ASSIGNMENT – 3

Title: - Create the cube with suitable dimension and fact tables

Problem Statement: -
Create the cube with suitable dimension and fact tables based on ROLAP, MOLAP and HOLAP model.

Objectives:
• To create the cube with suitable dimension and fact tables based on OLAP.

Outcome: -
- Creation of the cube with suitable dimension and fact tables based on OLAP.

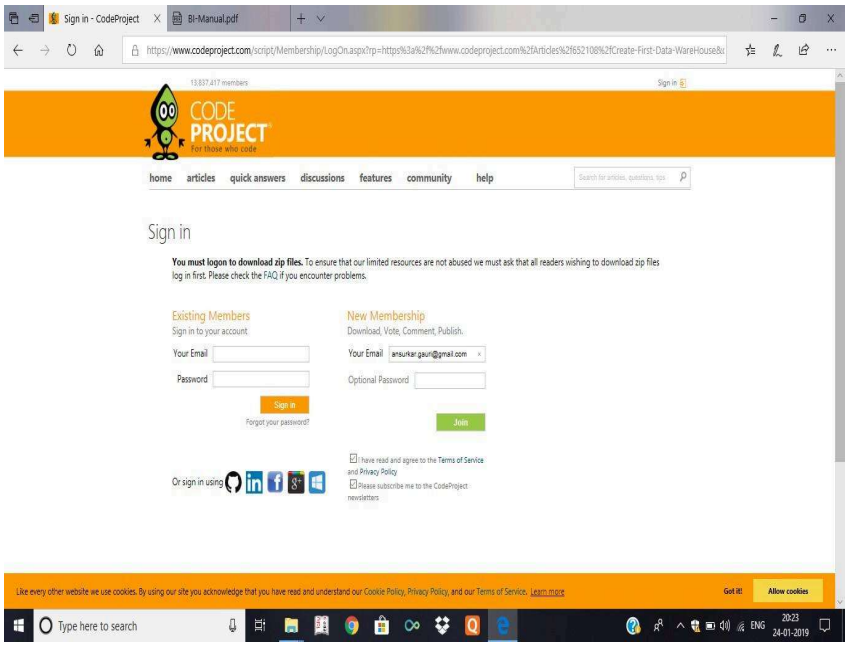
Theory: -

Step 1: Creating Data Warehouse

Let us execute our T-SQL Script to create data warehouse with fact tables, dimensions and populate them with appropriate test values.

Download T-SQL script attached with this article for creation of Sales Data Warehouse or download from this article “Create First Data Warehouse” and run it in your SQL Server.

Downloading "Data_WareHouse_____SQLScript.zip" from the article https://www.codeproject.com/Articles/652108/Create-First-Data-WareHou se



After downloading extract file in folder.

Follow the given steps to run the query in SSMS (SQL Server Management Studio).

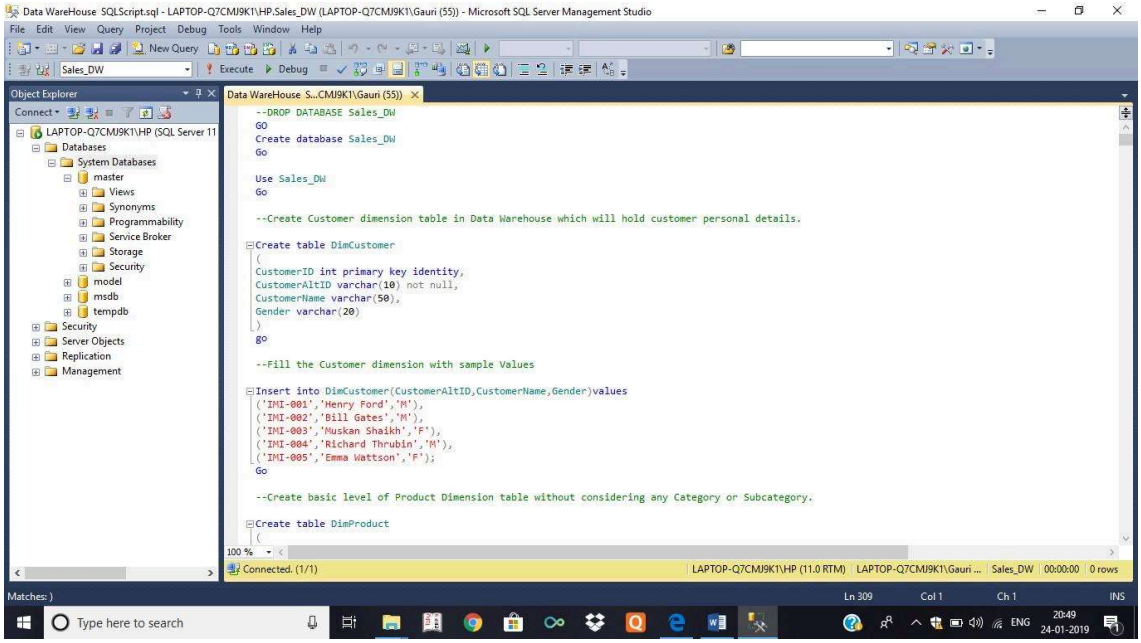
- Open SQL Server Management Studio 2012
- Connect Database Engine

Password for sa : admin123 (as given during installation) Click Connect.

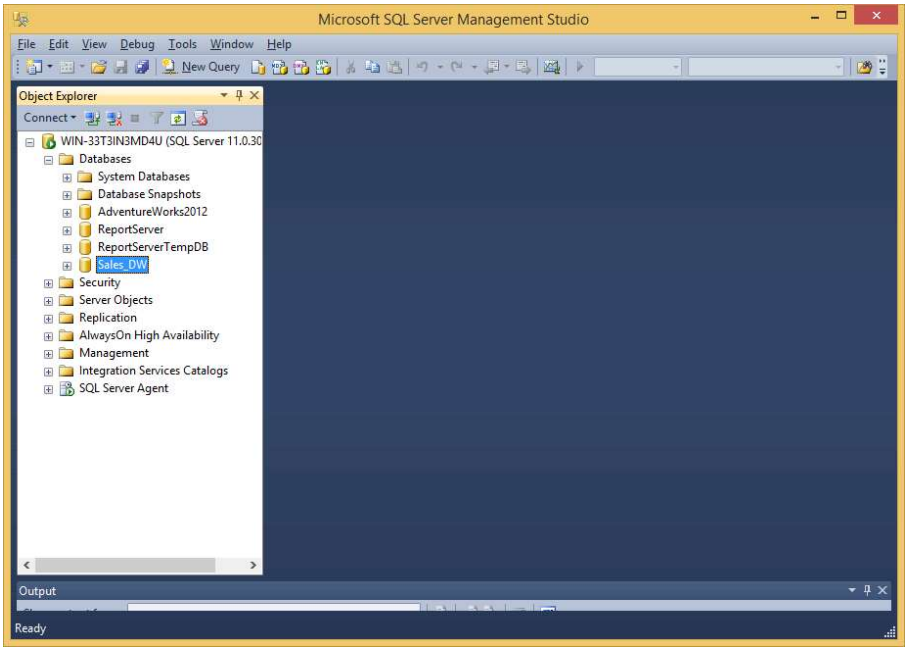
- Open New Query editor
- Copy paste Scripts given below in various steps in new query editor window one by one
- To run the given SQL Script, press F5
- It will create and populate “Sales_DW” database on your SQL Server

OR

- Go to the extracted sql file and double click on it.
- New Sql Query Editor will be opened containing Sales_DW Database.



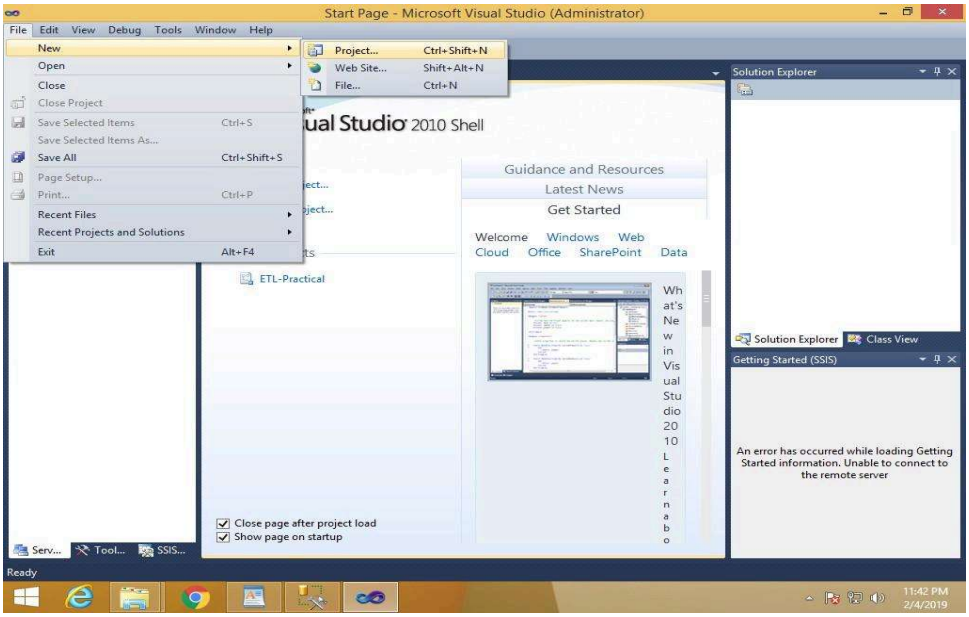
- Click on execute or press F5 by selecting query one by one or directly click on Execute.
- After completing execution save and close SQL Server Management studio & Reopen to see Sales_DW in Databases Tab.



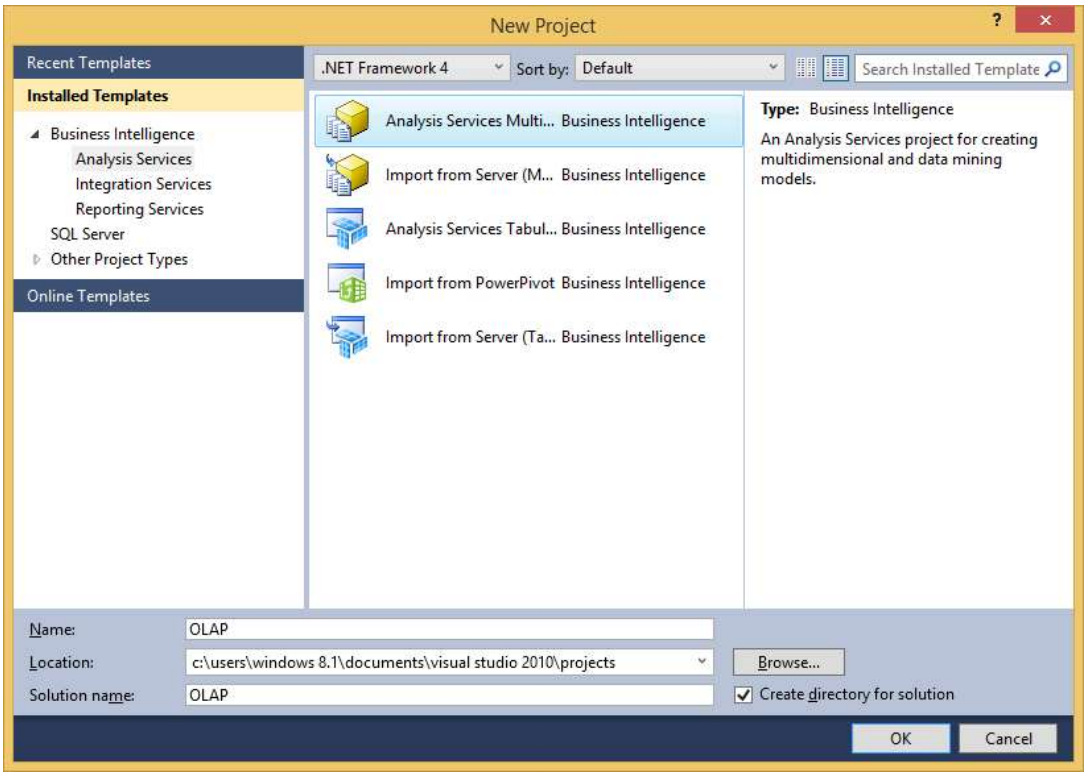
Step 2: Start SSDT environment and create New Data Source

