PRACTICAL 3

Create the cube with suitable dimension and fact tables based on

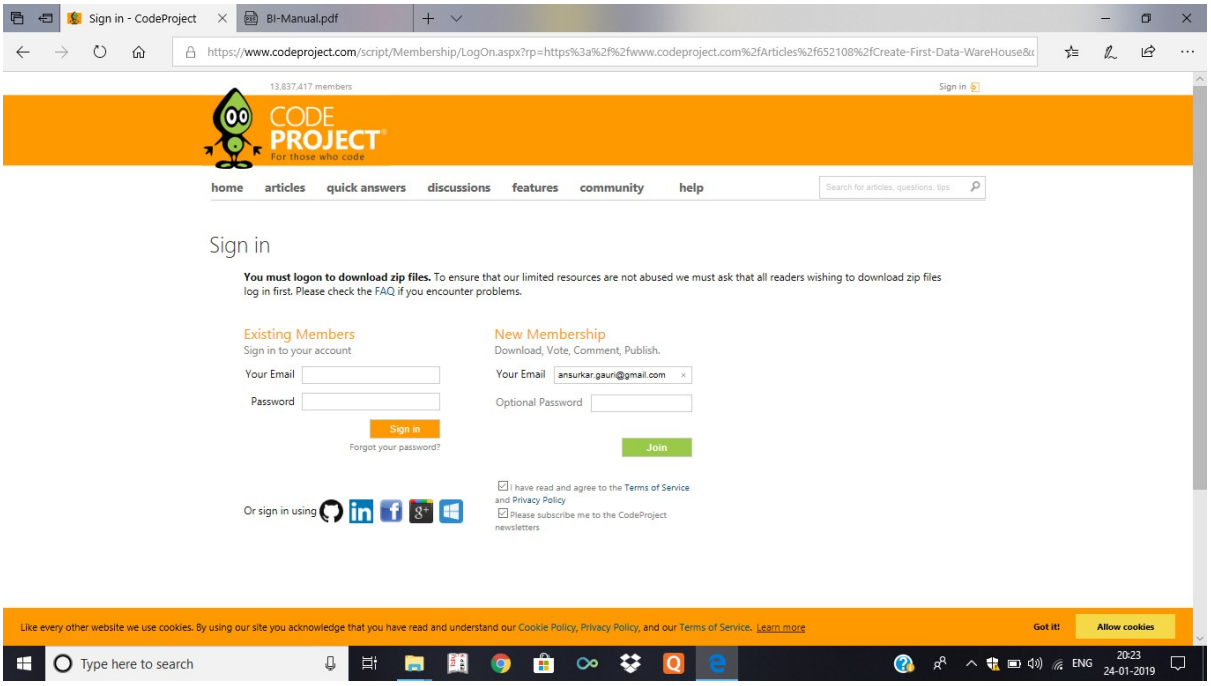
OLAP

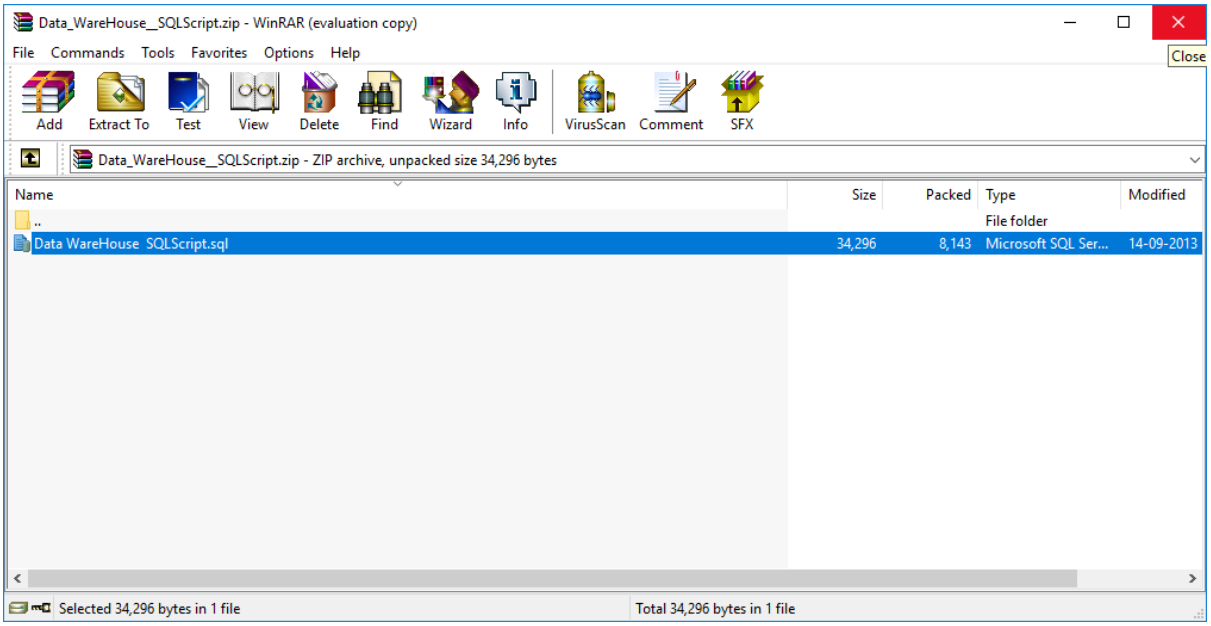
Step 1: Creating Data Warehouse

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-WareHouse



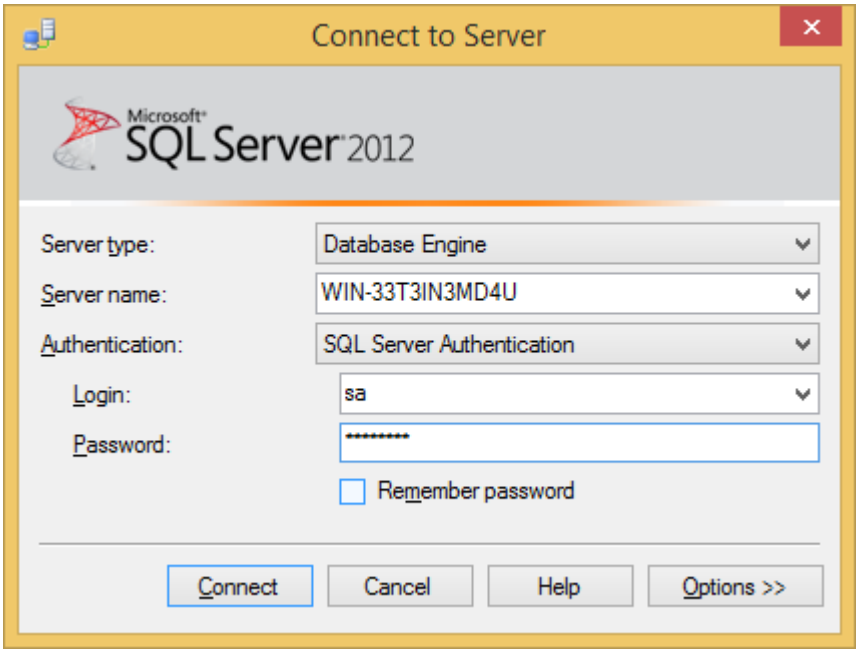


After downloading extract file in folder.

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

1. Open SQL Server Management Studio 2012

2. Connect Database Engine



Password for sa : admin123 (as given during installation)

Click Connect.

3. Open New Query editor

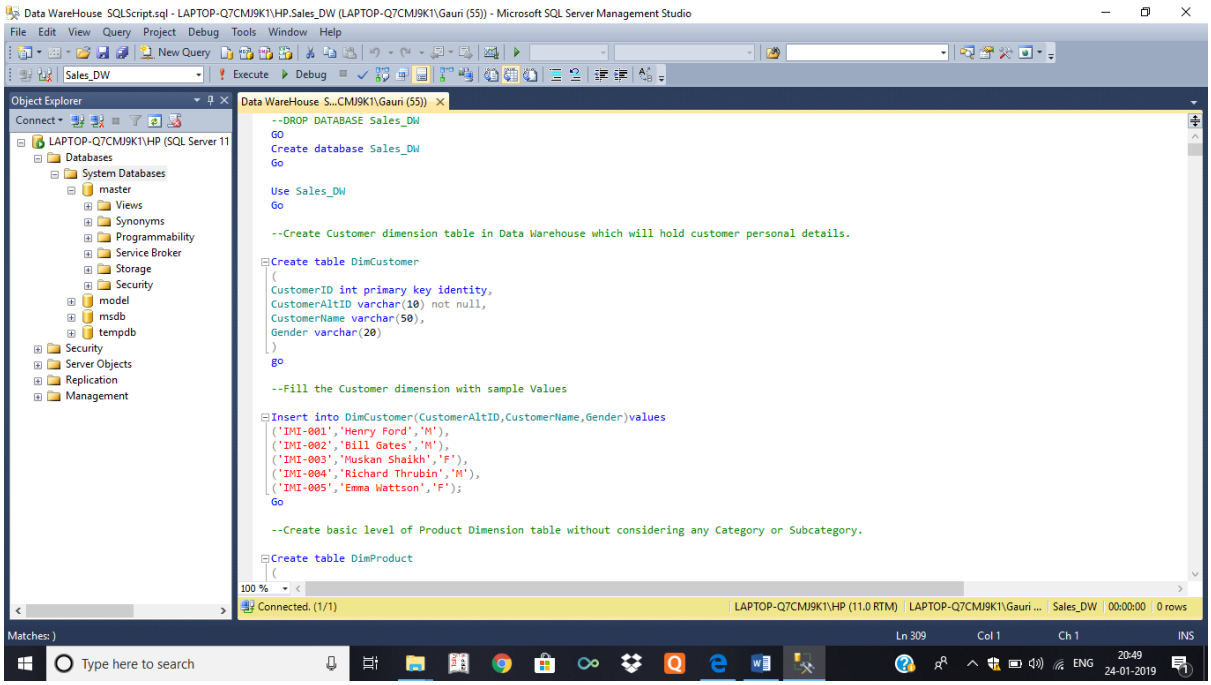
4. Copy paste Scripts given below in various steps in new query editor window one by one

5. To run the given SQL Script, press F5

6. It will create and populate "Sales_DW" database on your SQL Server

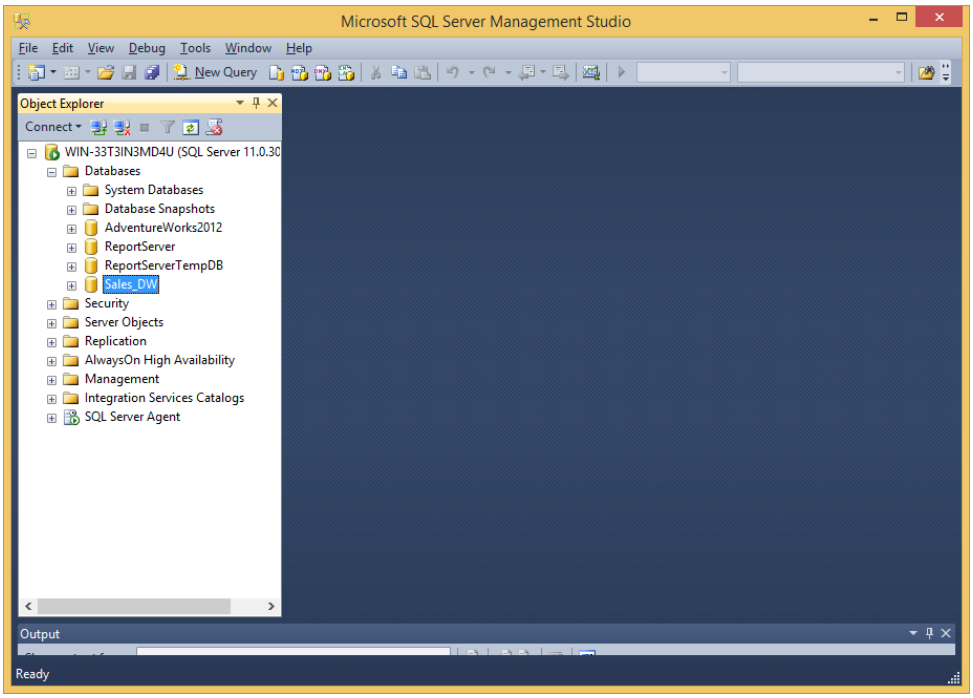
OR

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



3. **Click on execute or press F5 by selecting query one by one or directly click on Execute.**

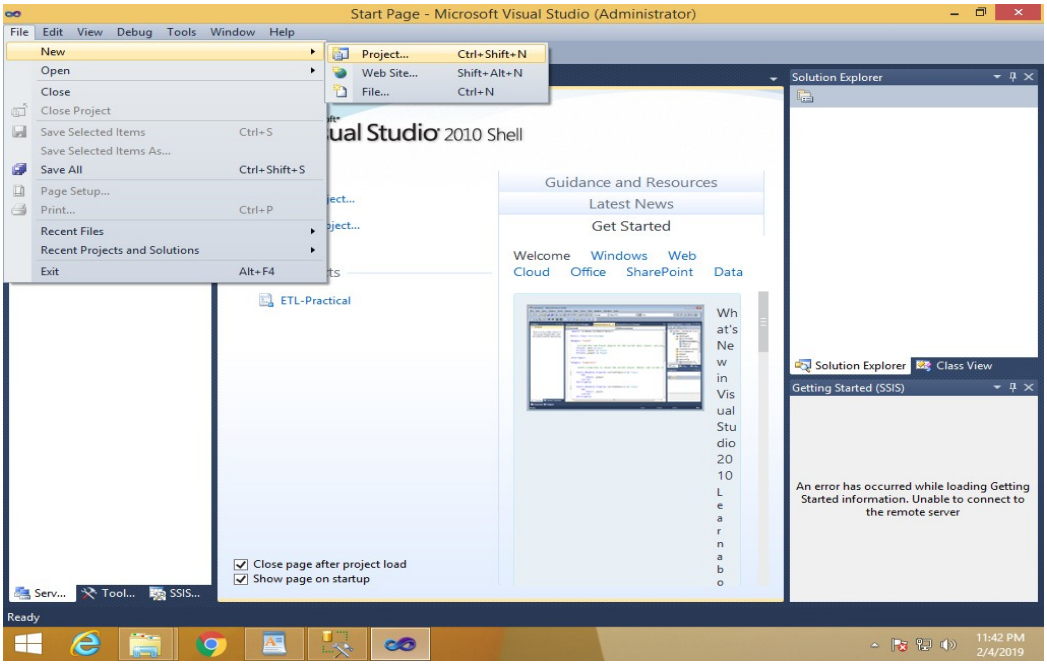
4. **After completing execution save and close SQL Server Management studio & Reopen to see Sales_DW in Databases Tab.**



