

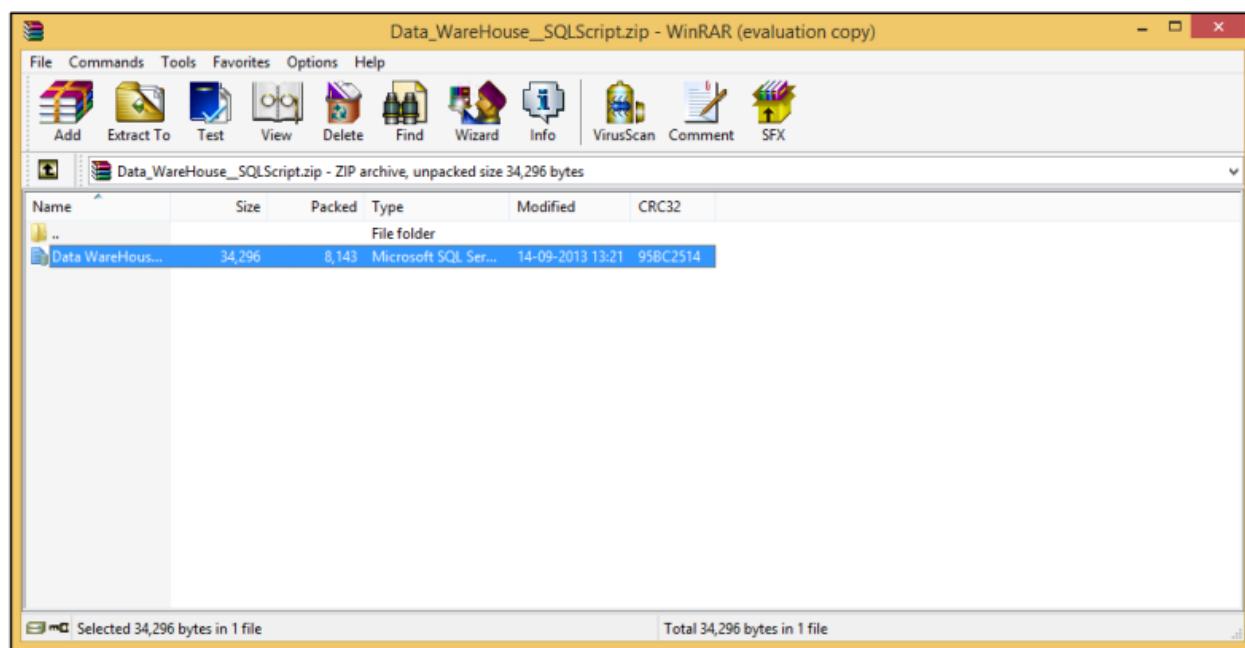
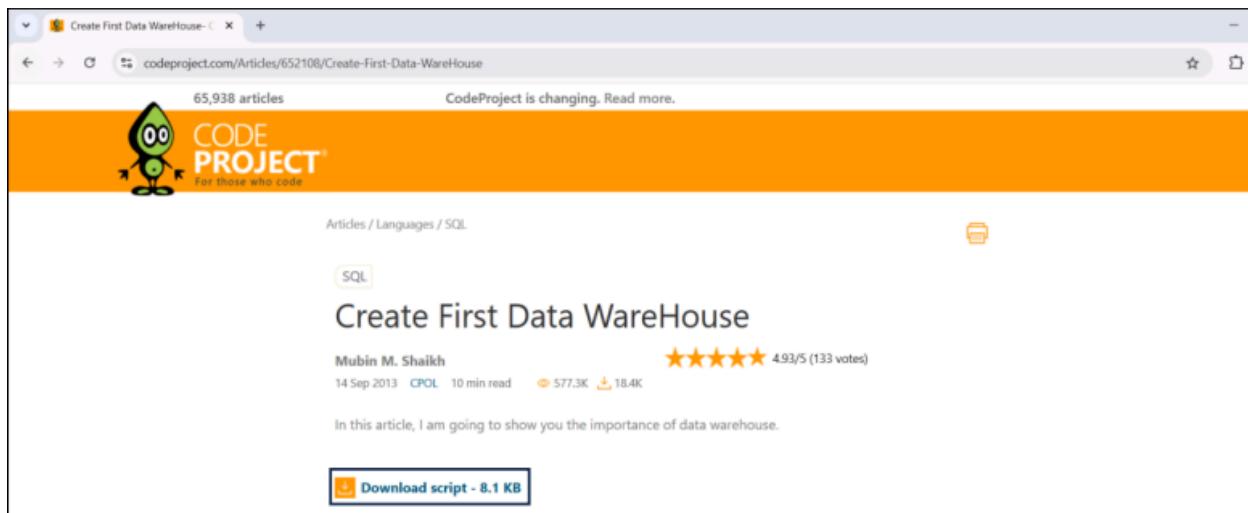
Practical No. 3b