Go to Sql Server Data Tools --> Right click and run as administrator

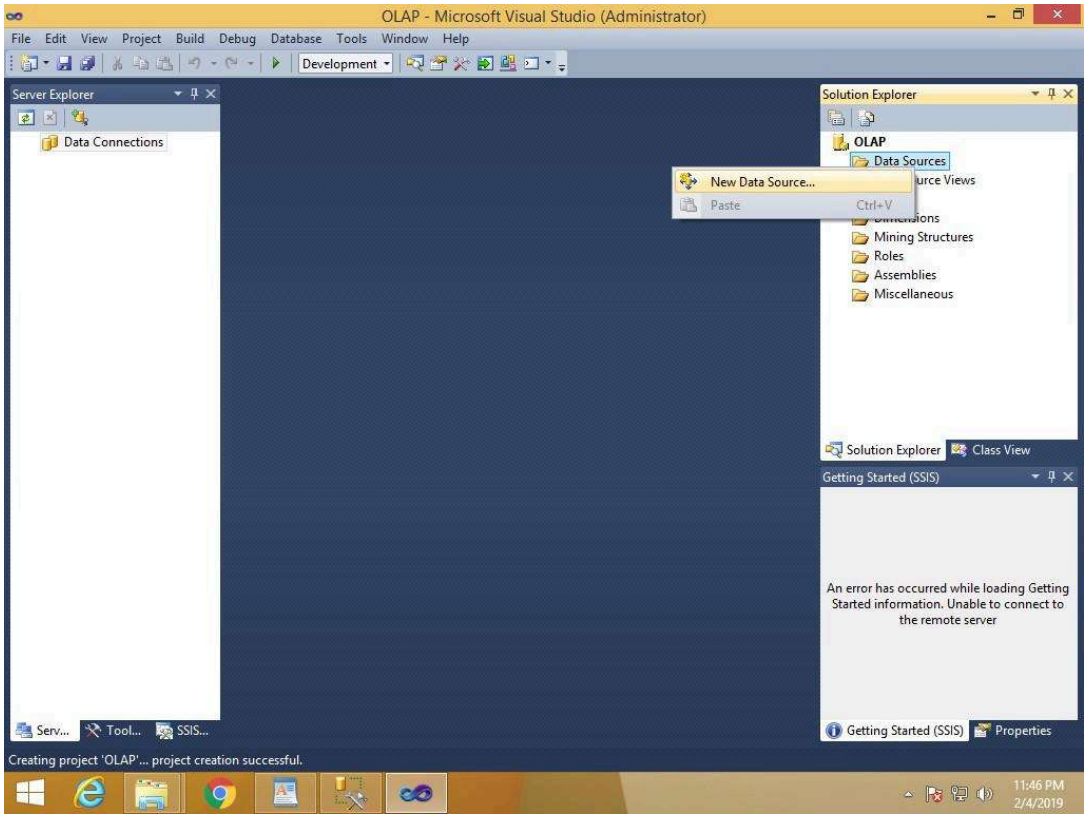
Click on File à New à Project



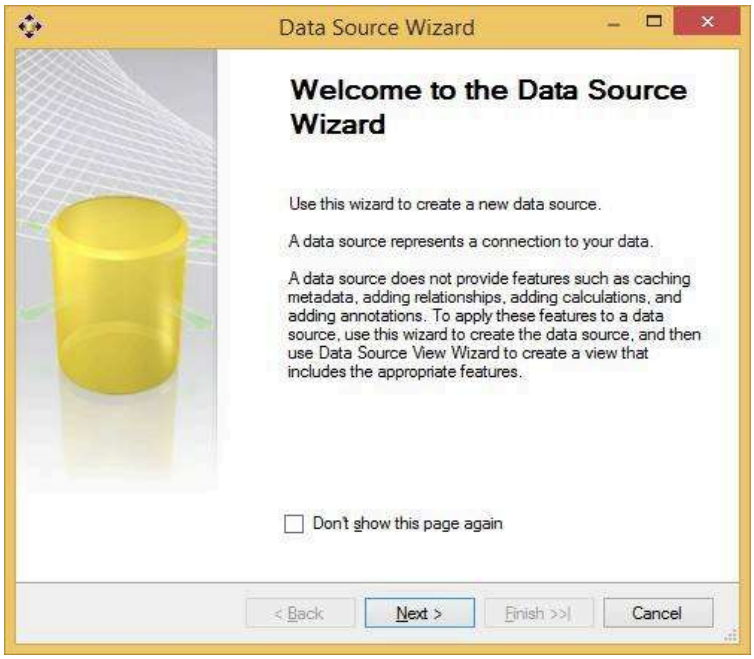
In Business Intelligence à Analysis Services Multidimensional and Data Mining models à appropriate project name à click OK



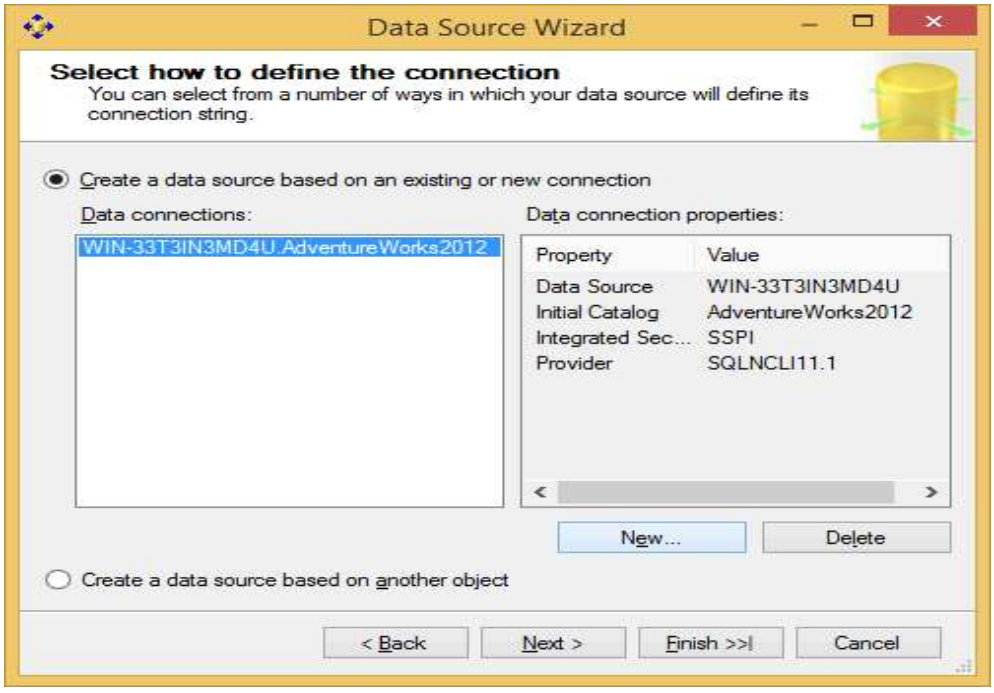
Right click on Data Sources in solution explorer à New Data Source



Data Source Wizard appears

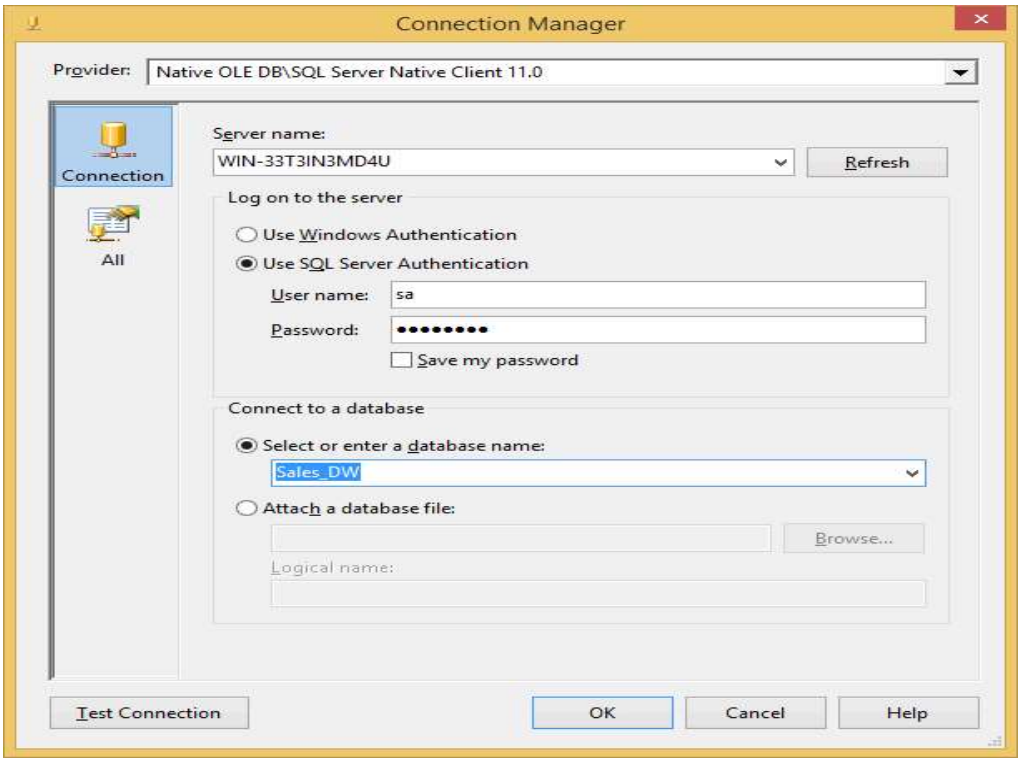


Click on New

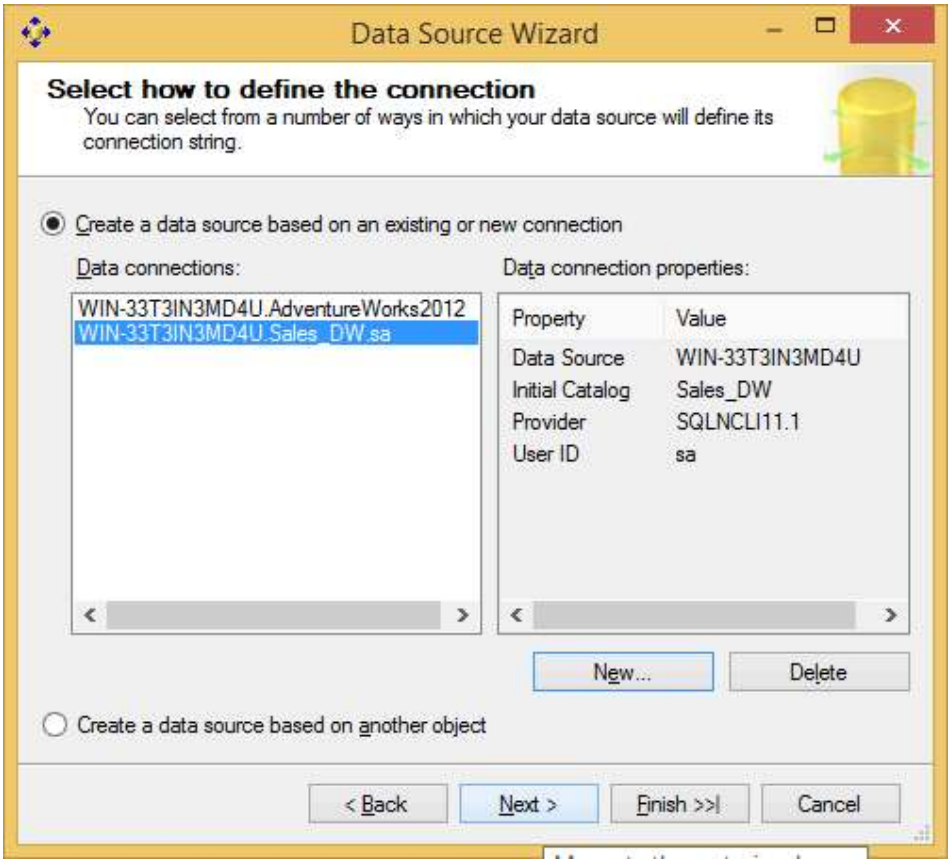


Select Server Name à select Use SQL Server Authentication à Select or enter a database name (Sales_DW)