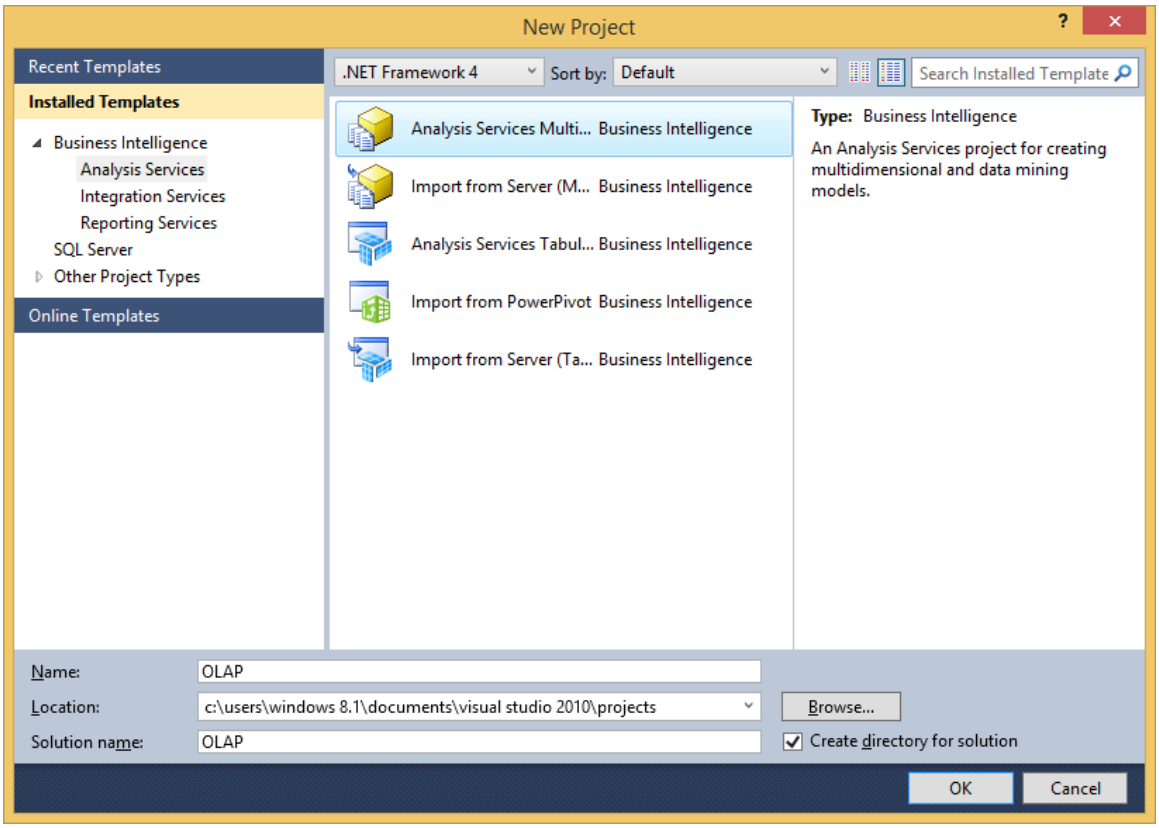
Step 2: Start SSDT environment and create New Data Source

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

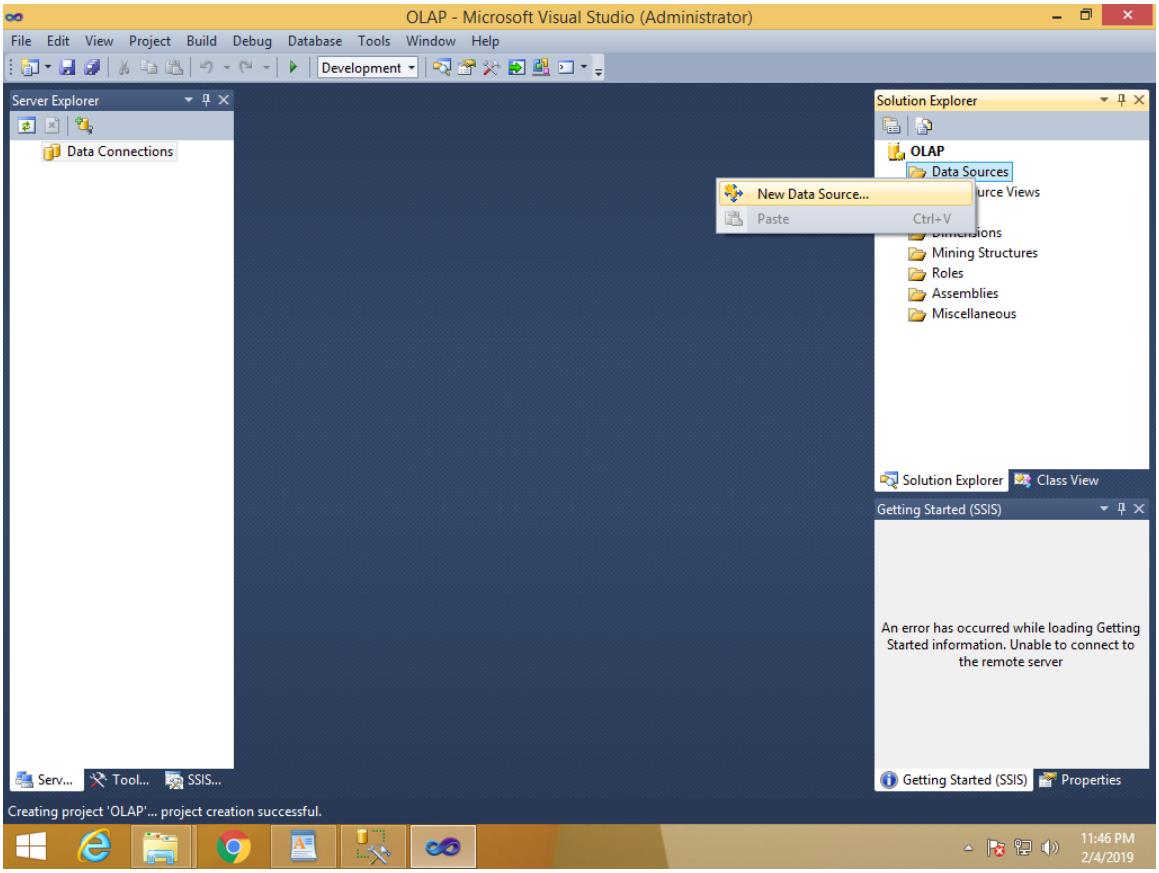
Click on File → New → Project



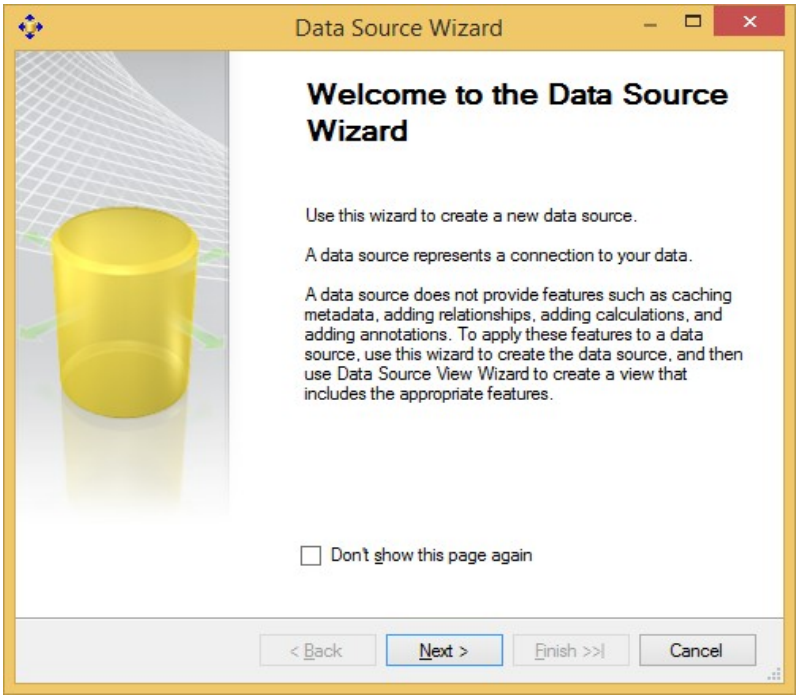
In Business Intelligence → Analysis Services Multidimensional and Data Mining models → appropriate project name → click OK



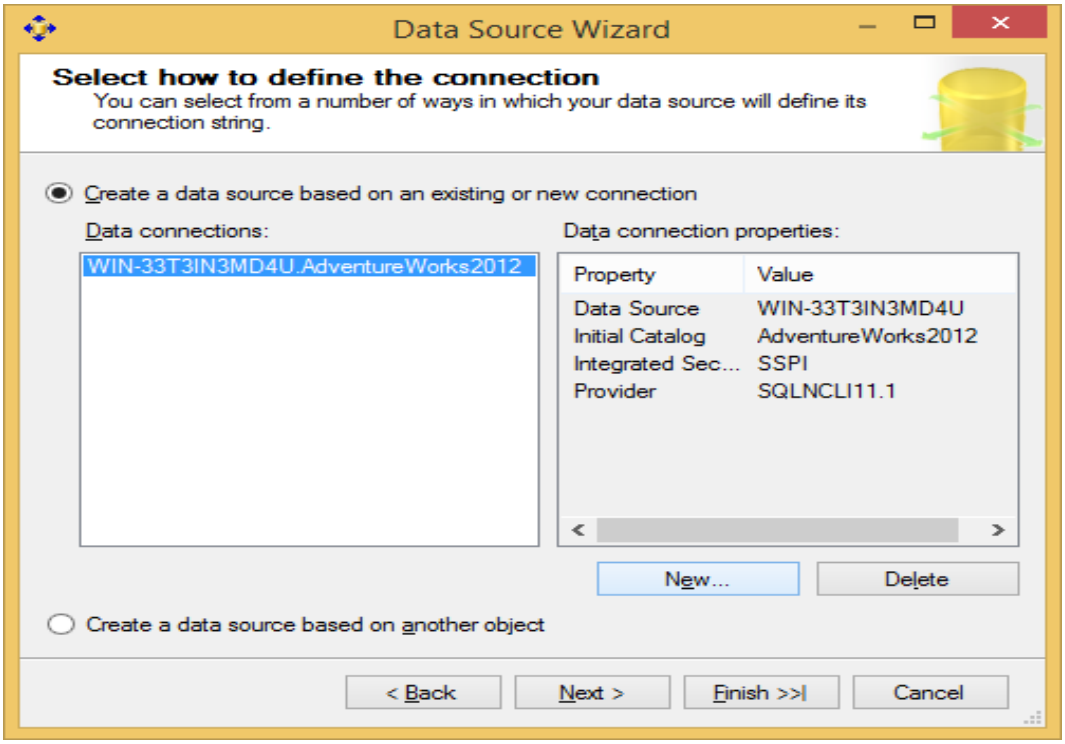
Right click on Data Sources in solution explorer → New Data Source



Data Source Wizard appears

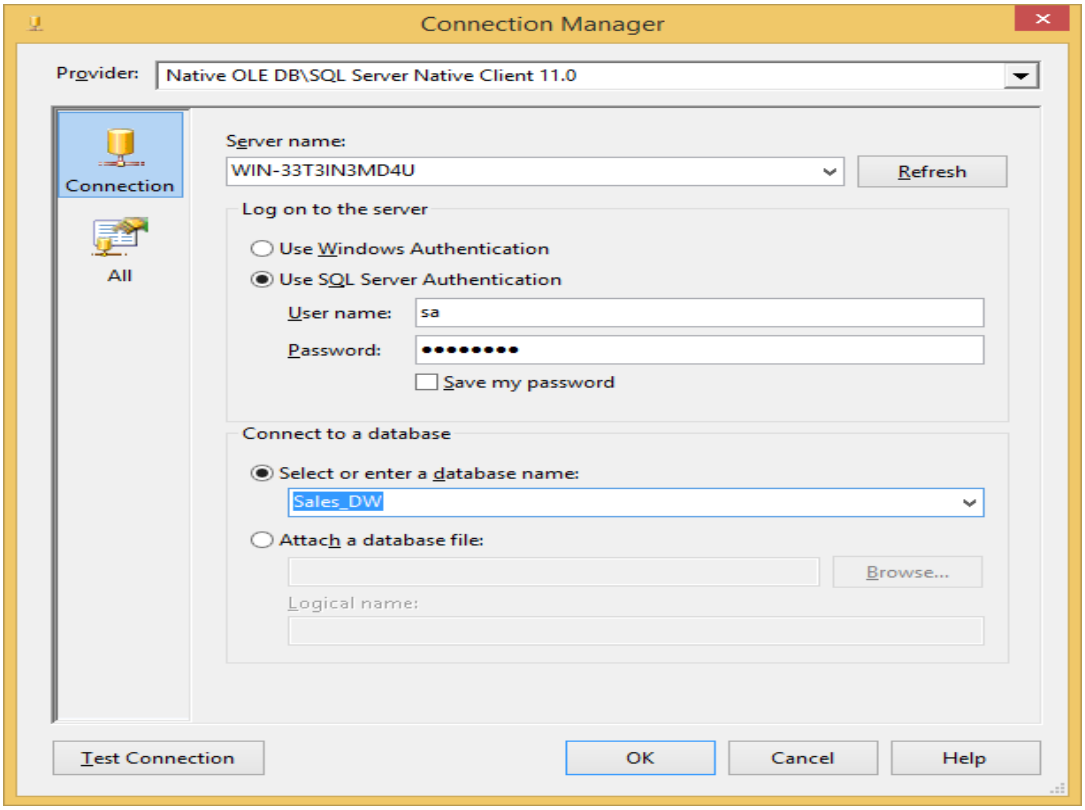


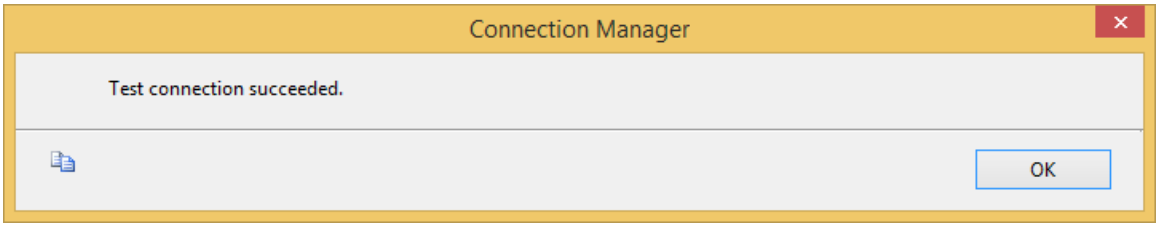
Click on New



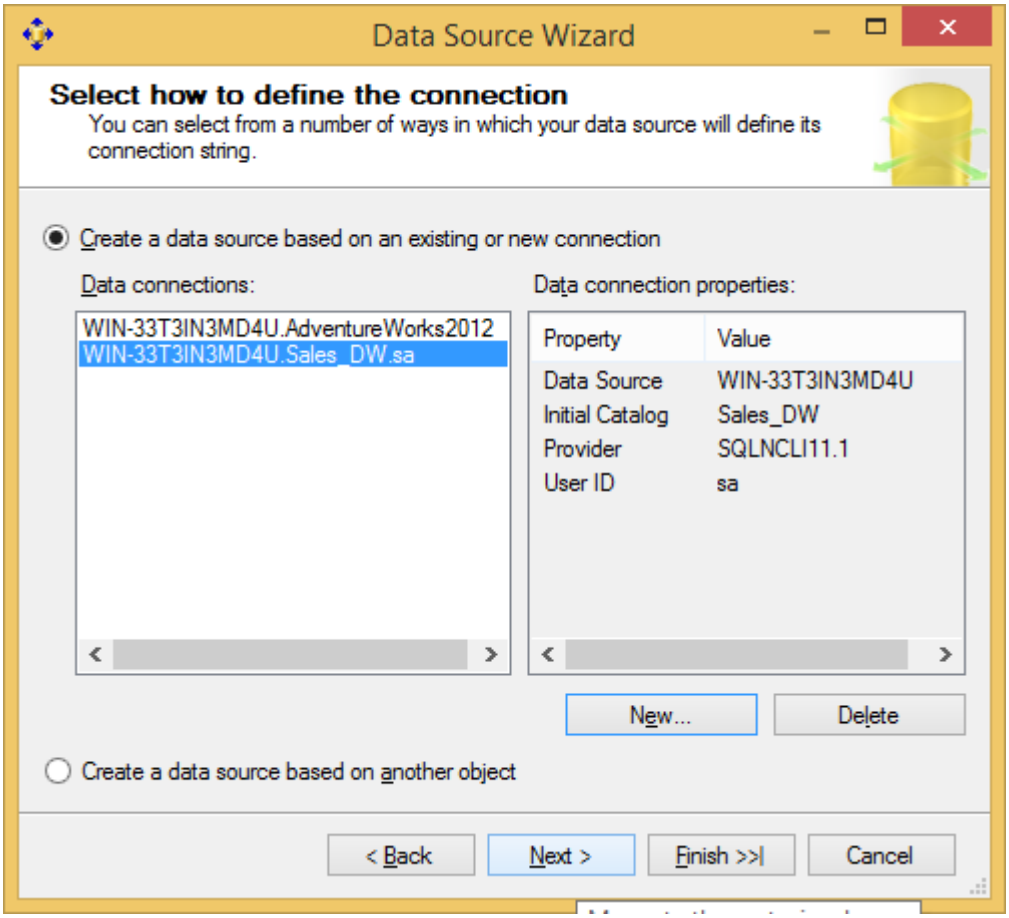
Select Server Name → select Use SQL Server Authentication → Select or enter a database name (Sales_DW)