Cre

ate the cube with suitable dimension and fact tables based on OLAP.

Steps to perform the practical:

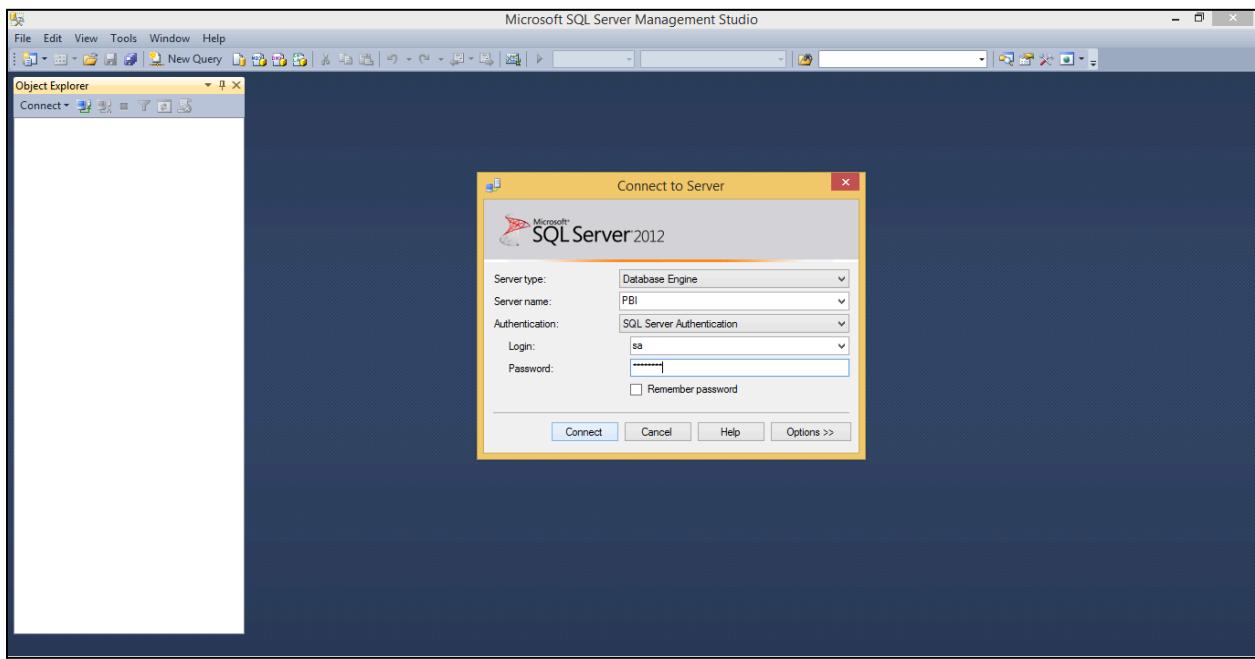
Step 1 : Creating a Data Warehouse. We need to execute T-SQL Script to create a data warehouse with fact tables, dimensions and populate them with appropriate test values. Download T-SQL script from the article “Create First Data WareHouse”.