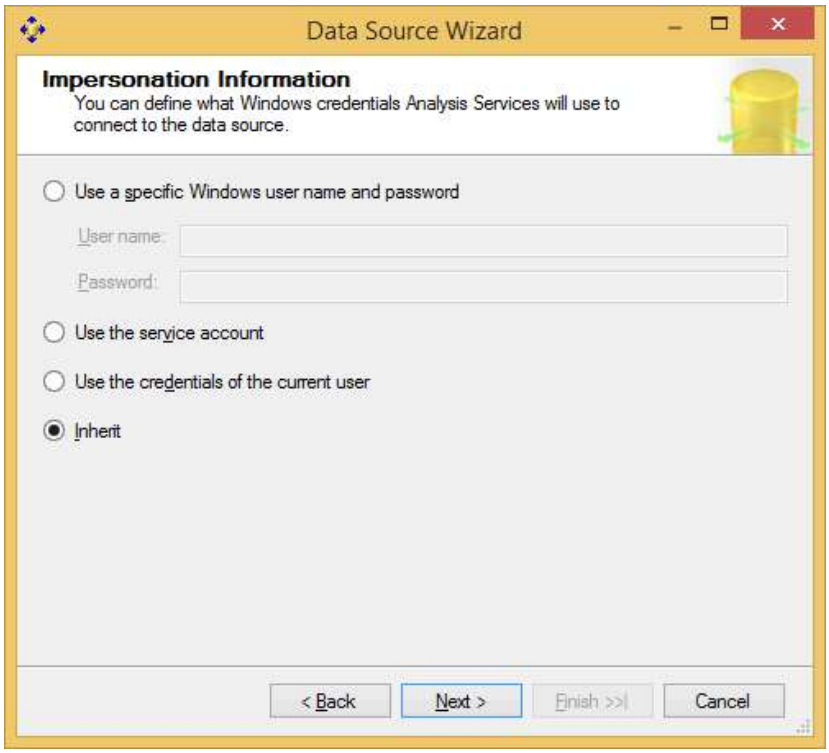
Note : Password for sa : admin123 (as given during installation of SQL 2012 full version)