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

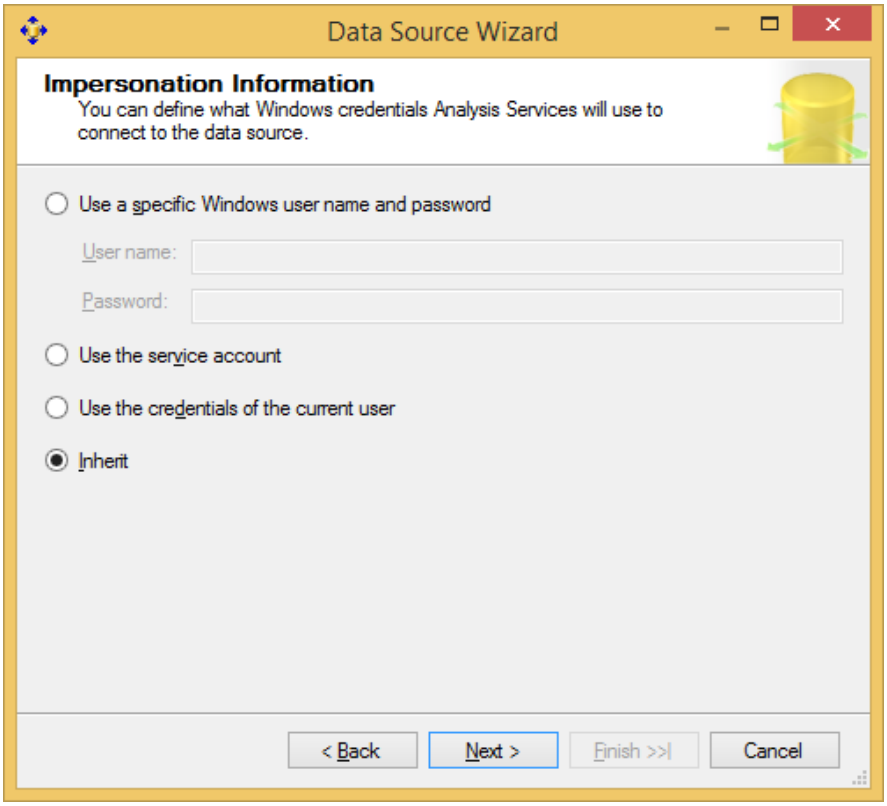




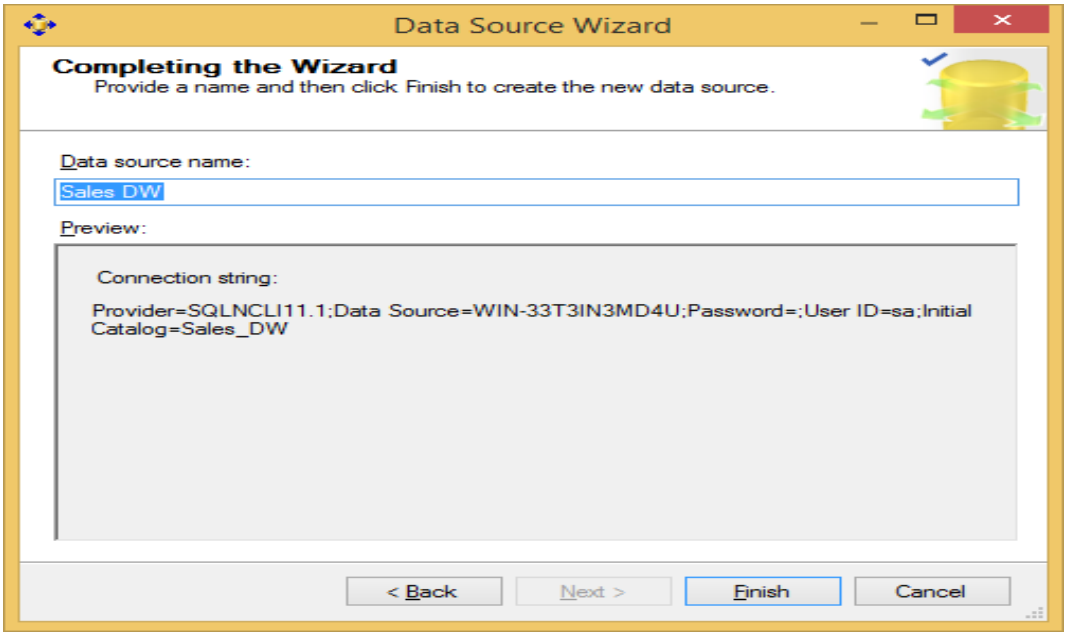
Click Next



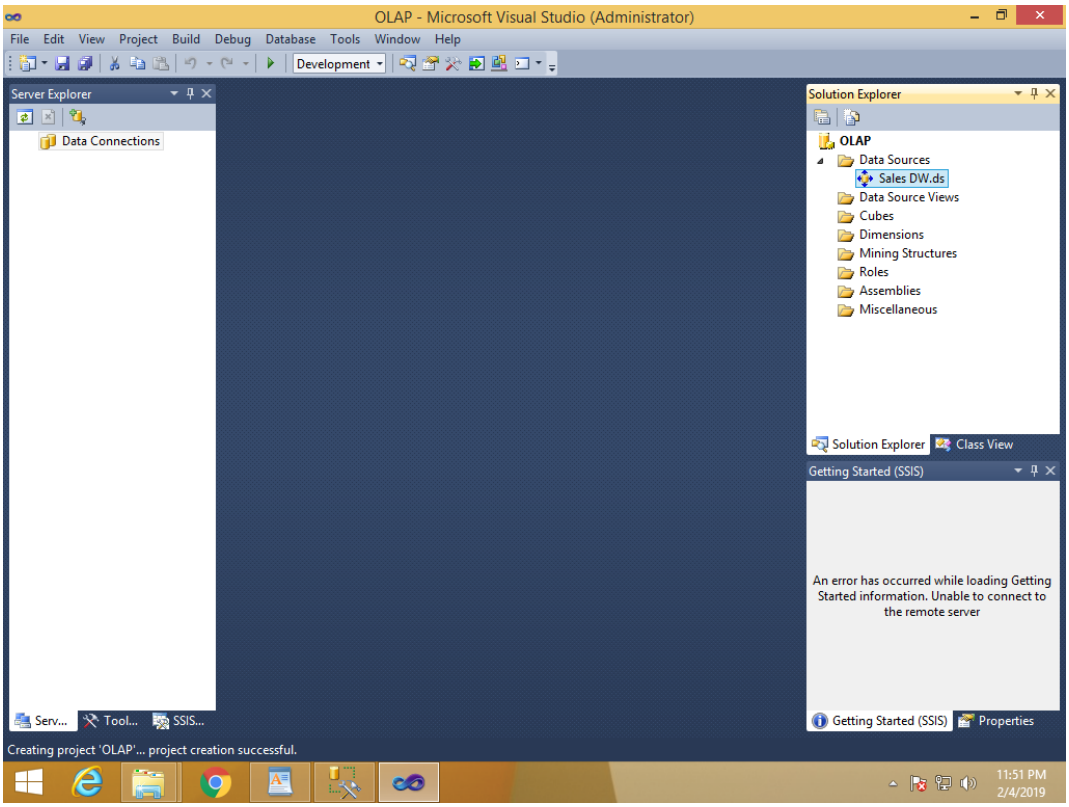
Select Inherit → Next



Click Finish

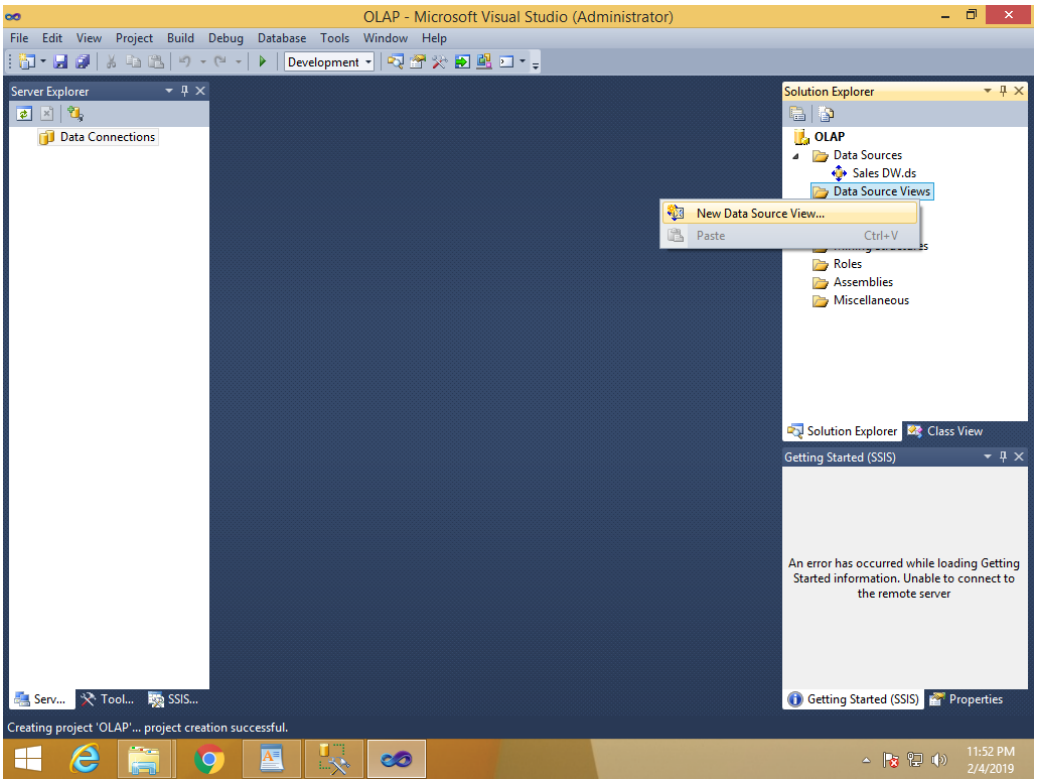


Sales_DW.ds gets created under Data Sources in Solution Explorer

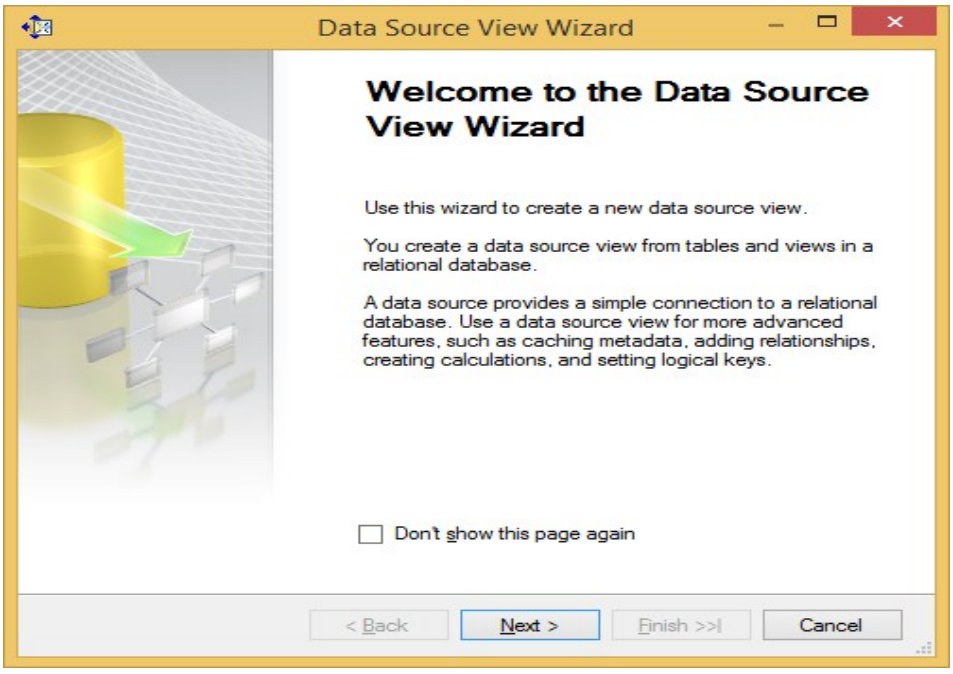


Step 3: Creating New Data Source View

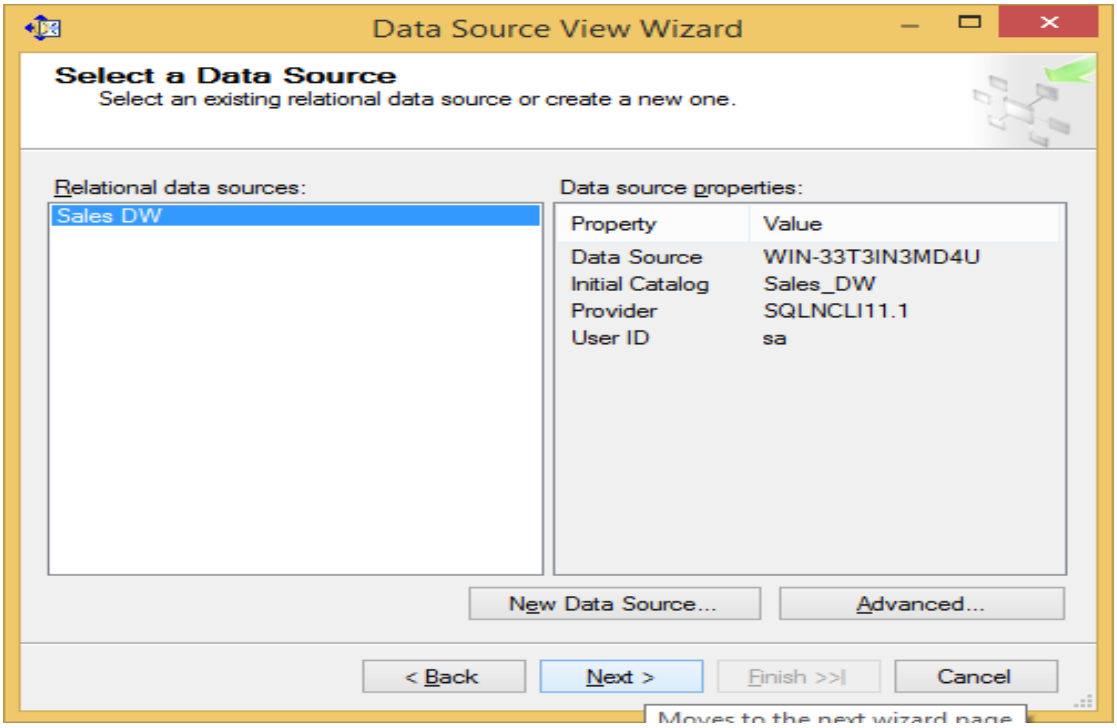
In Solution explorer right click on Data Source View → Select New Data Source View