After downloading the extract file in the folder.

Follow the given steps to run the query in SQL Server Management Studio:

1) Open SQL Server Management Studio 2012 and Connect Database Engine.

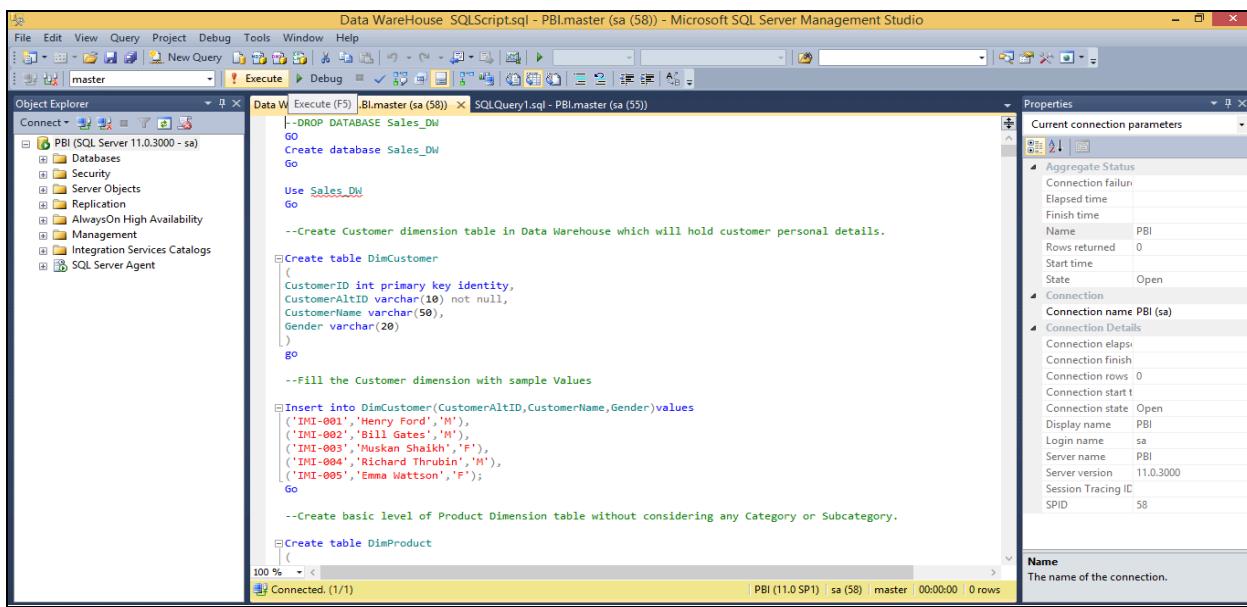


Click Connect.

2) Open New Query Editor → Copy Paste Scripts given below in various steps in new query editor window one by one → Run the given SQL Script, press F5 → It will create and populate “Sales_DW” database on your SQL Server.