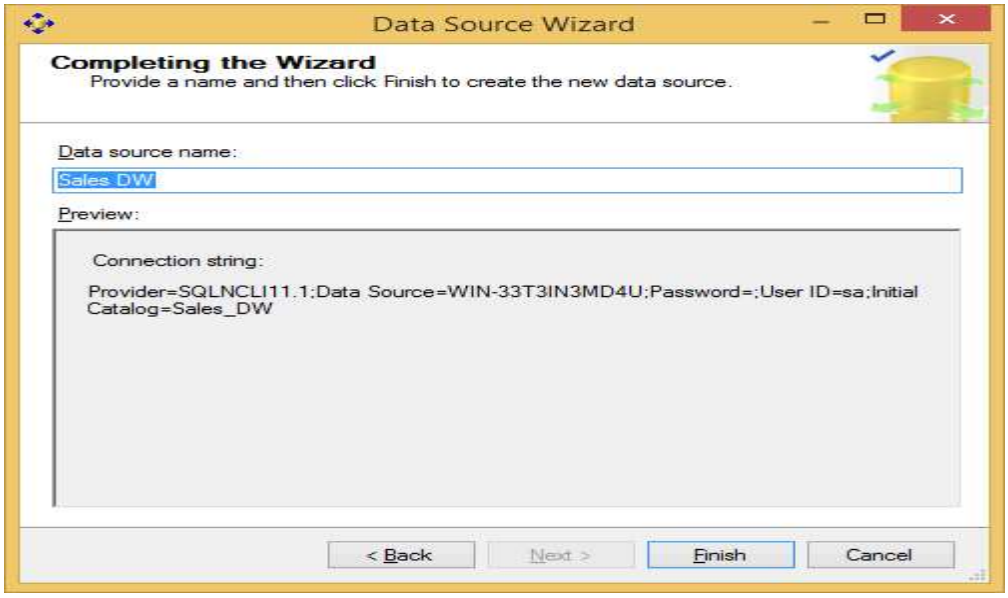
- Click Next



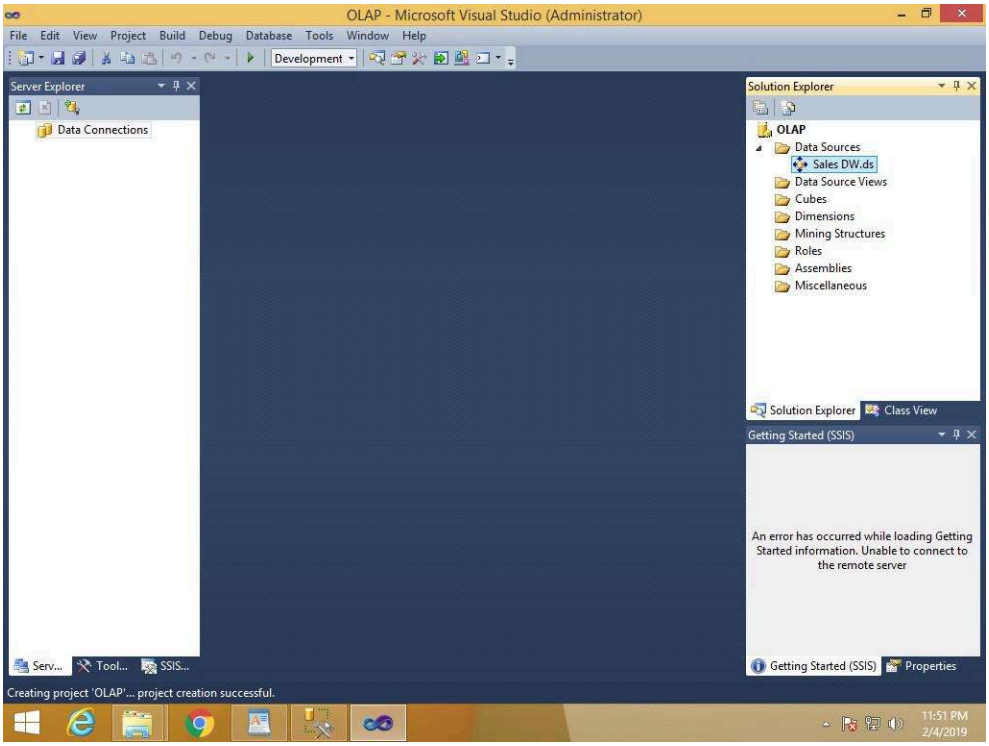
Select Inherit à Next



- Click Finish

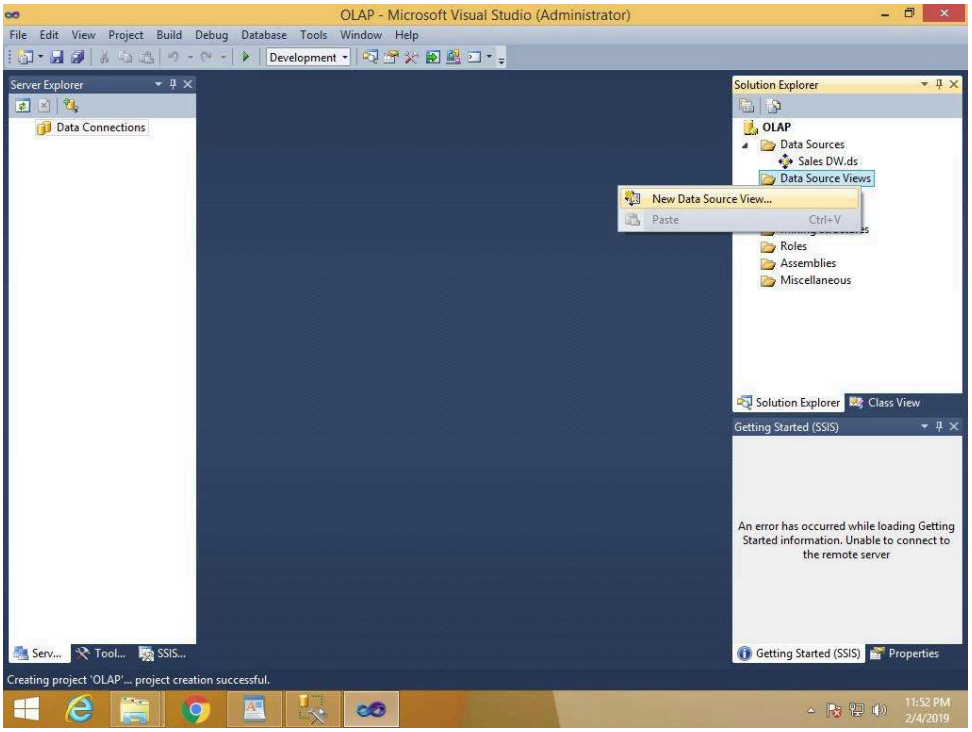


- Sales_DW.ds gets created under Data Sources in Solution Explorer

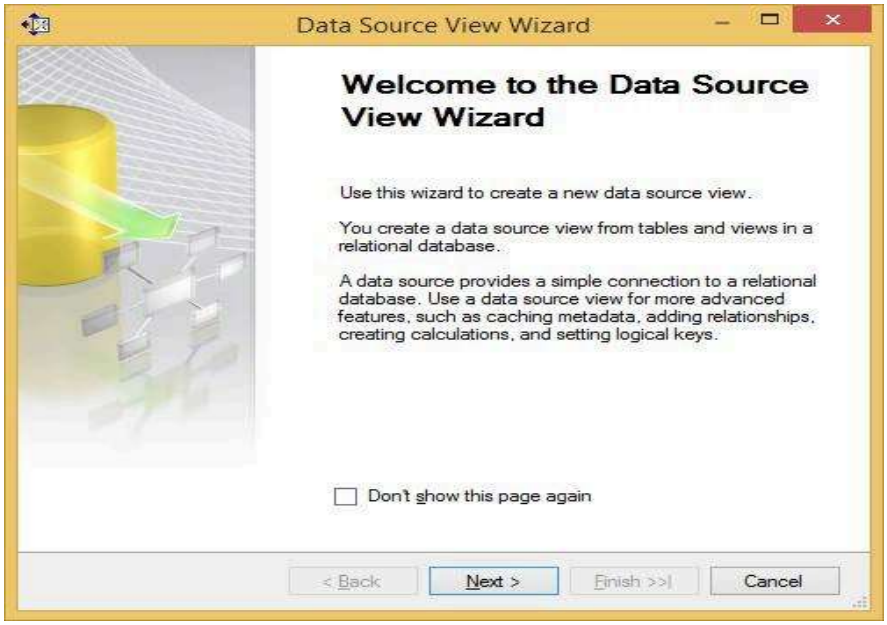


Step 3: Creating New Data Source View

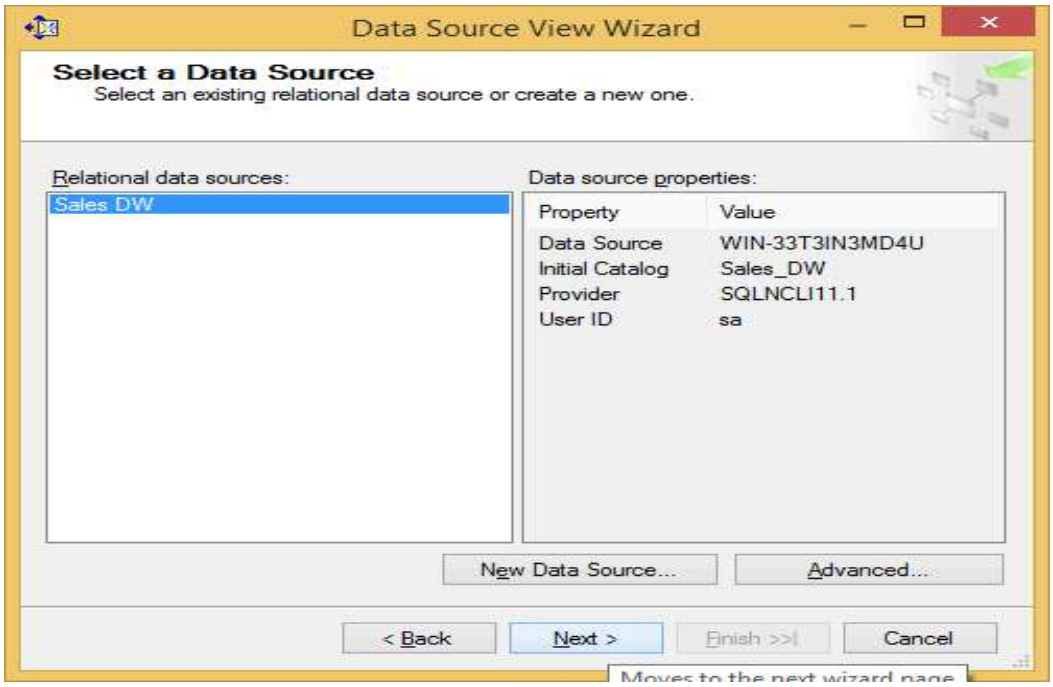
In Solution explorer right click on Data Source View à Select New Data Source View



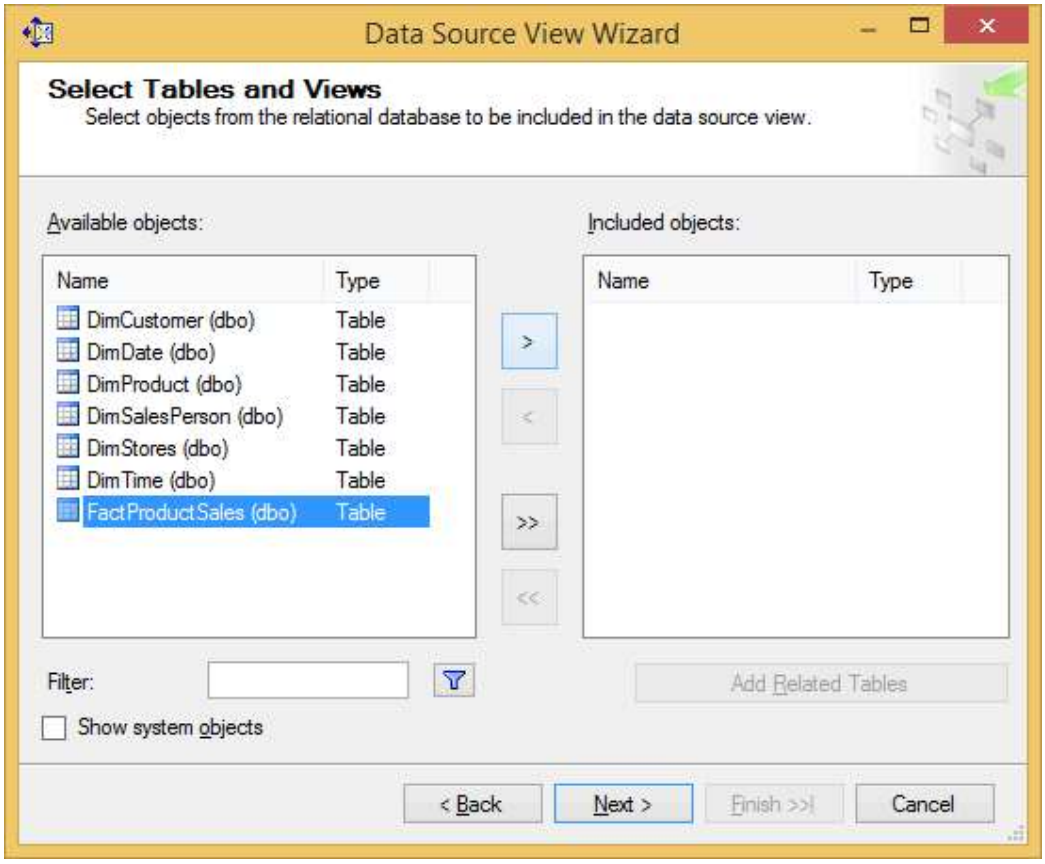
- Click Next

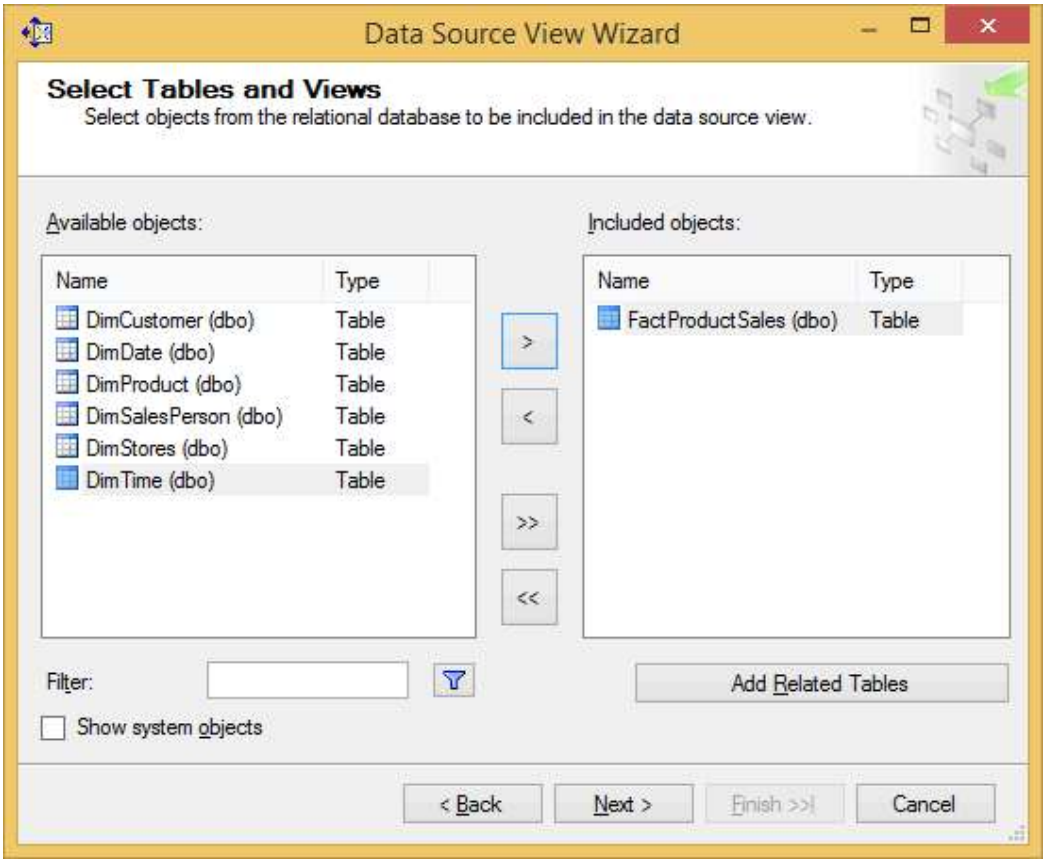


- Click Next

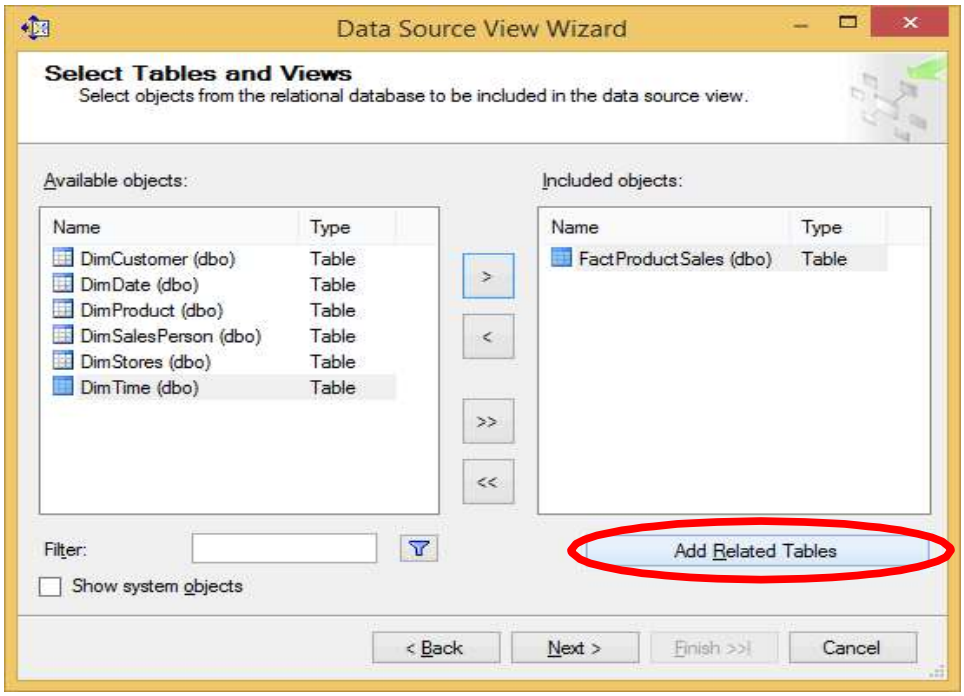


- Select FactProductSales(dbo) from Available objects and put in Includes Objects by clicking on >