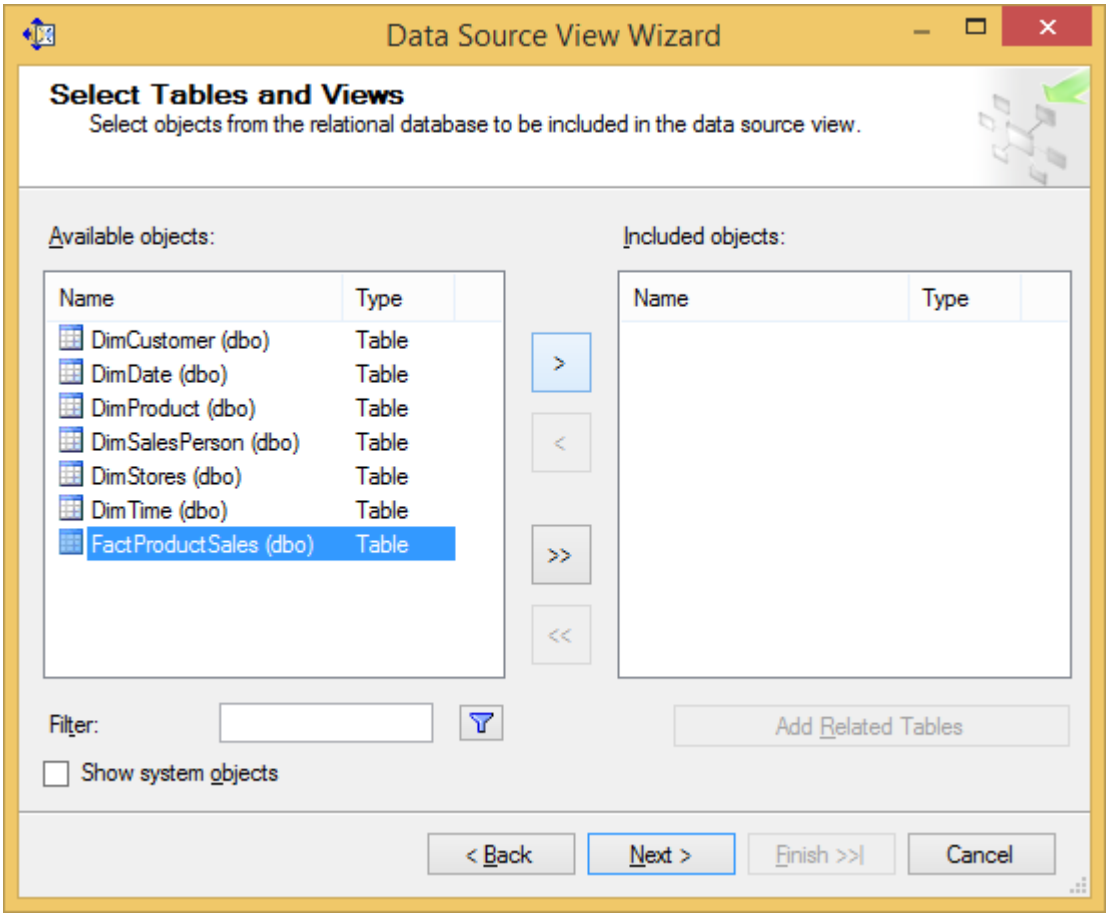
Click Next

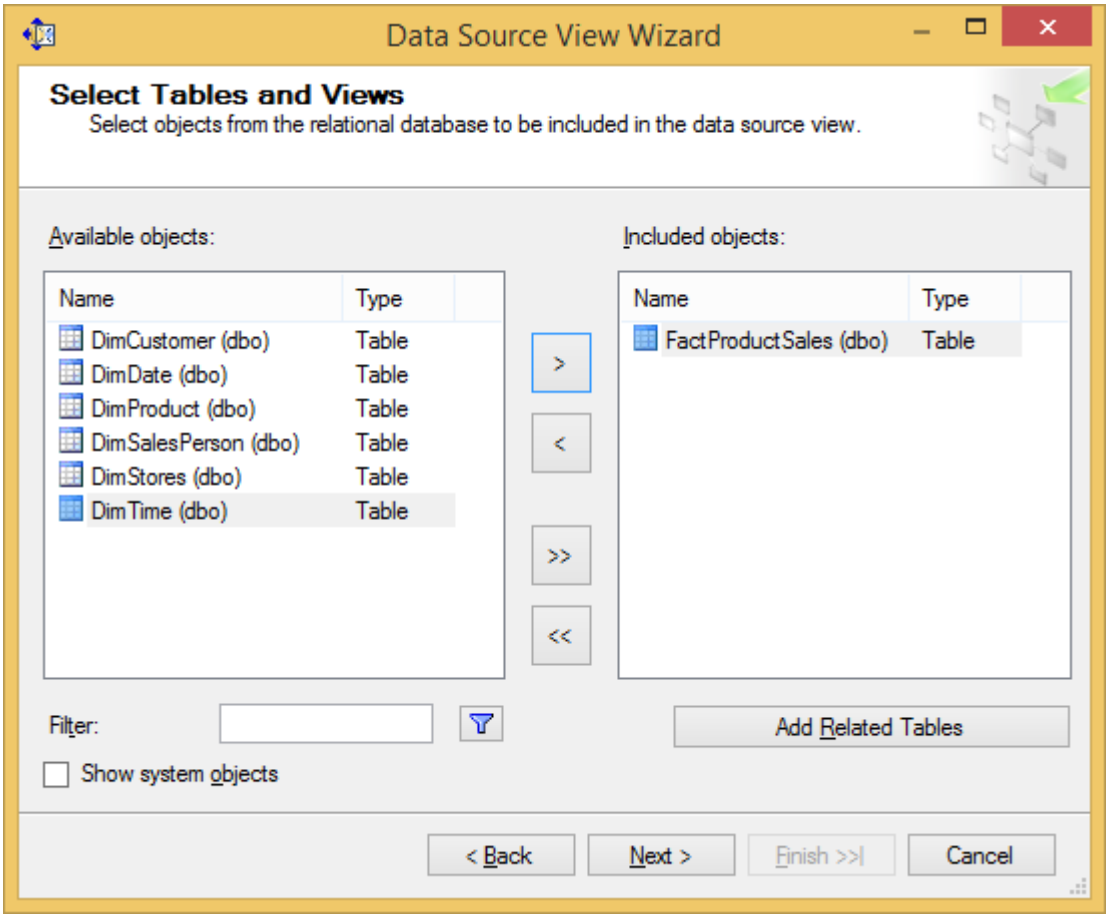


Click Next

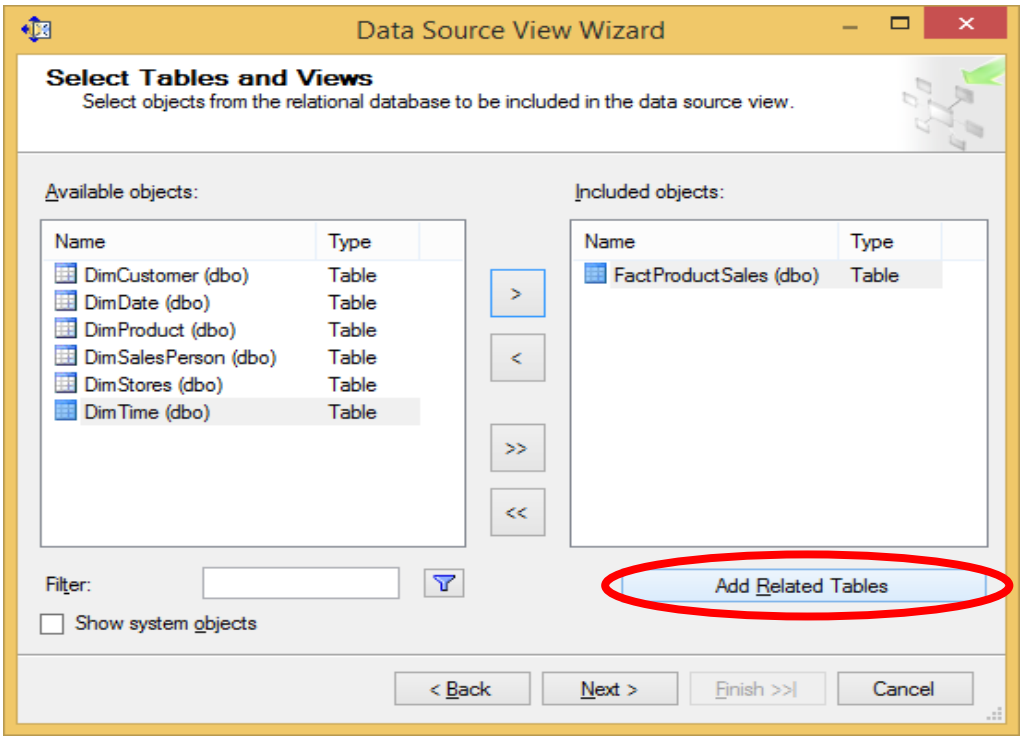


Select FactProductSales(dbo) from Available objects and put in Includes Objects by clicking on >

