogspot.com/2012/09/common-table-expressions-part-49.html)
3. [Updatable CTE](http://csharp-video-tutorials.blogspot.com/2012/09/updatable-cte-part-50.html)
4. [Recursive CTE](http://csharp-video-tutorials.blogspot.com/2012/09/recursive-cte-part-51.html)
5. [Temporary tables](http://csharp-video-tutorials.blogspot.com/2012/09/temporary-tables-in-sql-server-part-34.html)
6. [Table valued parameters in SQL Server](http://csharp-video-tutorials.blogspot.com/2015/09/table-valued-parameters-in-sql-server.html)
7. [Over clause in SQL Server](http://csharp-video-tutorials.blogspot.com/2015/09/over-clause-in-sql-server.html)
8. [Row\_Number function in SQL Server](http://csharp-video-tutorials.blogspot.com/2015/09/rownumber-function-in-sql-server.html)
9. [Rank and Dense\_Rank in SQL Server](http://csharp-video-tutorials.blogspot.com/2015/10/rank-and-denserank-in-sql-server.html)
10. [Difference between rank dense\_rank and row\_number in SQL](http://csharp-video-tutorials.blogspot.com/2015/10/difference-between-rank-denserank-and.html)
11. [Calculate running total in SQL Server 2012](http://csharp-video-tutorials.blogspot.com/2015/10/calculate-running-total-in-sql-server.html)
12. [NTILE function in SQL Server](http://csharp-video-tutorials.blogspot.com/2015/10/ntile-function-in-sql-server.html)
13. [Lead and Lag functions in SQL Server 2012](http://csharp-video-tutorials.blogspot.com/2015/10/lead-and-lag-functions-in-sql-server.html)
14. [FIRST\_VALUE function in SQL Server](http://csharp-video-tutorials.blogspot.com/2015/10/firstvalue-function-in-sql-server.html)
15. [Window functions in SQL Server](http://csharp-video-tutorials.blogspot.com/2015/10/window-functions-in-sql-server.html)
16. [Difference between rows and range](http://csharp-video-tutorials.blogspot.com/2015/10/difference-between-rows-and-range.html)
17. [LAST\_VALUE function in SQL Server](http://csharp-video-tutorials.blogspot.com/2015/10/lastvalue-function-in-sql-server.html)

**NOTE:** If you have difficulty understanding Kudvenkat’s YouTube videos, then I suggest you read his articles describing these videos’ material in writing. You can translate the article much easily.

* Here is the link for his articles: <https://csharp-video-tutorials.blogspot.com/p/free-sql-server-video-tutorials-for.html>

**TASK # 2: Complete HW Exercise questions (listed in a SQLPracticeProblems\_SQLServer-1-54.pdf file attachment) and send Aslon the script that contains your answers.**

* **NOTE: You need to Northwind\_SPP by running Part1\_SQLPracticeProblems\_SQLServer\_PracticeDBSetup and Part2\_SQLPracticeProblems\_SQLServer\_PracticeDBSetup.**