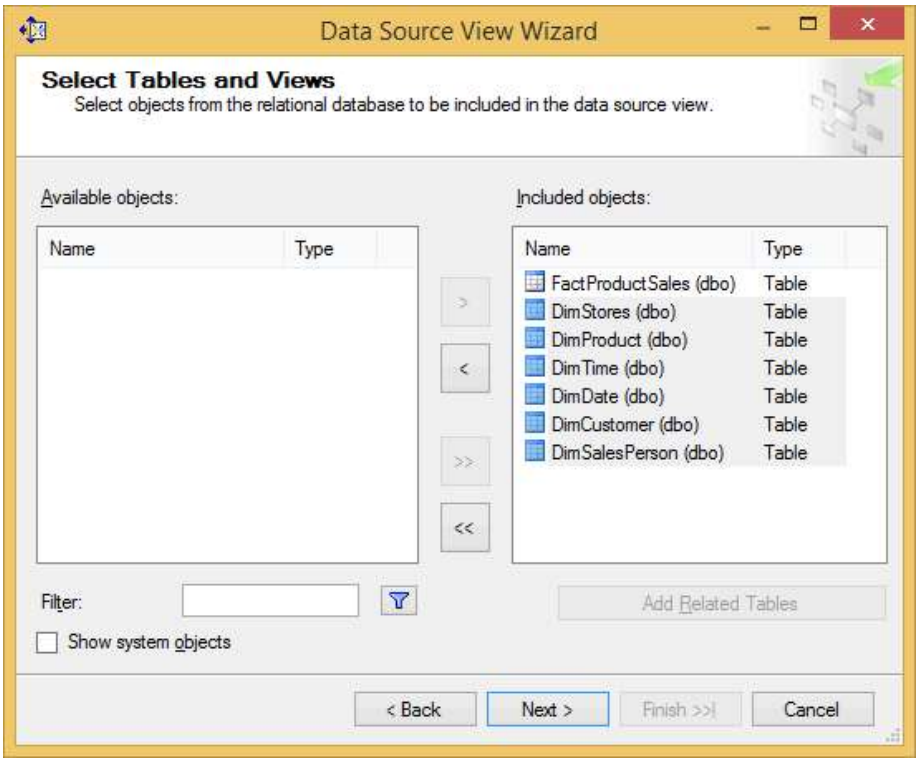




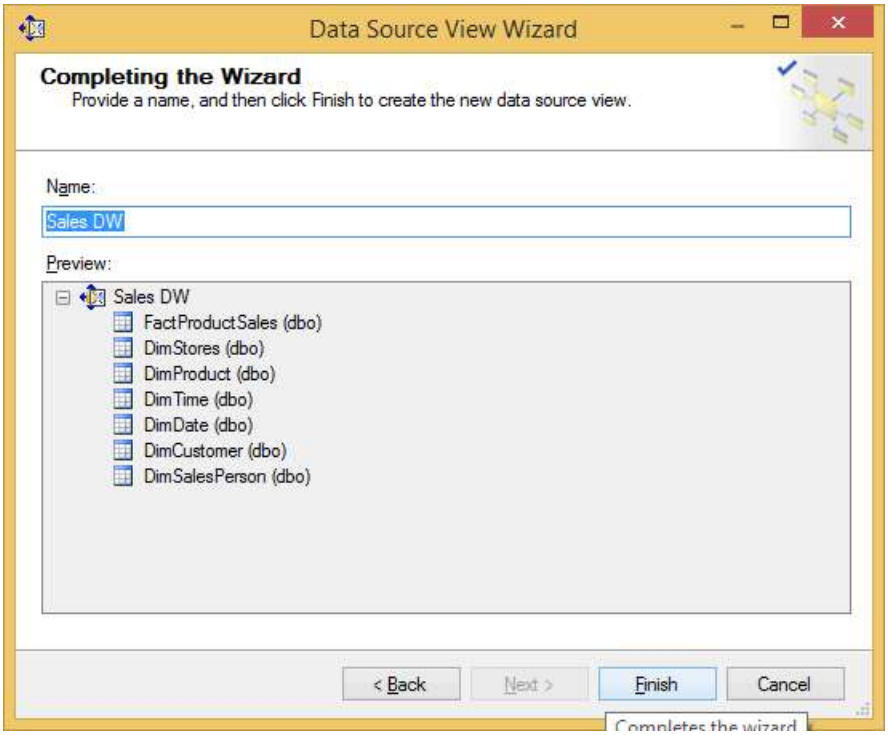
- Click on Add Related Tables



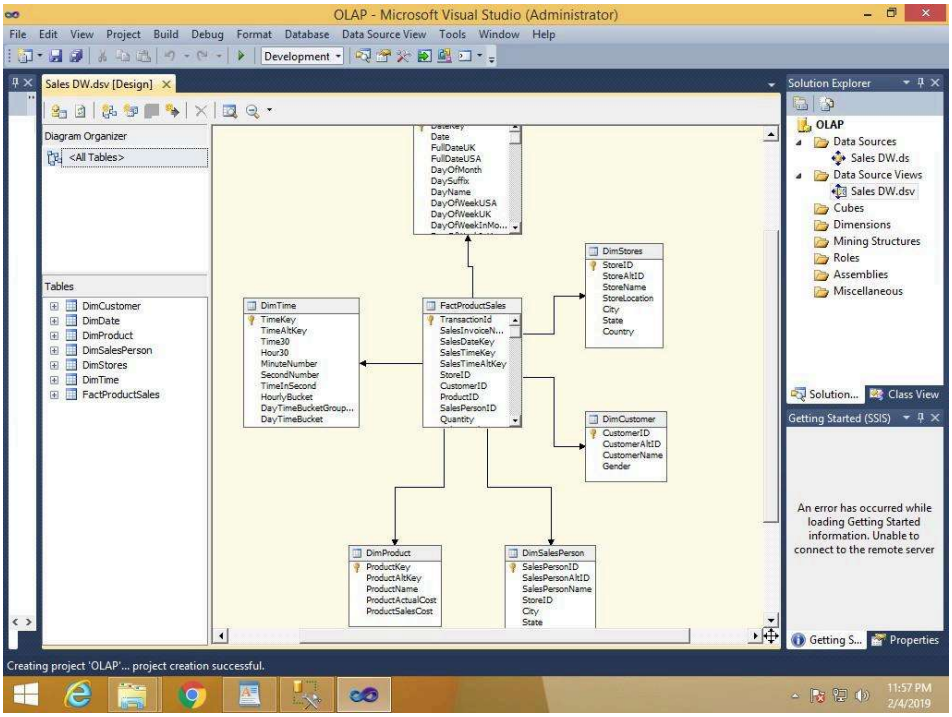
- Click Next



- Click Finish

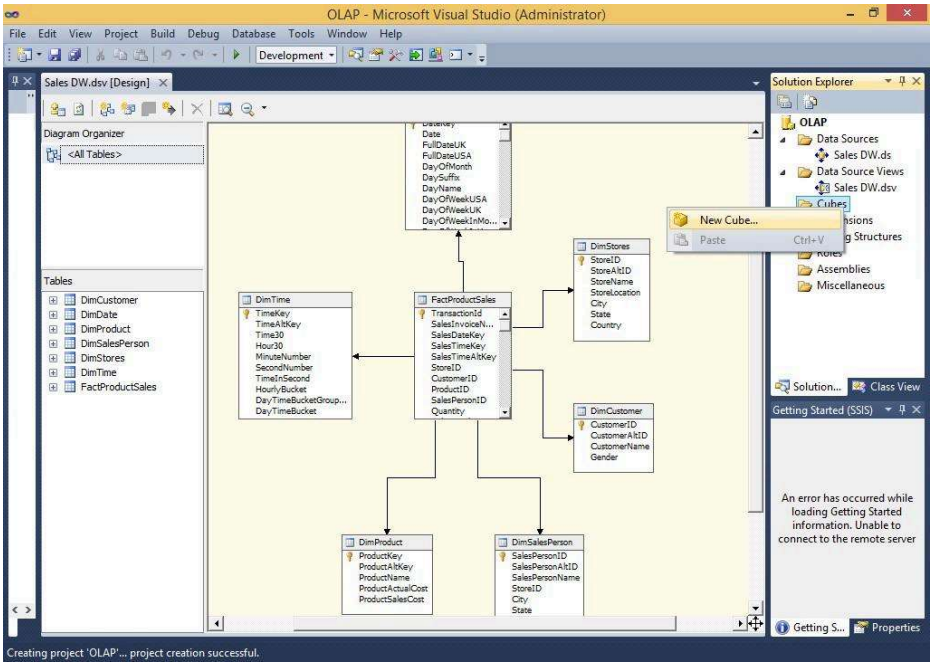


- Sales DW.dsv appears in Data Source Views in Solution Explorer.