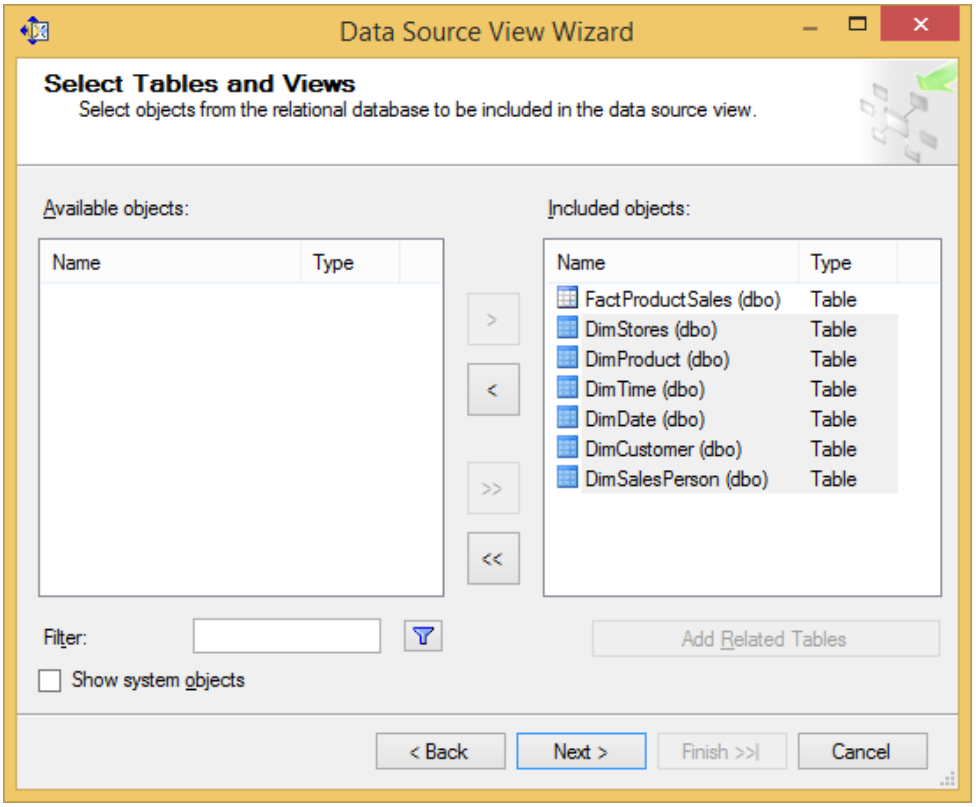




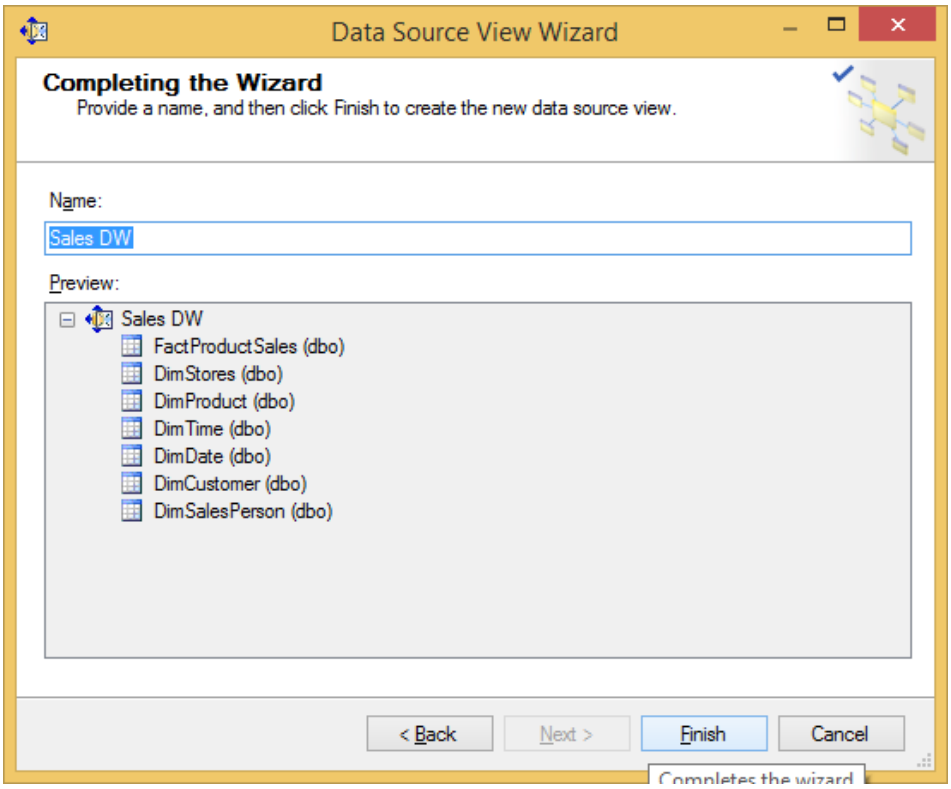
Click on Add Related Tables



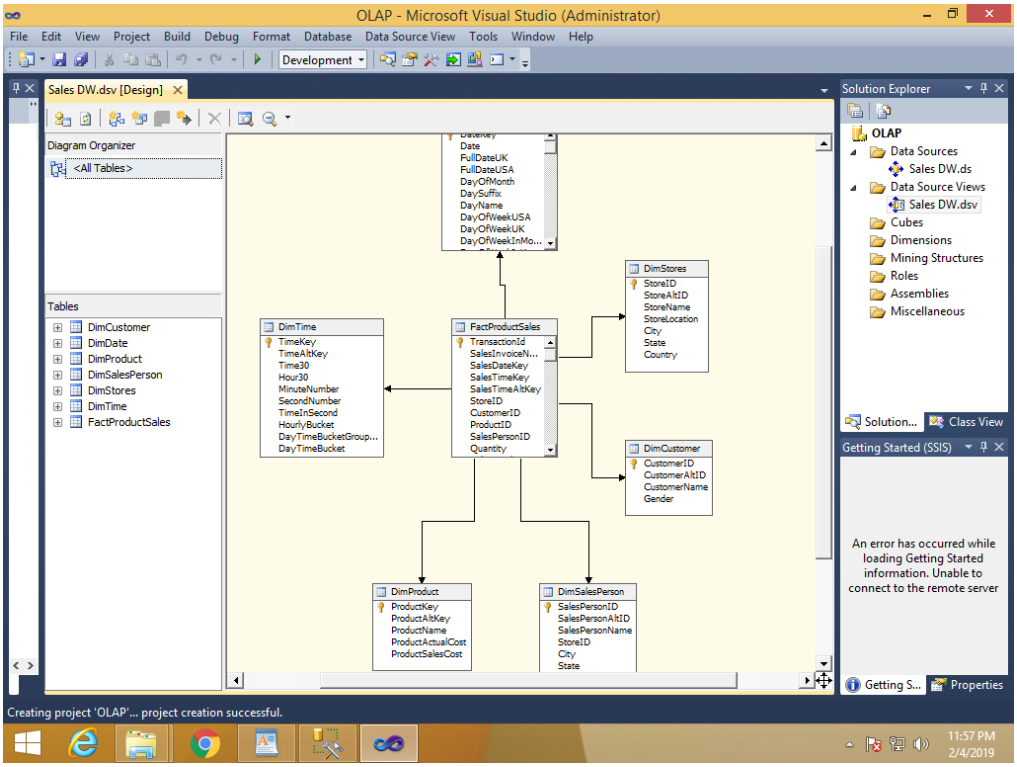
Click Next



Click Finish

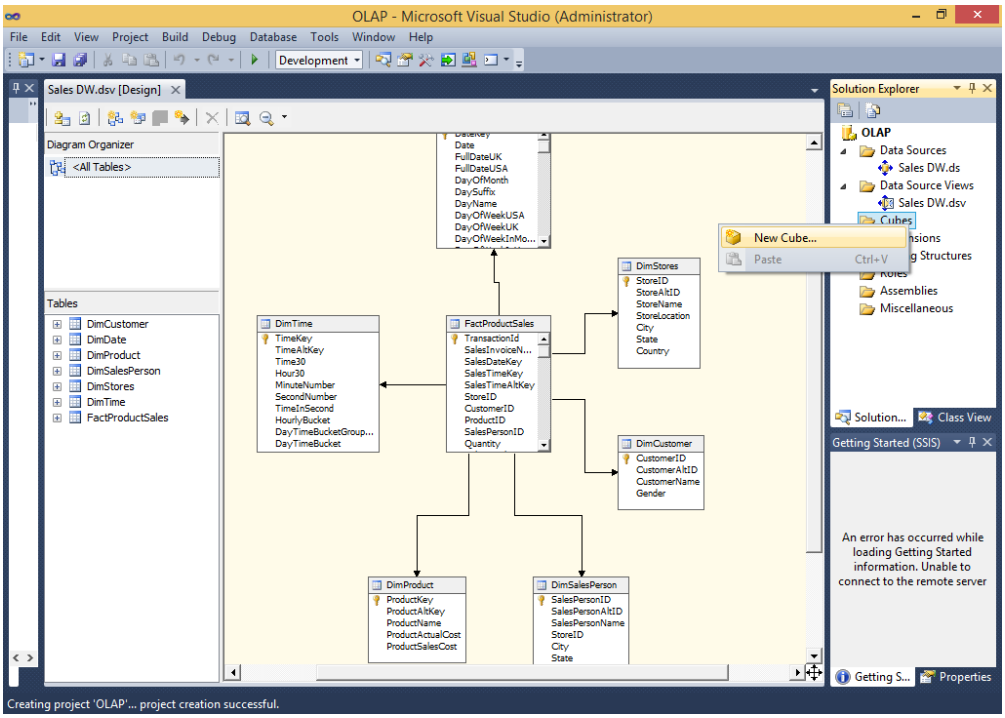


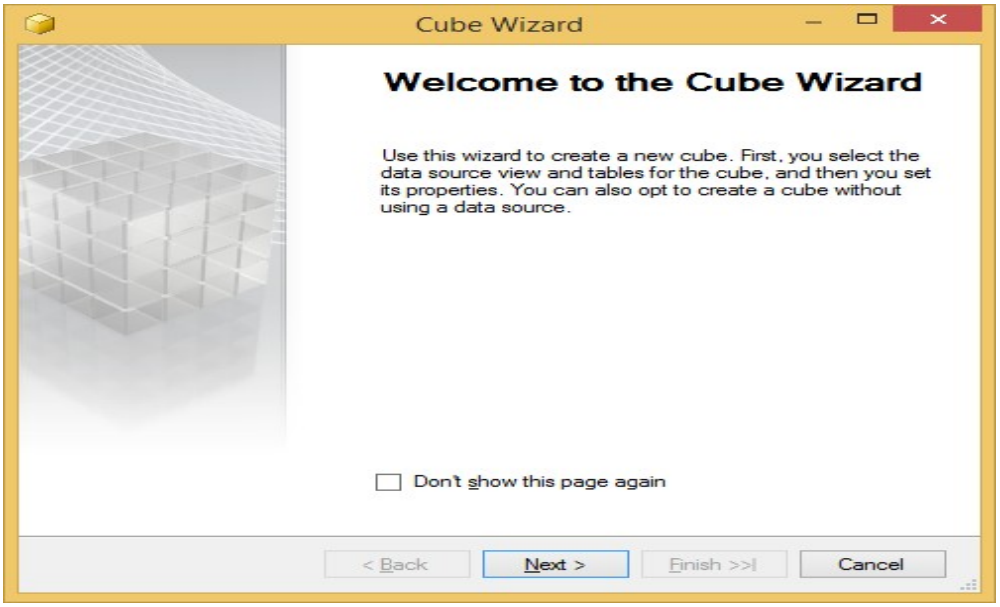
Sales DW.dsv appears in Data Source Views in Solution Explorer.



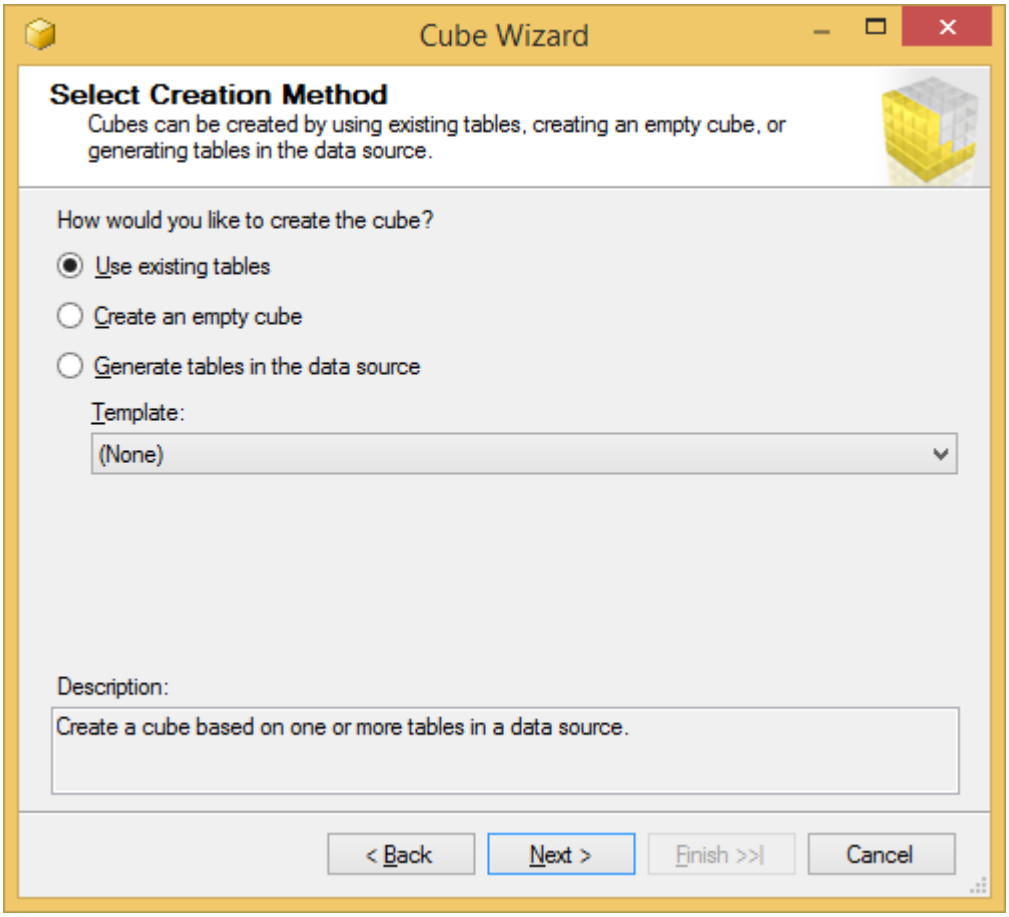
Step 4: Creating new cube

Right click on Cubes → New Cube

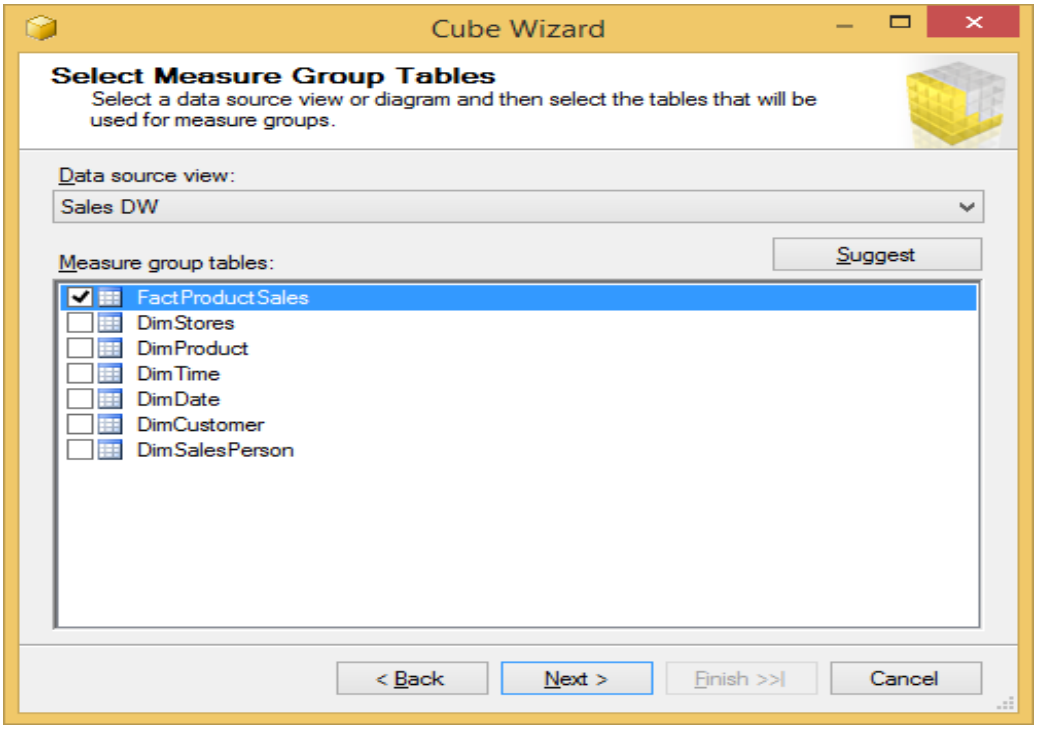




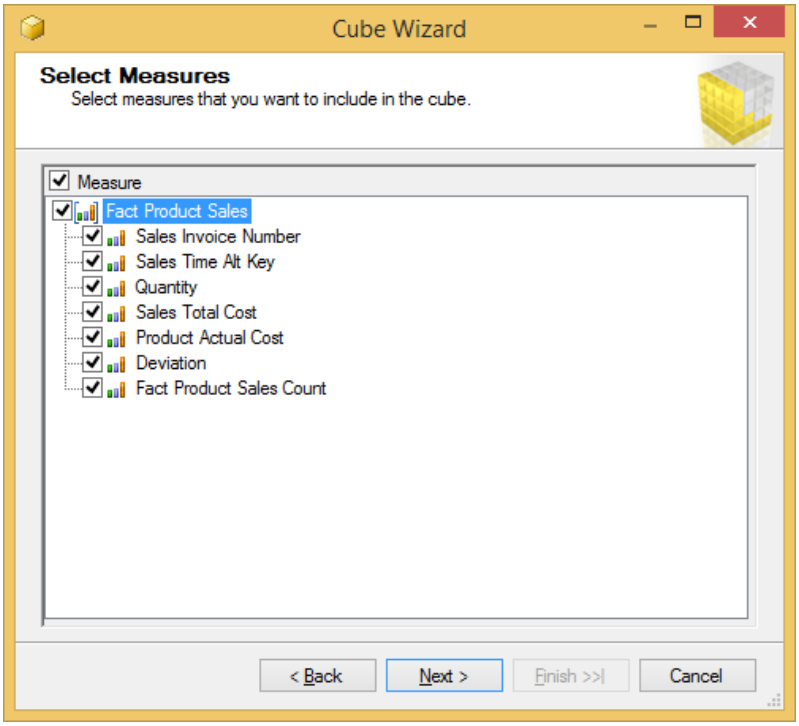
Select Use existing tables in Select Creation Method → Next



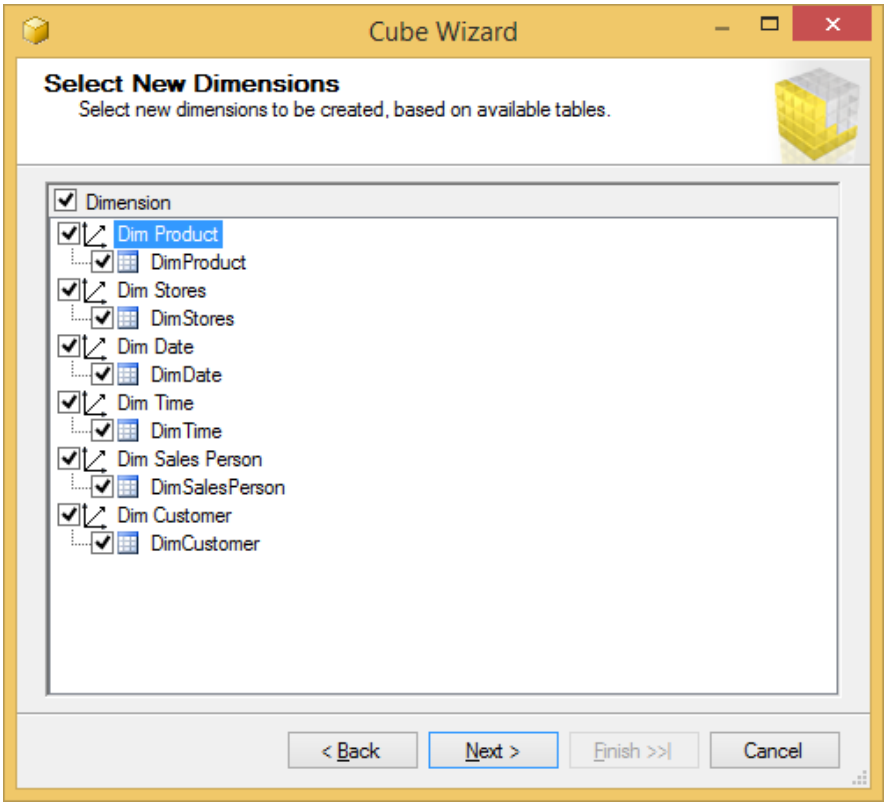
In Select Measure Group Tables → Select FactProductSales → Click Next