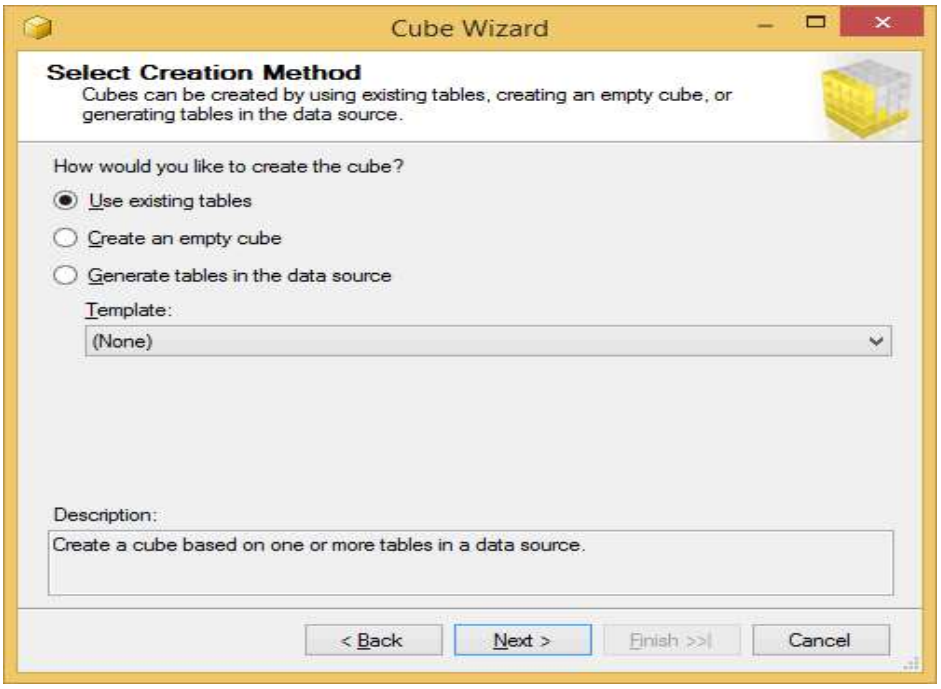


Step 4: Creating new cube

Right click on Cubes à New Cube

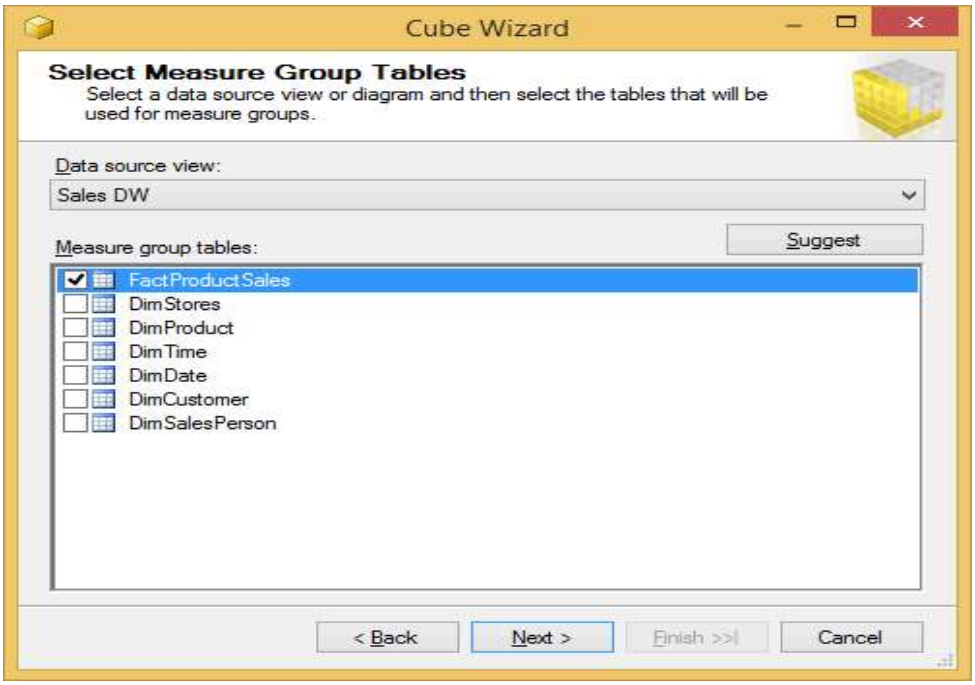


- Select Use existing tables in Select Creation Method à

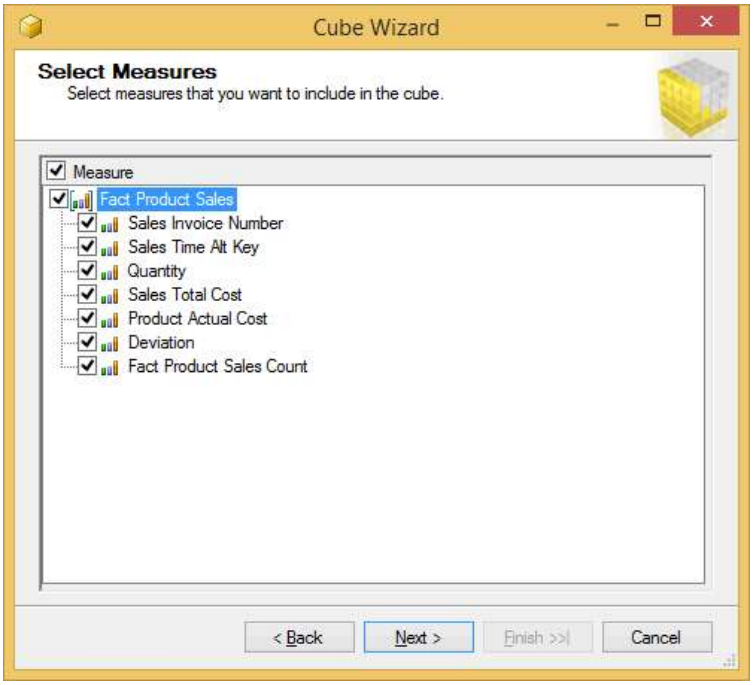


Next

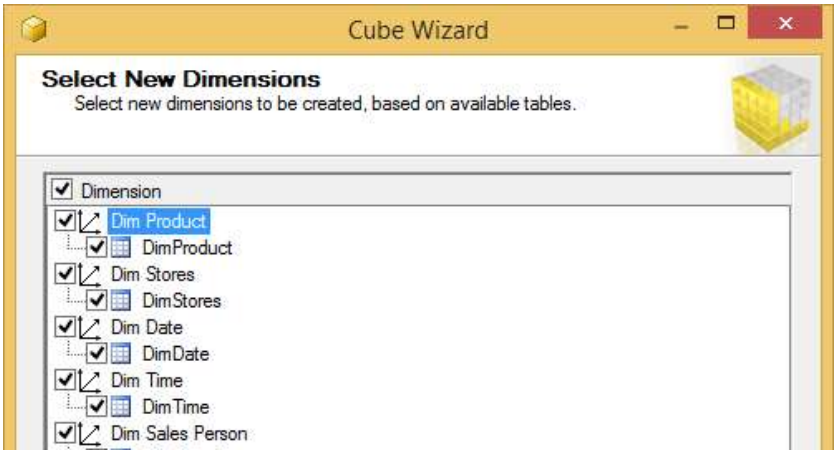
- In Select Measure Group Tables à Select Fact Product Sales à Click Next



- In Select Measures à check all measures à Next

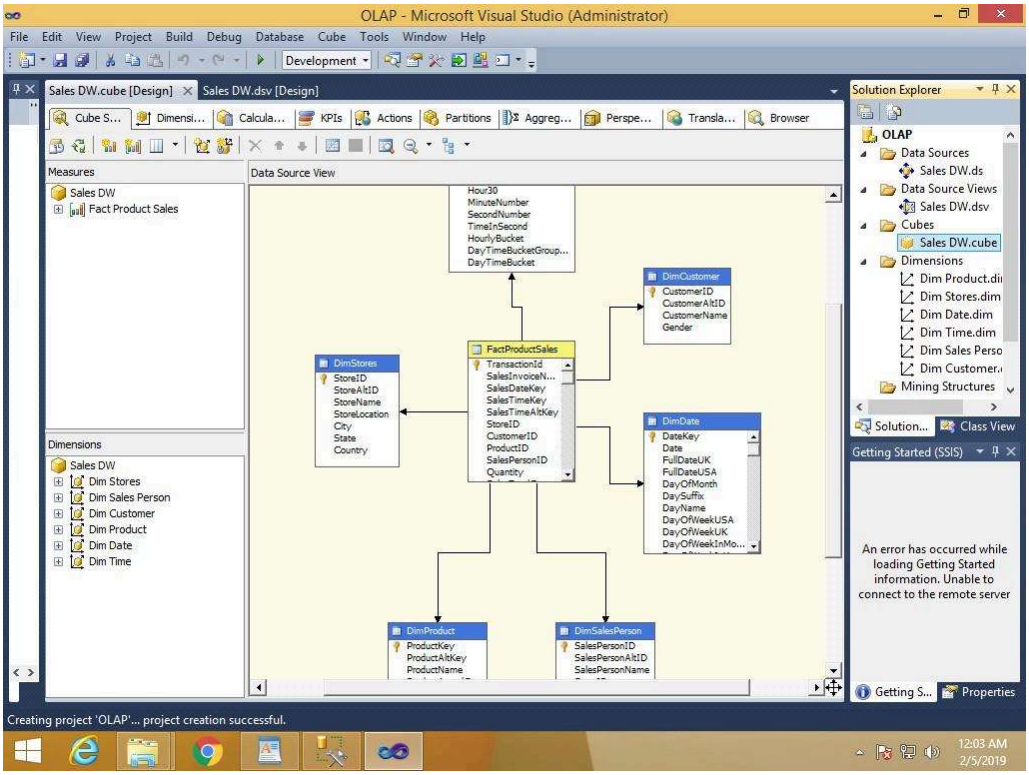


- In Select New Dimensions à Check all Dimensions à Next



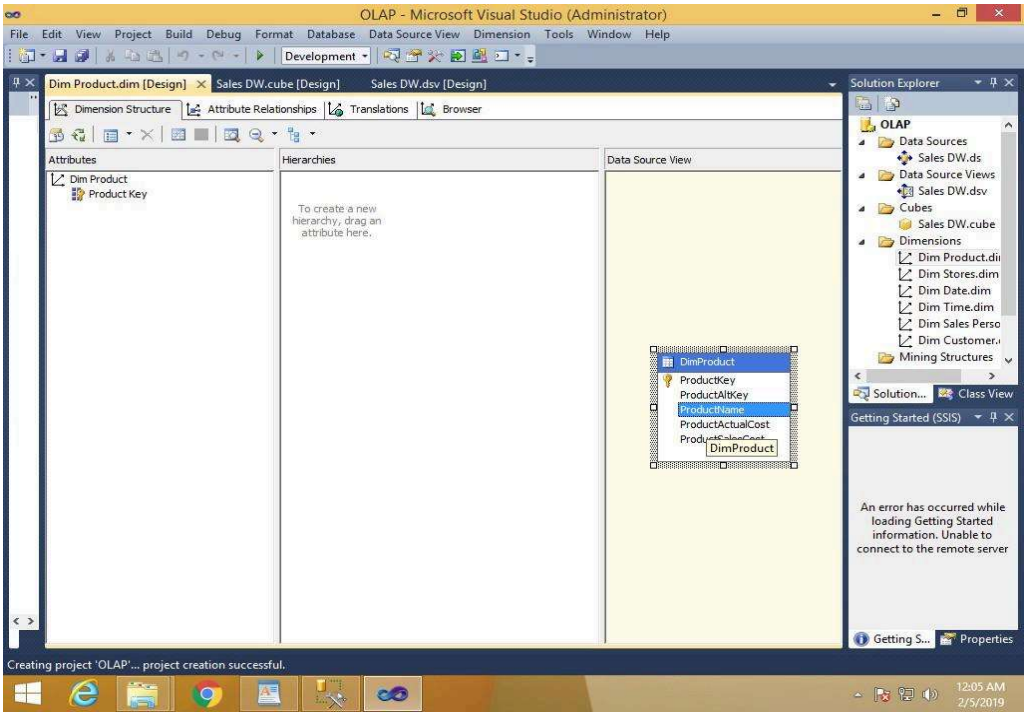
- Click on Finish

Sales_DW.cube is created

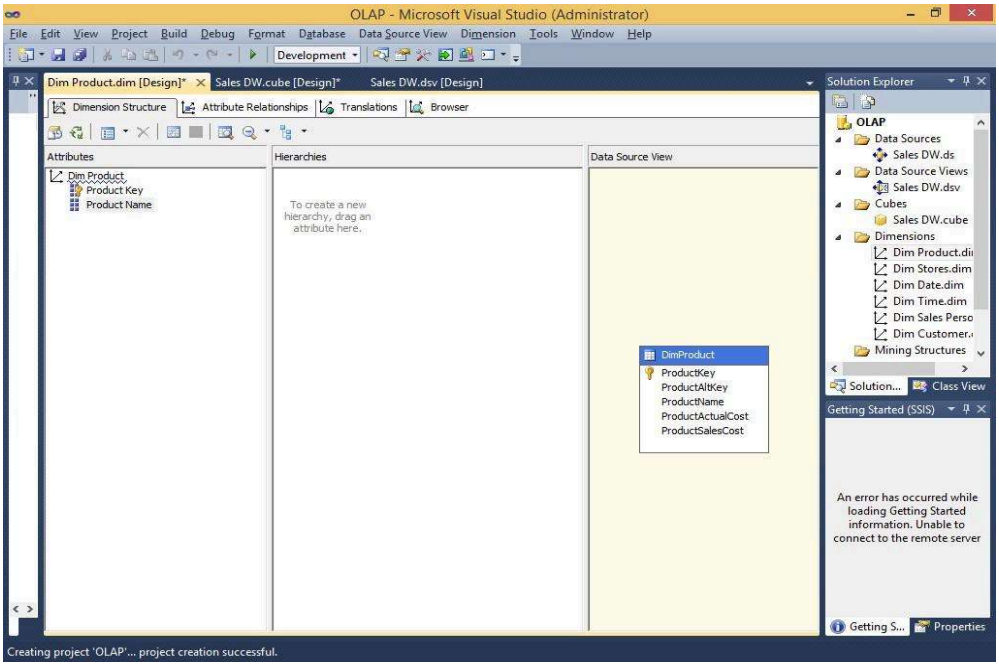


Step 5: Dimension Modification

- In dimension tab à Double Click Dim Product.dim



- Drag and Drop Product Name from Table in Data Source View and Add in Attribute Pane at left side