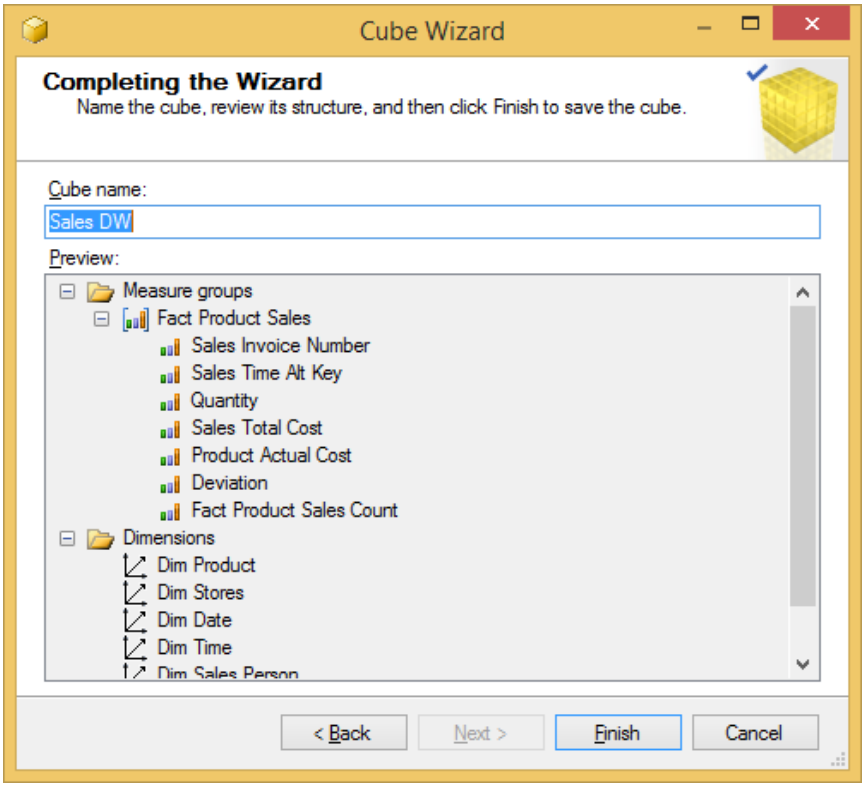
In Select Measures → check all measures → Next



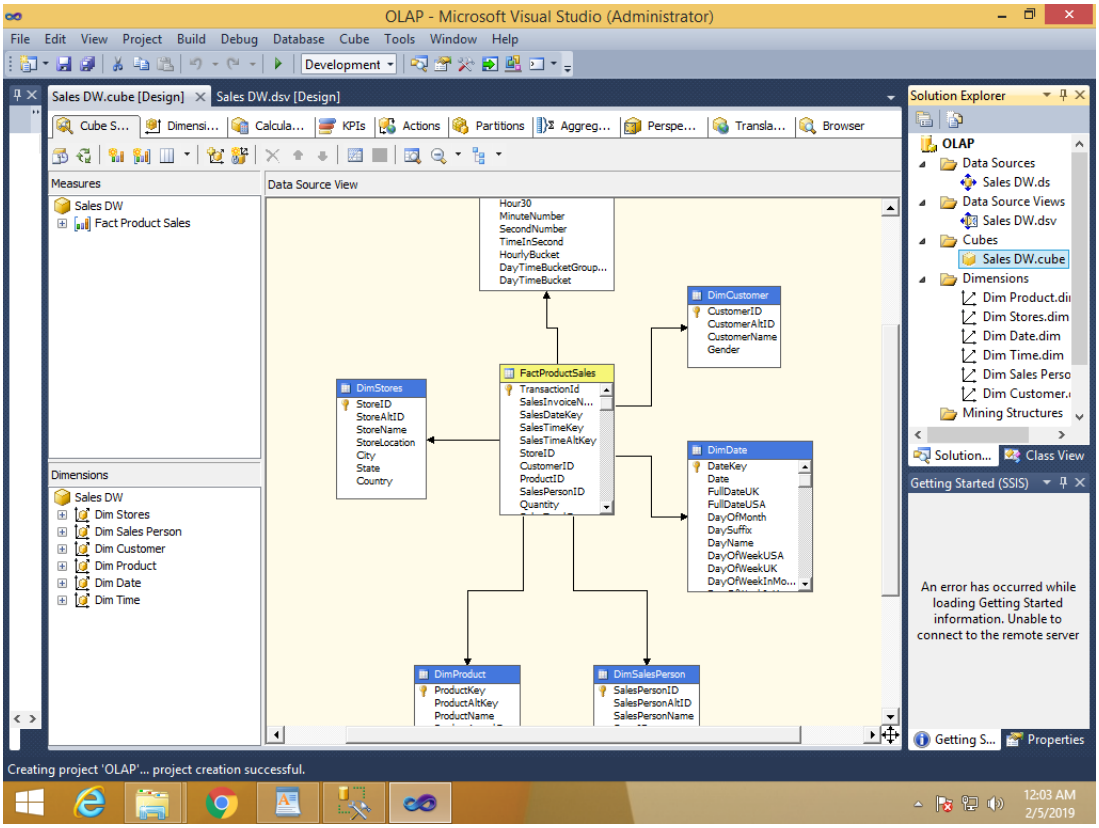
In Select New Dimensions → Check all Dimensions → Next



Click on Finish

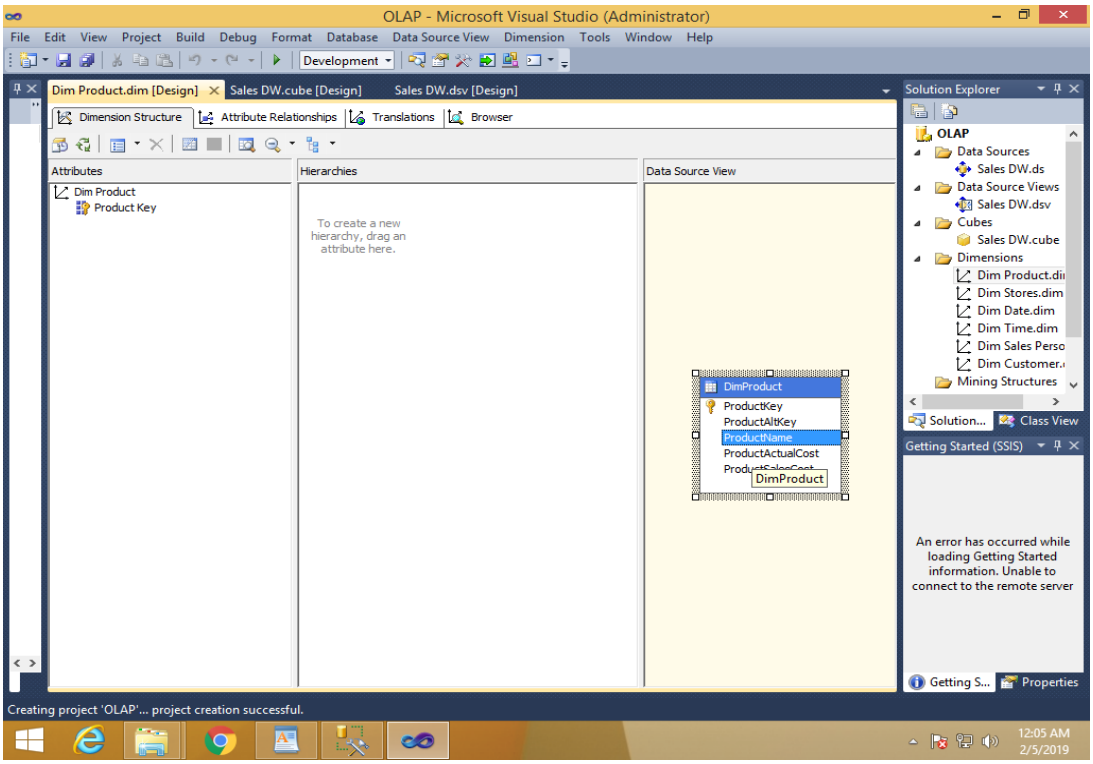


Sales_DW.cube is created

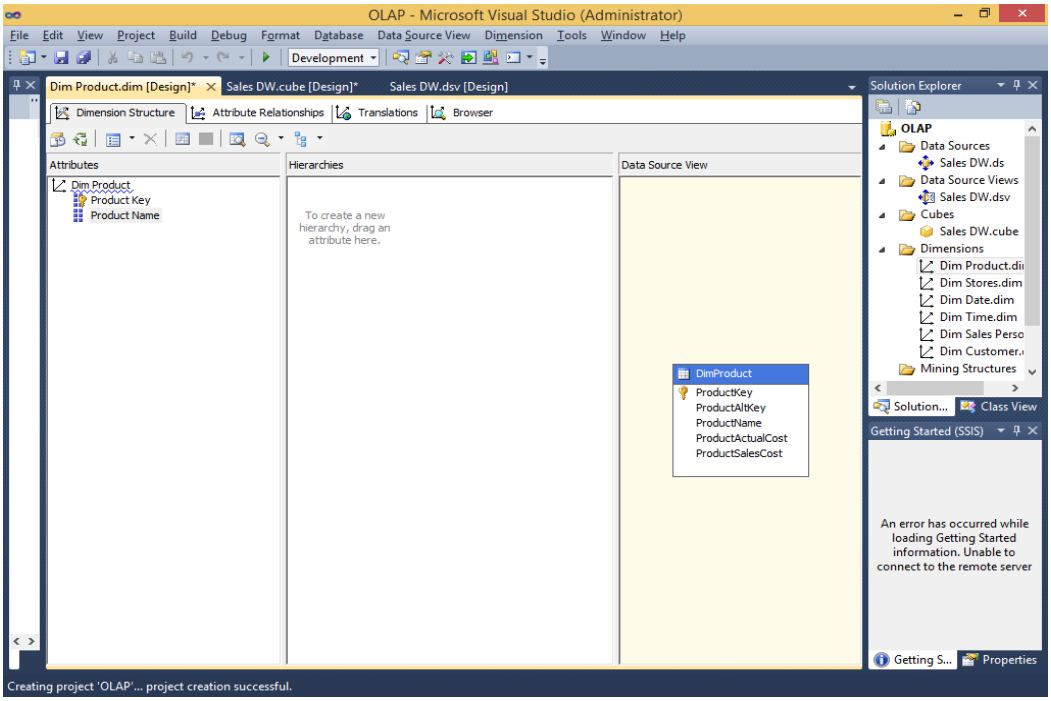


Step 5: Dimension Modification

In dimension tab → Double Click Dim Product.dim



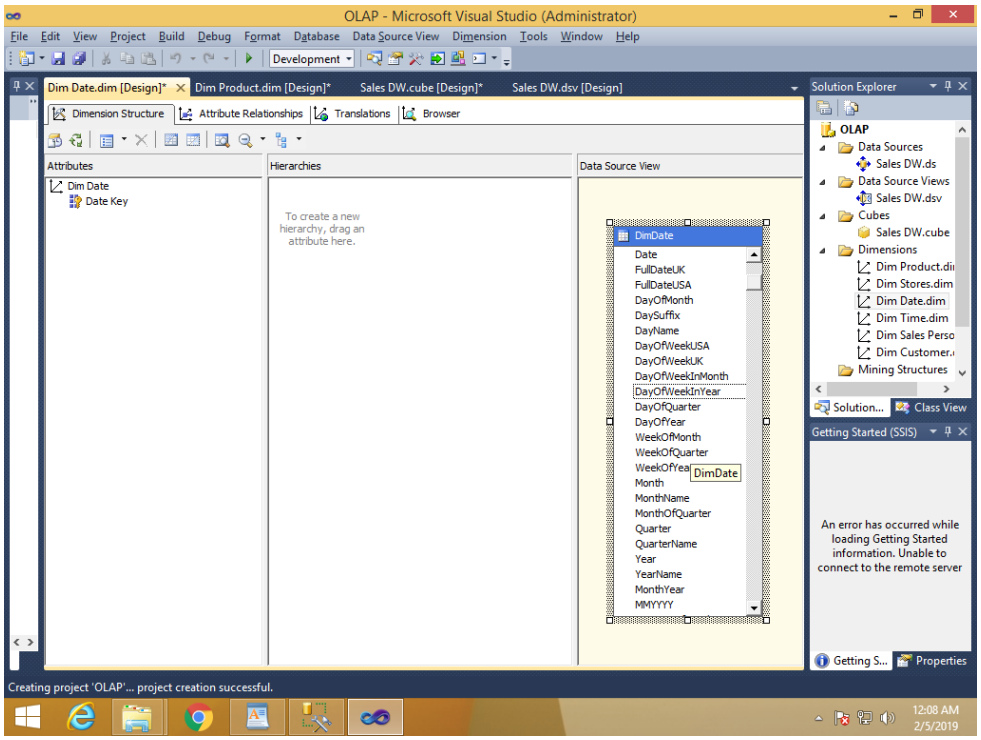
Drag and Drop Product Name from Table in Data Source View and Add in Attribute Pane at left side

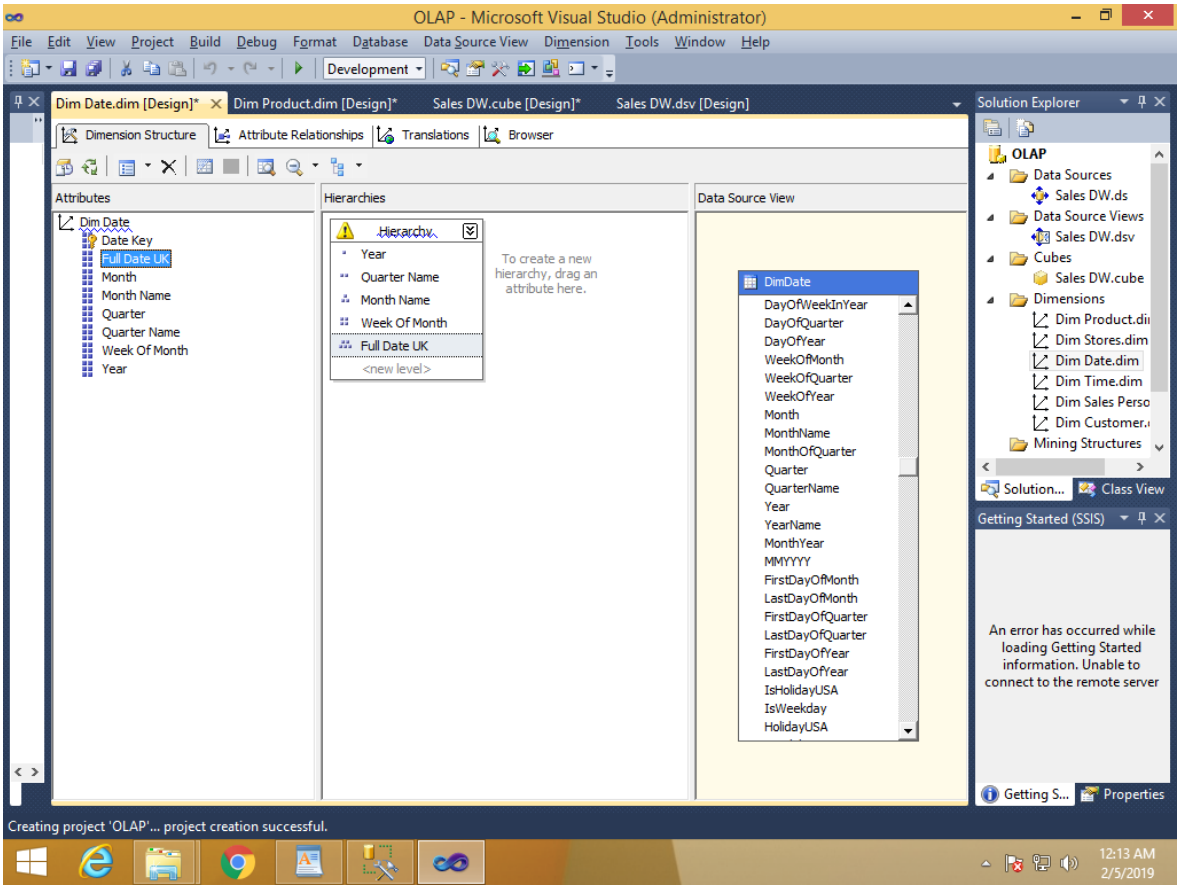


Step 6: Creating Attribute Hierarchy in Date Dimension

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.

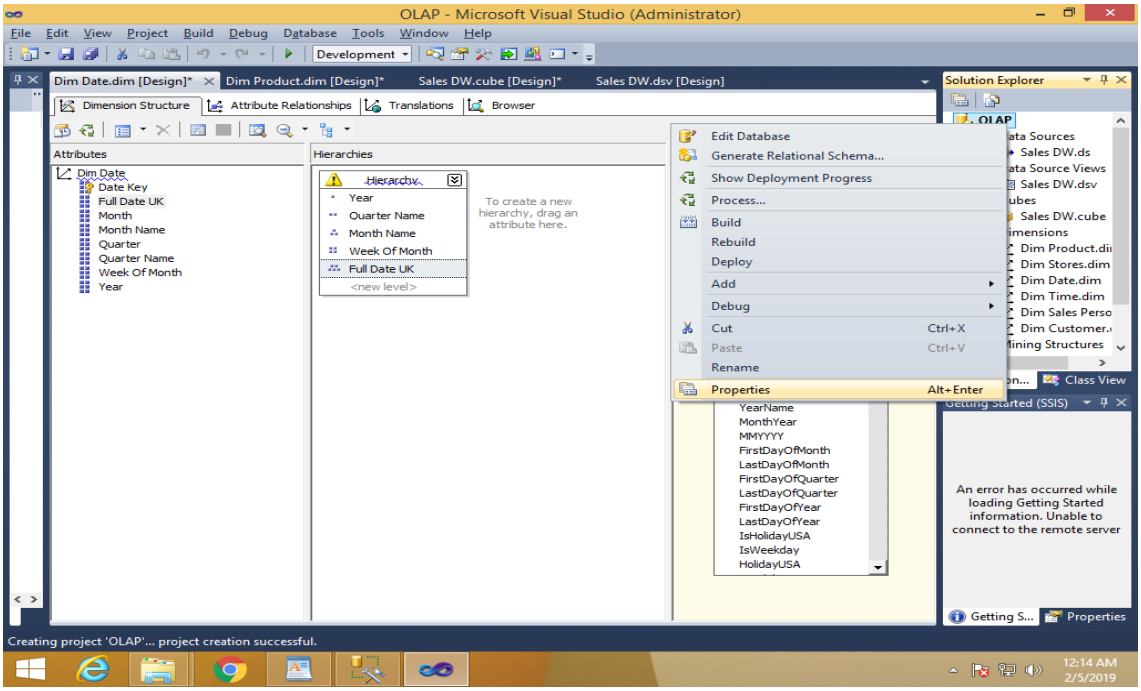
Drag fields in sequence from Attributes to Hierarchy window (Year, Quarter Name, Month Name, Week of the Month, Full Date UK)



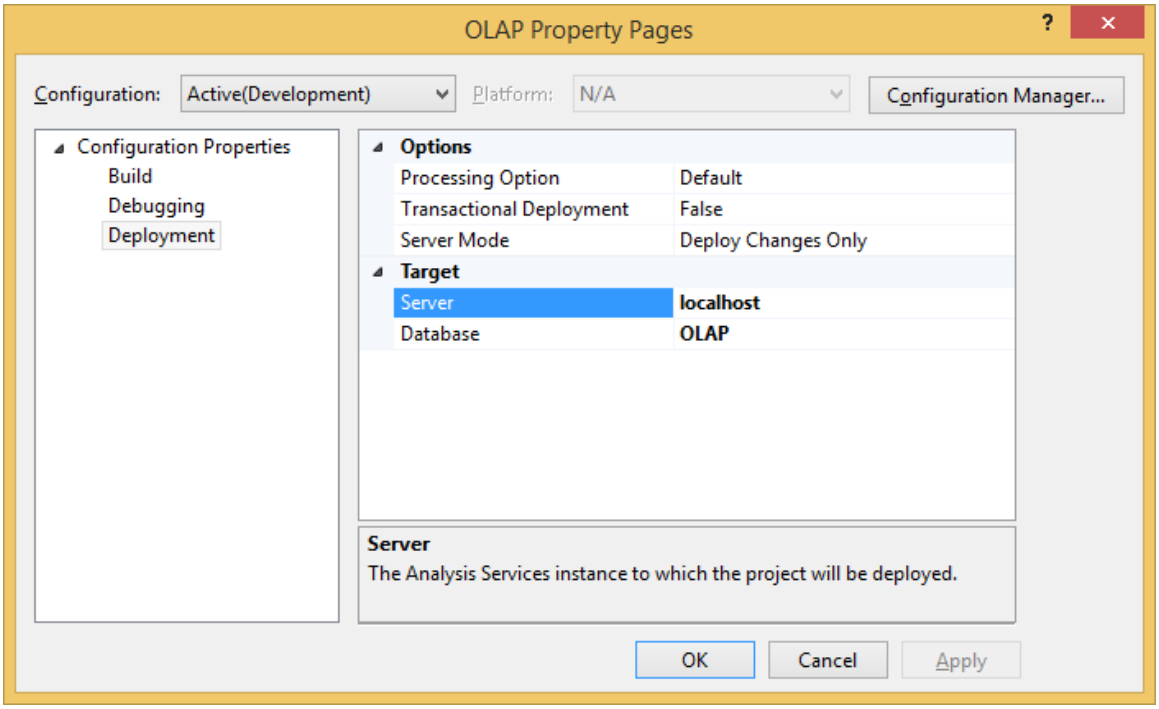


Step 7: Deploy Cube

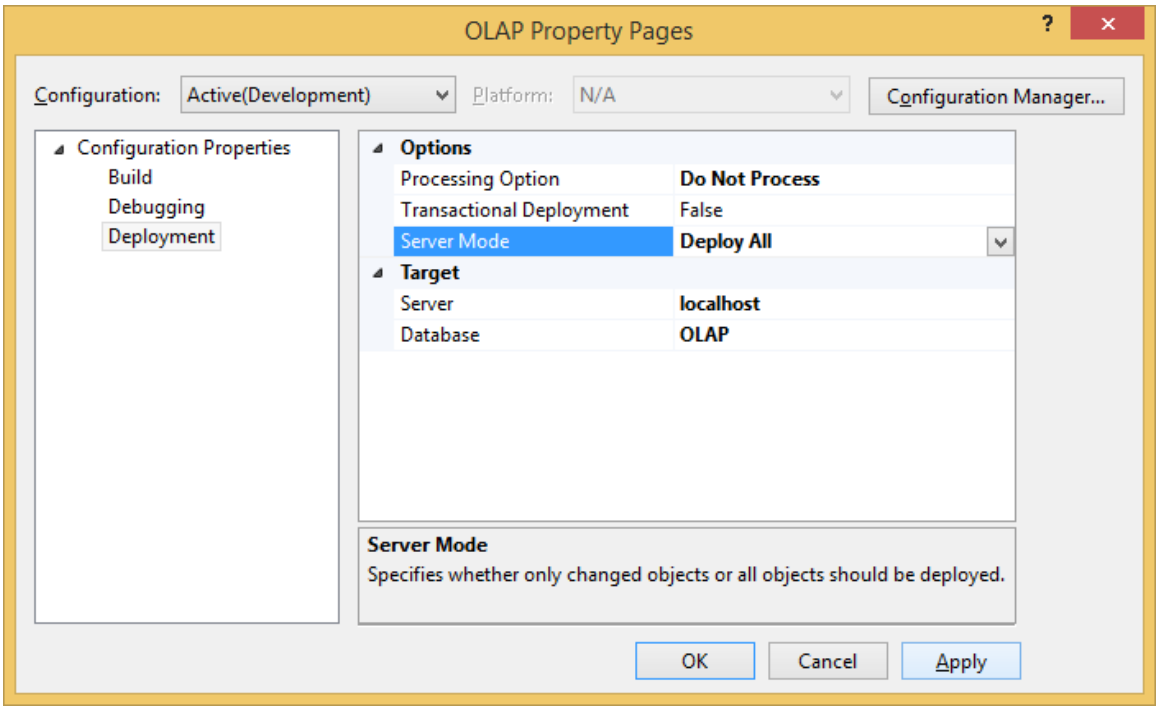
Right click on Project name → Properties



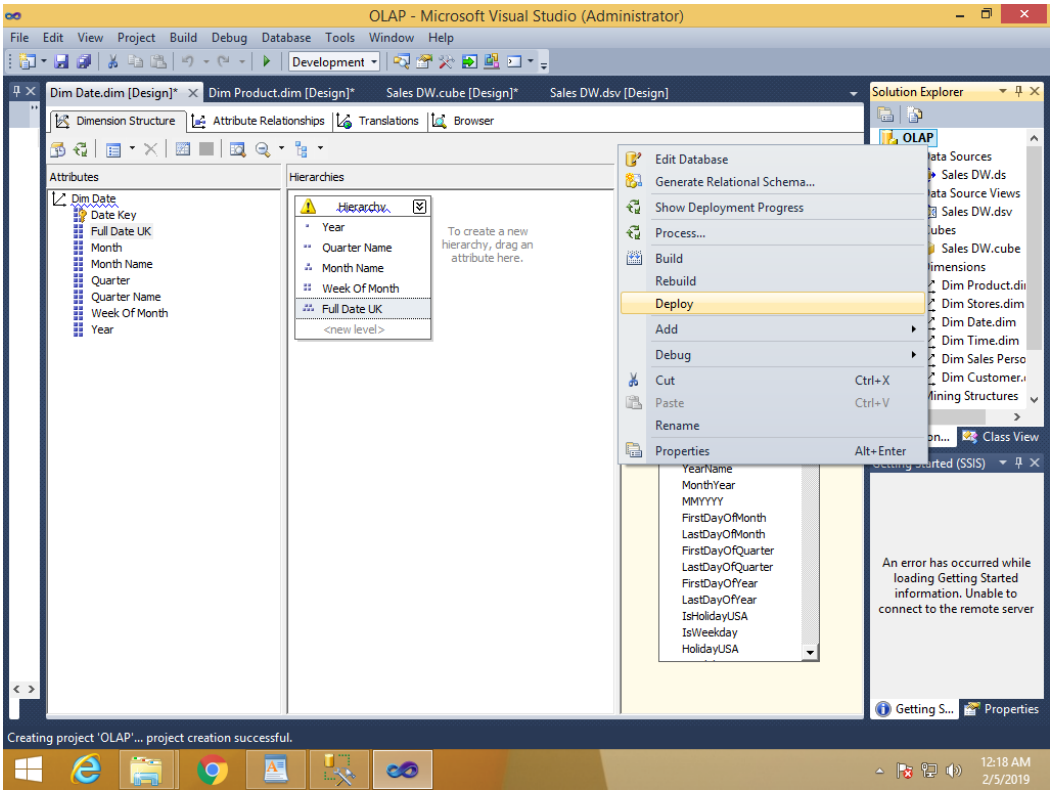
This window appaers



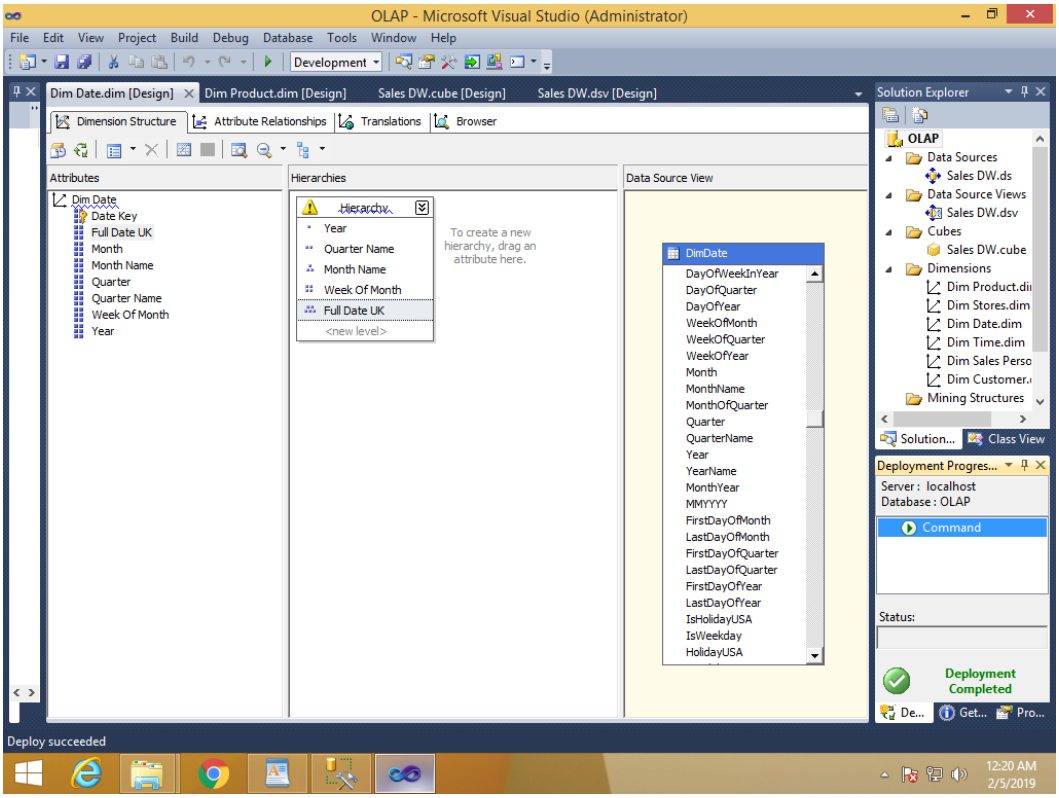
Do following changes and click on Apply & ok