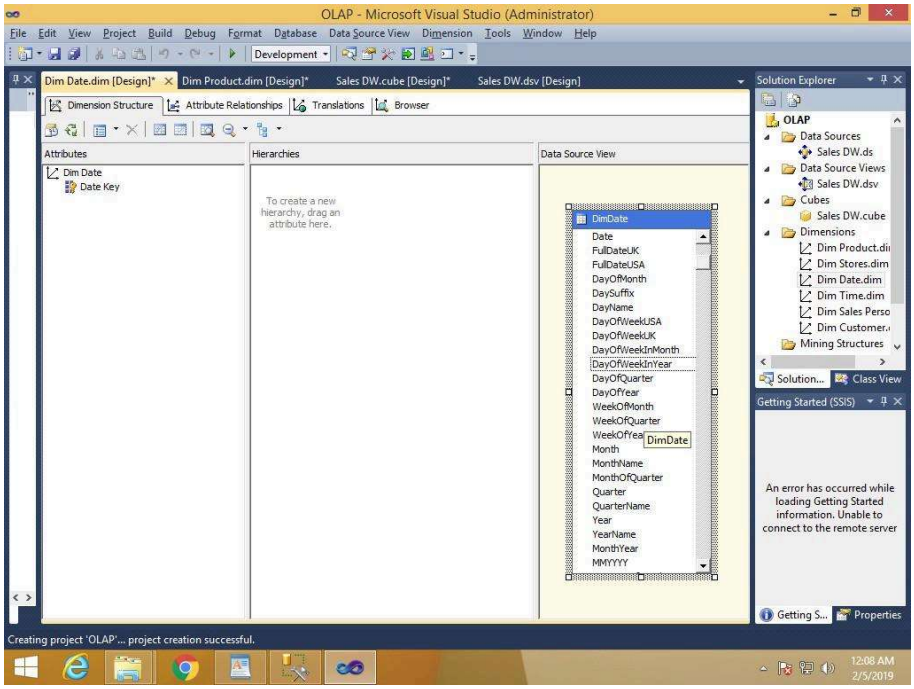


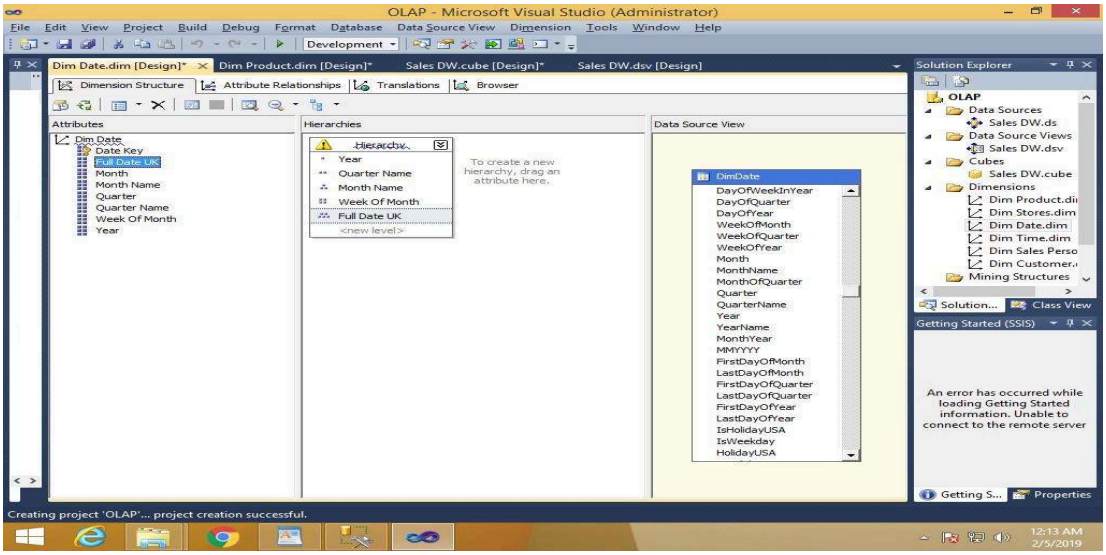
Step 6: Creating Attribute Hierarchy in Date Dimension

- Double click On Dim Date dimension -> Drag and Drop Fields from Table shown in Data Source View to Attributes-> Drag and Drop attributes from leftmost pane of attributes to middle pane of Hierarchy.

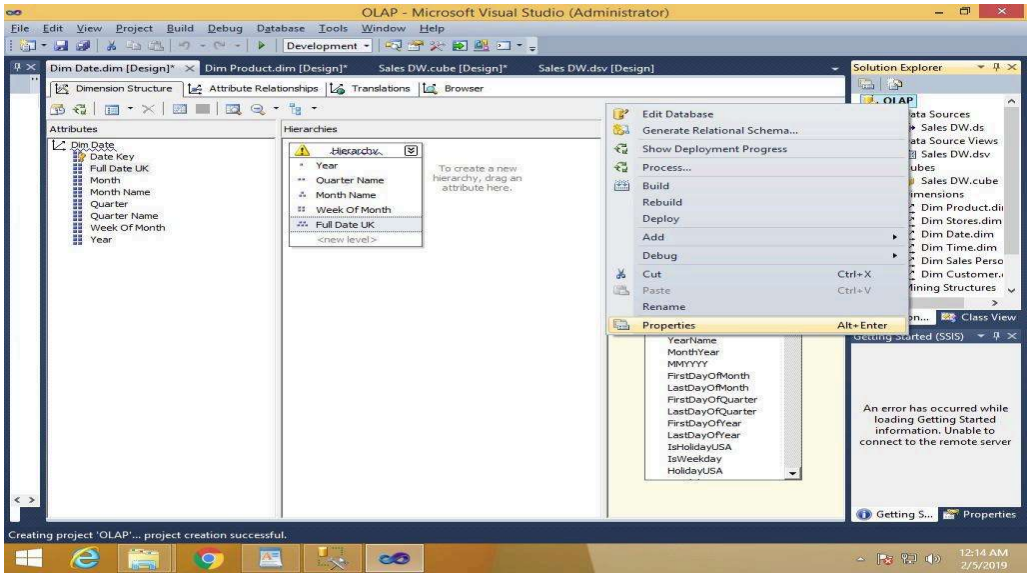
- Drag fields in sequence from Attributes to Hierarchy window

(Year, Quarter Name, Month Name, Week of the Month, Full Date UK)

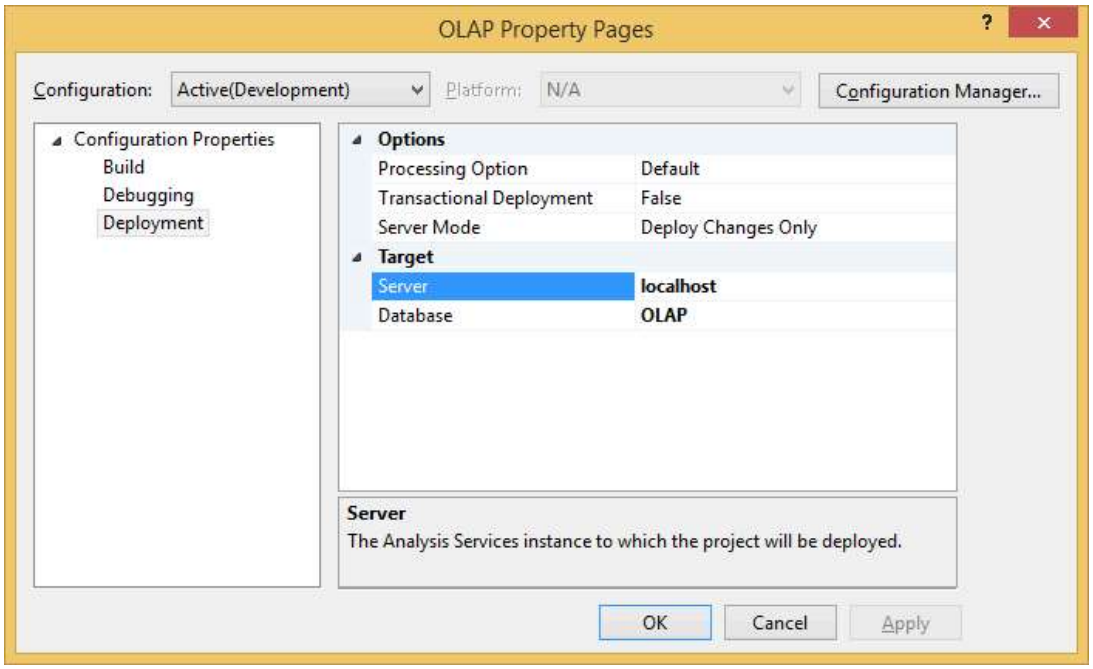




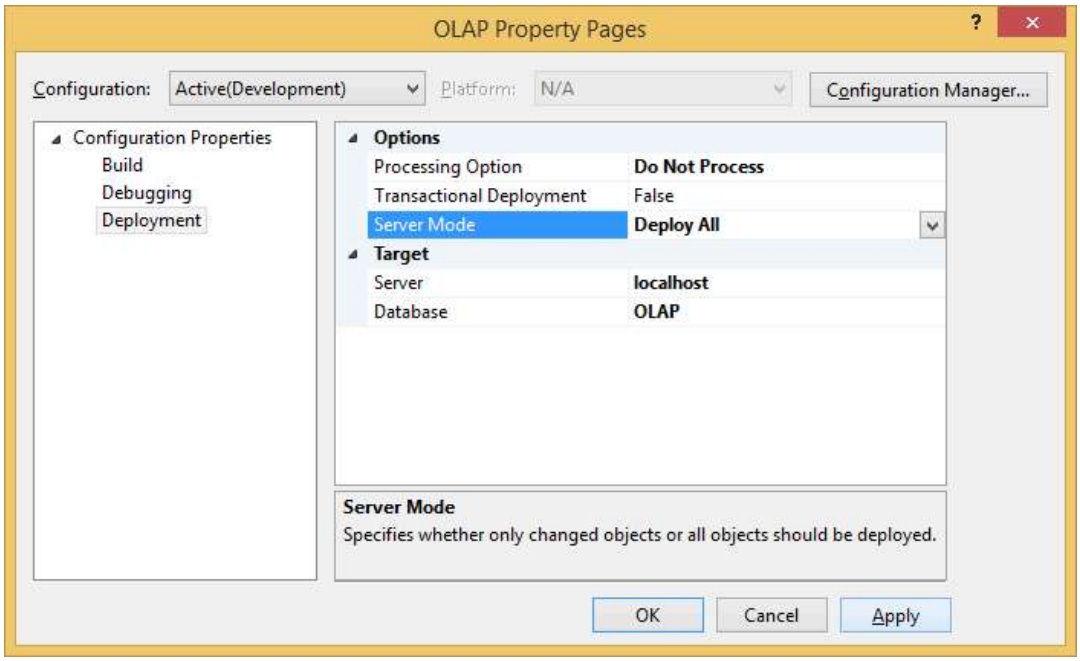
Step 7: Deploy Cube



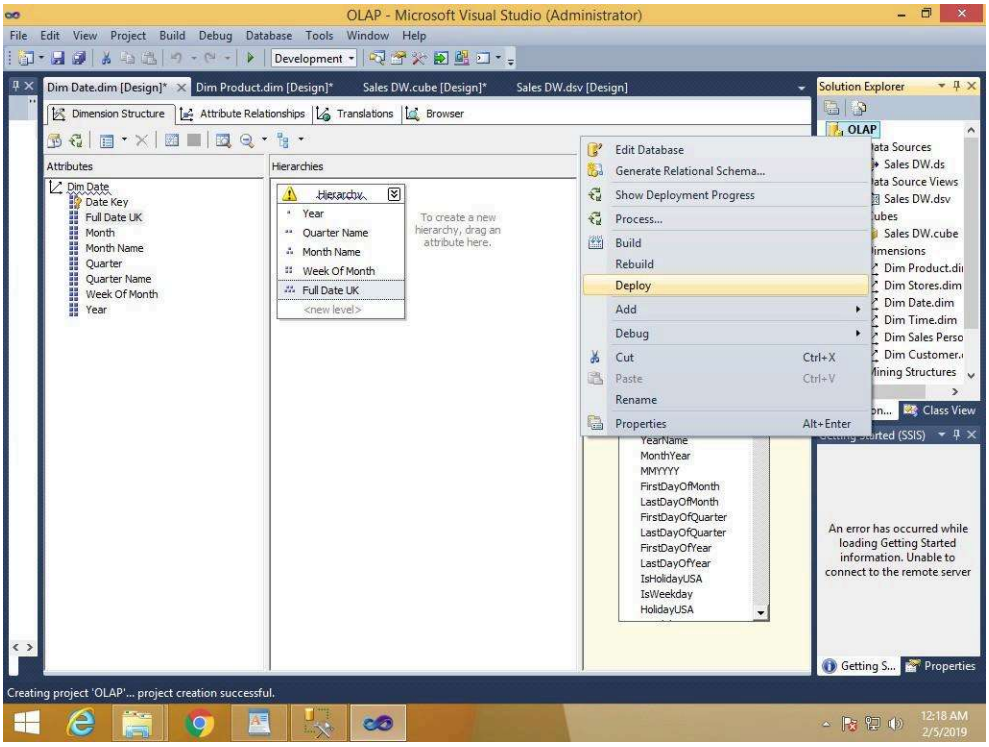
- Right click on Project name à Properties