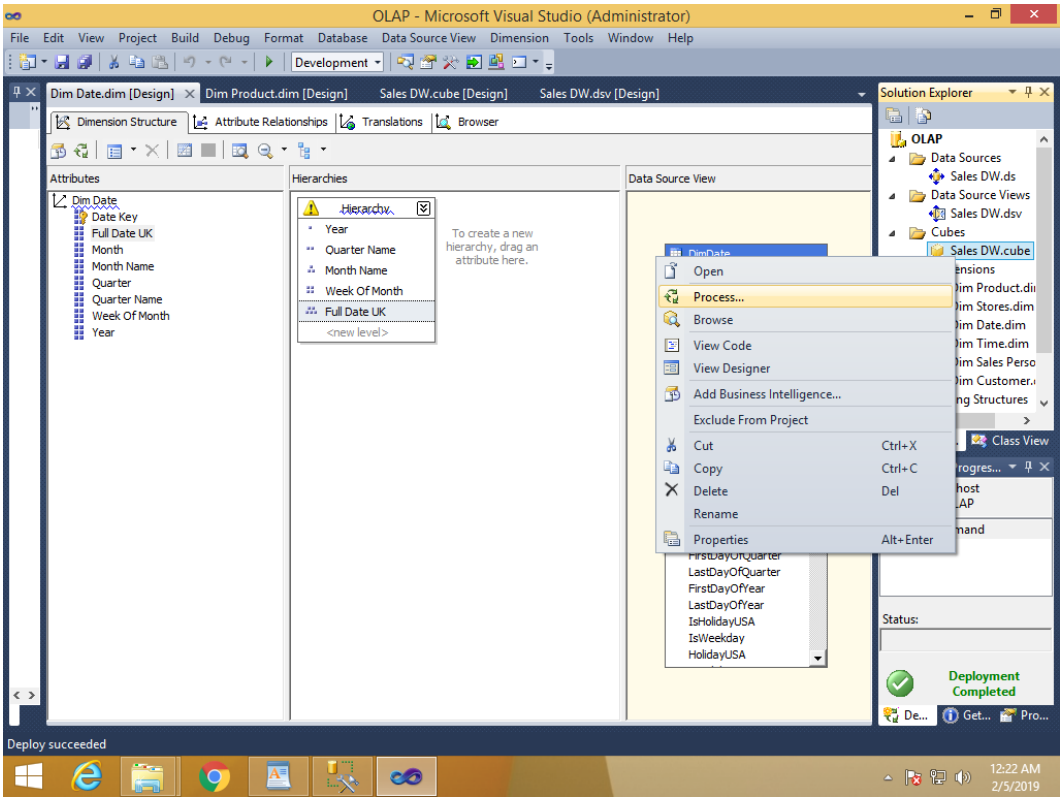
Right click on project name → Deploy



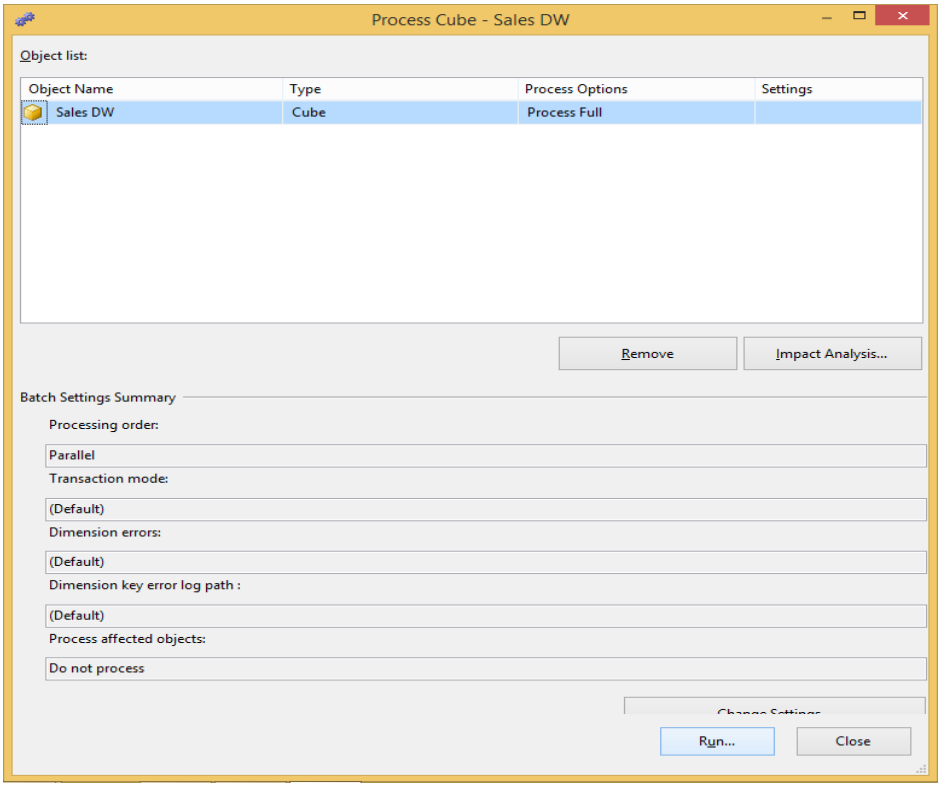
Deployment successful

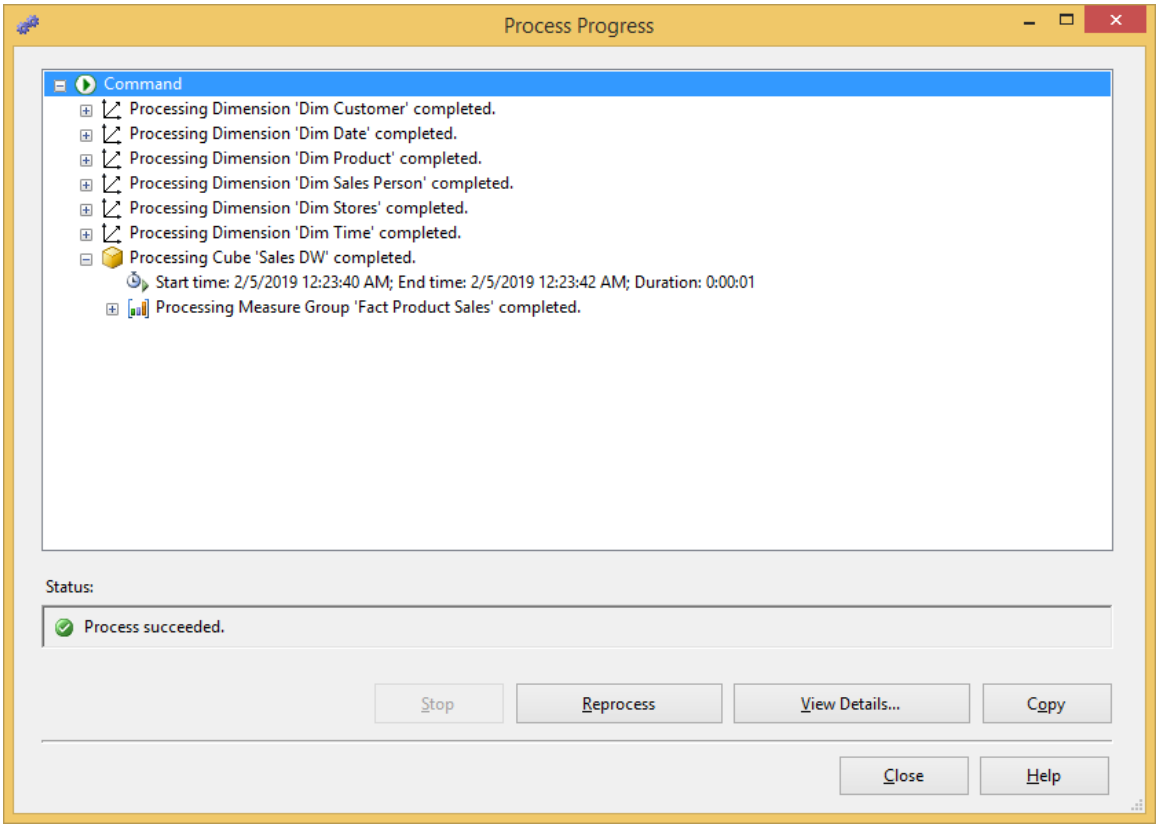


To process cube right click on Sales_DW.cube → Process

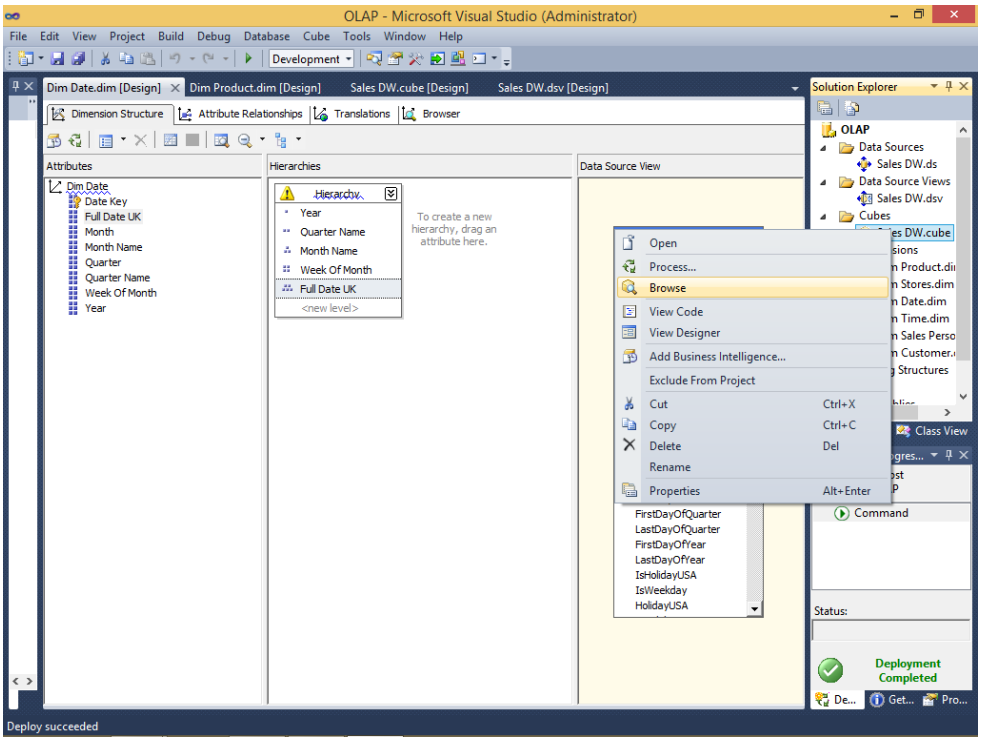


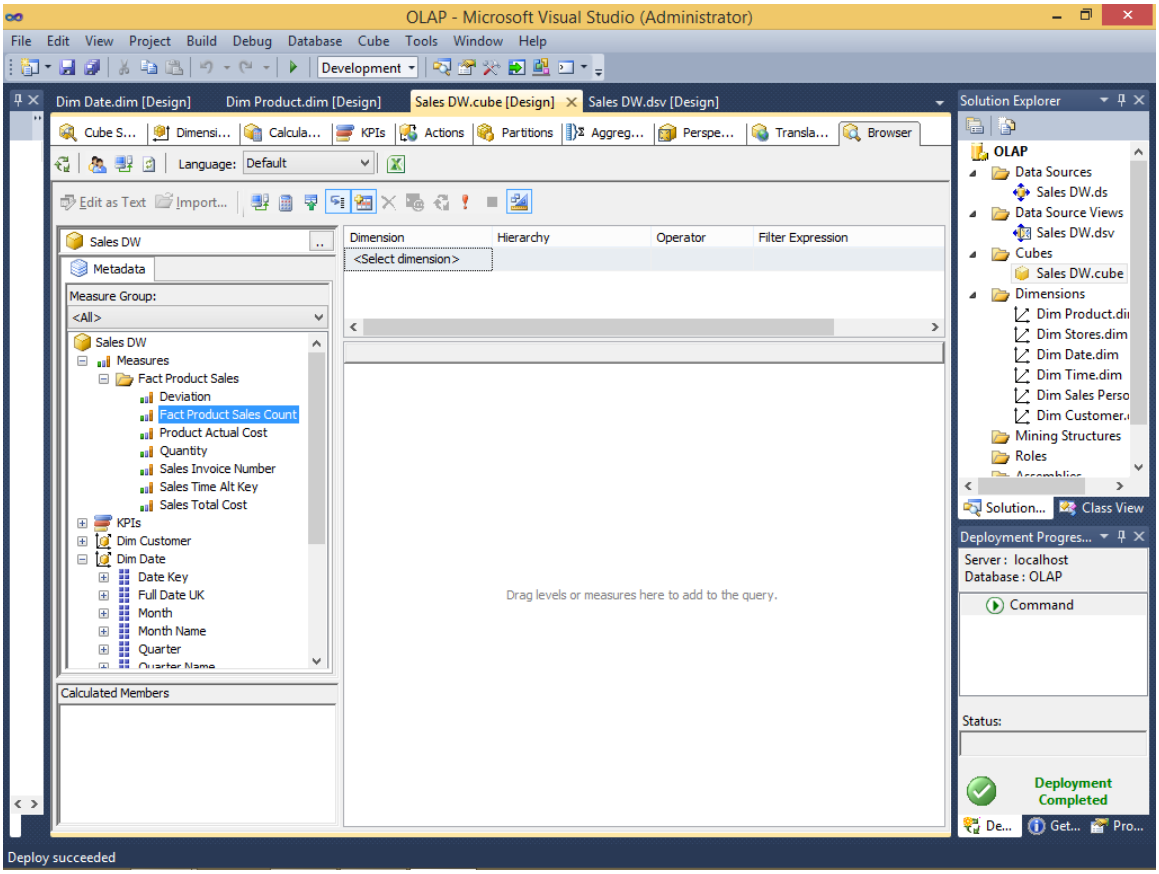
Click run





Browse the cube for analysis in solution explorer




OLAP - Microsoft Visual Studio (Administrator)
File Edit View Project Build Debug Database Cube Tools Window Help
Development
Dim Date.dim [Design]
Dim Product.dim [Design]
Sales DW.cube [Design]
Sales DW.dsv [Design]
Cube S...
Dimensi...
Calcula...
KPIs
Actions
Partitions
Aggreg...
Perspe...
Transla...
Browser
Language: Default
Edit as Text
Import...
Sales DW
Metadata
Measure Group:
<All>
Sales DW
Measures
Fact Product Sales
Deviation
Fact Product Sales Count
Product Actual Cost
Quantity
Sales Invoice Number
Sales Time Alt Key
Sales Total Cost
KPIs
Dim Customer
Dim Date
Date Key
Full Date UK
Month
Month Name
Quarter
Calculated Members
Dimension
Hierarchy
Operator
Filter Expression
<Select dimension>
Drag levels or measures here to add to the query.
Solution Explorer
OLAP
Data Sources
Sales DW.ds
Data Source Views
Sales DW.dsv
Cubes
Sales DW.cube
Dimensions
Dim Product.di
Dim Stores.dim
Dim Date.dim
Dim Time.dim
Dim Sales Perso
Dim Customer.
Mining Structures
Roles
Solution...
Class View
Deployment Progres...
Server : localhost
Database : OLAP
Command
Status:
Deployment Completed
De...
Get...
Pro...
Deploy succeeded