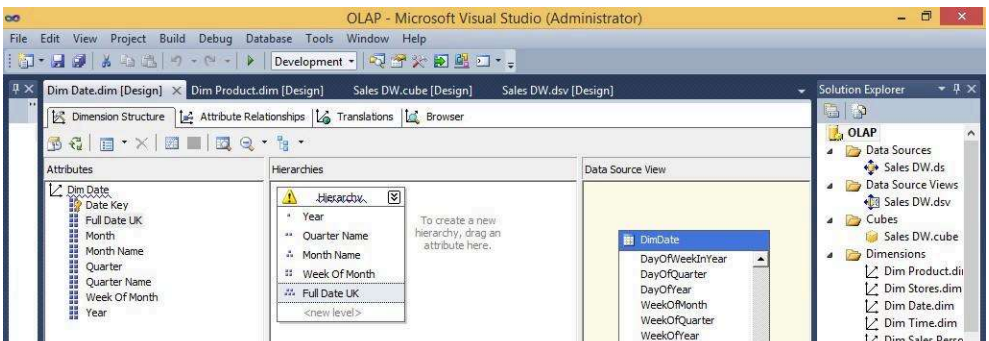
- Do following changes and click on Apply & ok



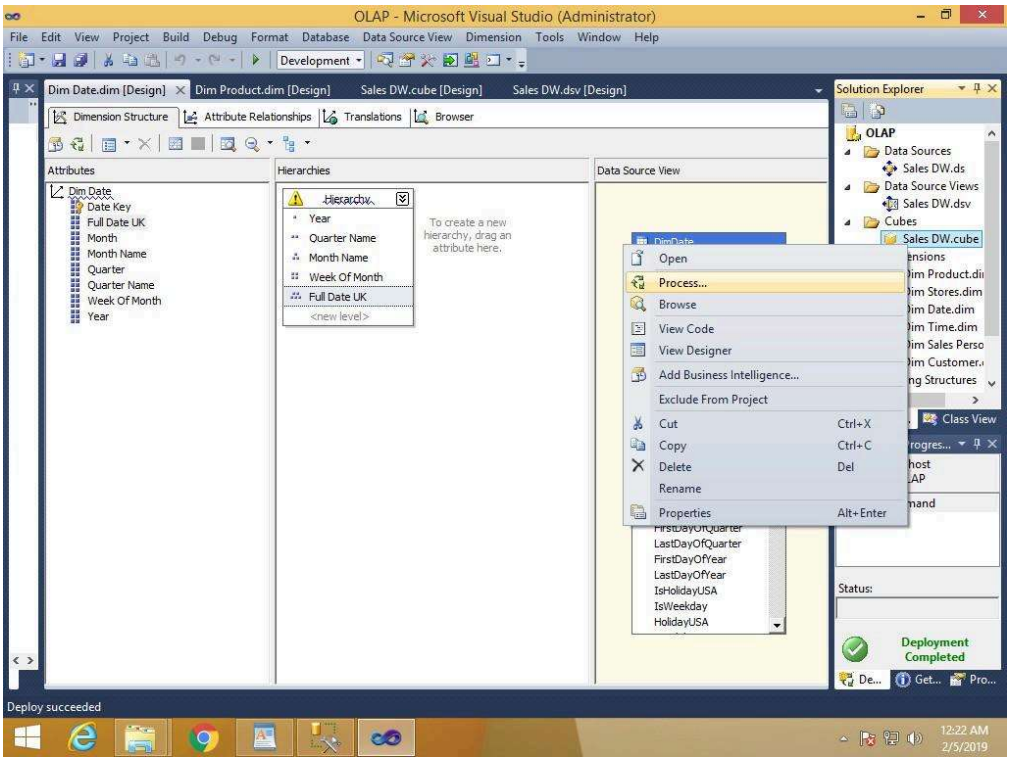
- Right click on project name à Deploy



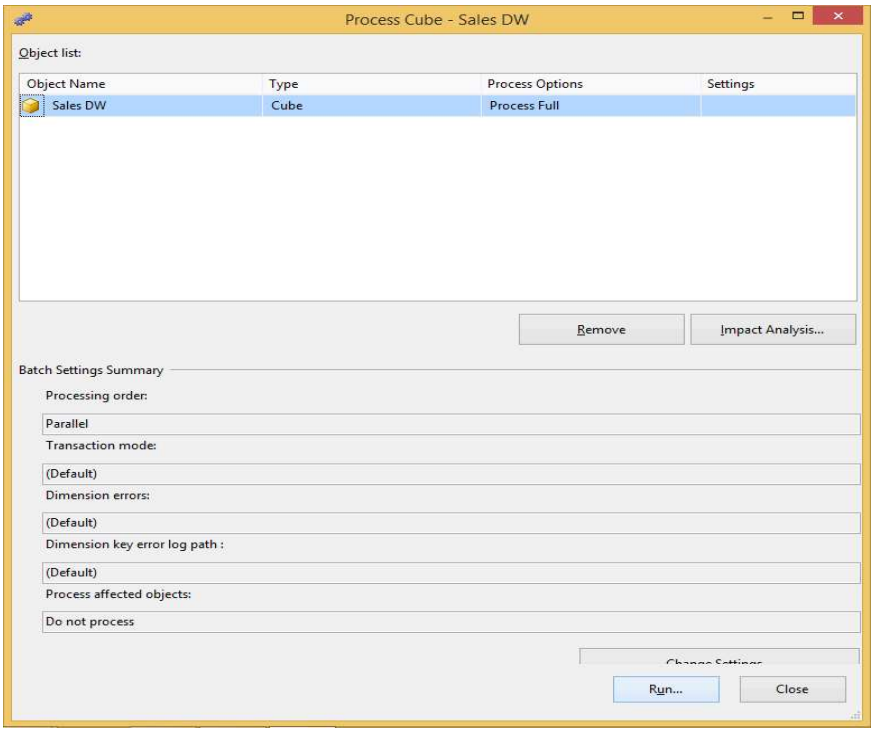
- Deployment successful



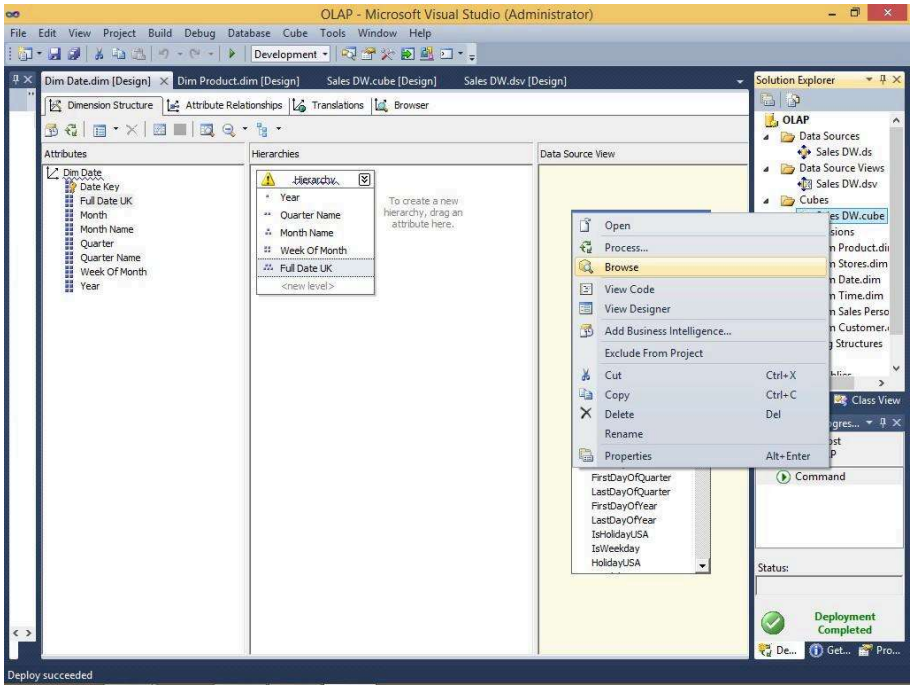
- To process cube right click on Sales_DW.cube à Process

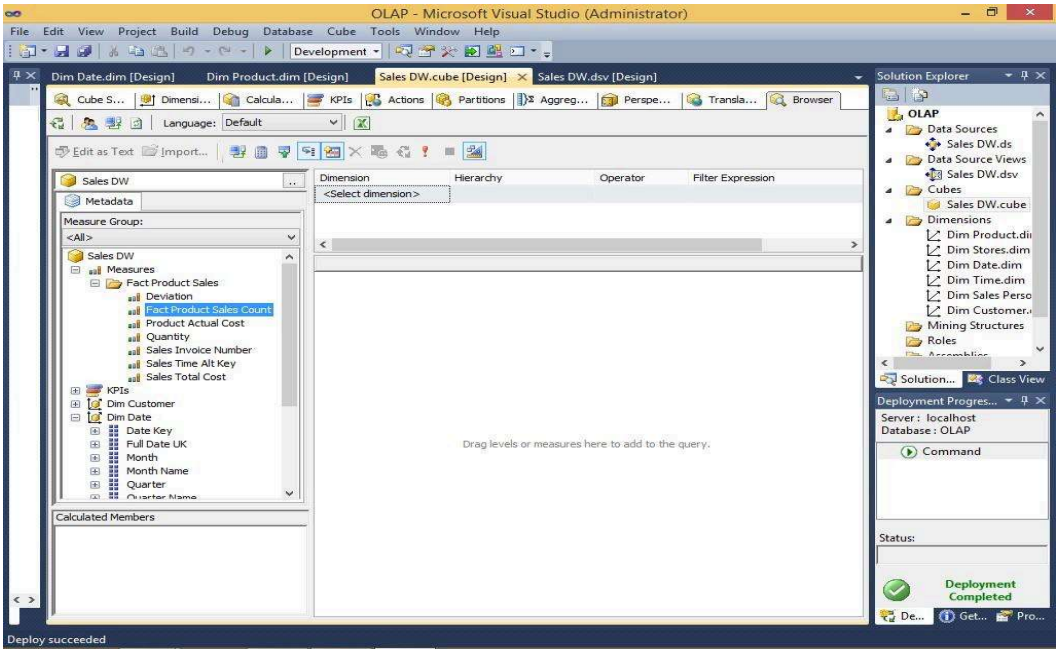


- Click run



- Browse the cube for analysis in solution explorer





Conclusion: - We are able to Create the cube with suitable dimension and fact tables based on ROLAP, MOLAP and HOLAP model.