OR

Go to extracted SQL file and Double Click on it → New SQL Query Editor will be opened containing “Sales_DW” Database.



```

--DROP DATABASE Sales_DW
GO
Create database Sales_DW
Go

Use Sales_DW
Go

--Create Customer dimension table in Data Warehouse which will hold customer personal details.

Create table DimCustomer
(
CustomerID int primary key identity,
CustomerAltID varchar(10) not null,
CustomerName varchar(50),
Gender varchar(20)
)
go

--Fill the customer dimension with sample Values

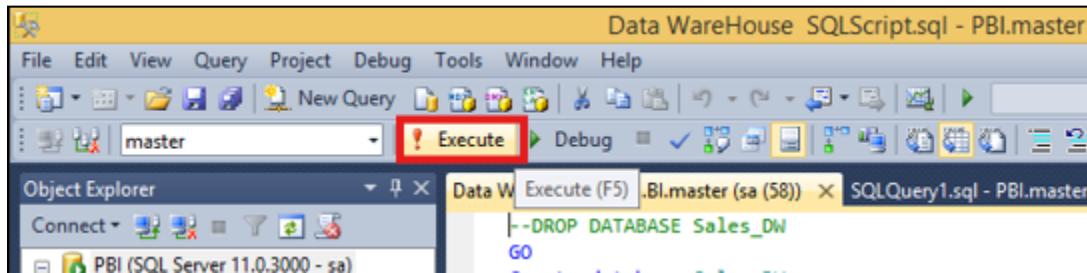
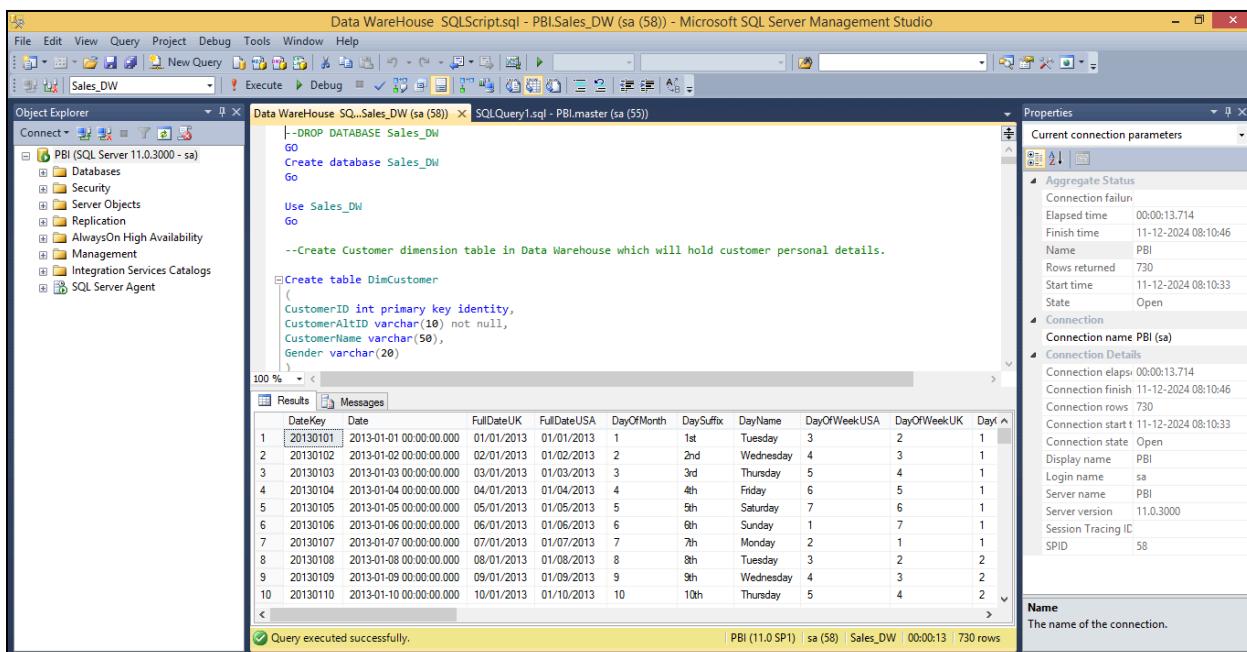
Insert into DimCustomer(CustomerAltID,CustomerName,Gender)values
('IMI-001','Henry Ford','M'),
('IMI-002','Bill Gates','M'),
('IMI-003','Muskan Shahik','F'),
('IMI-004','Richard Thrubin','M'),
('IMI-005','Emma Wattson','F');
go

--Create basic level of Product Dimension table without considering any Category or Subcategory.

Create table DimProduct
(
)

```

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

```

--DROP DATABASE Sales_DW
GO
Create database Sales_DW
Go

Use Sales_DW
Go

--Create Customer dimension table in Data Warehouse which will hold customer personal details.

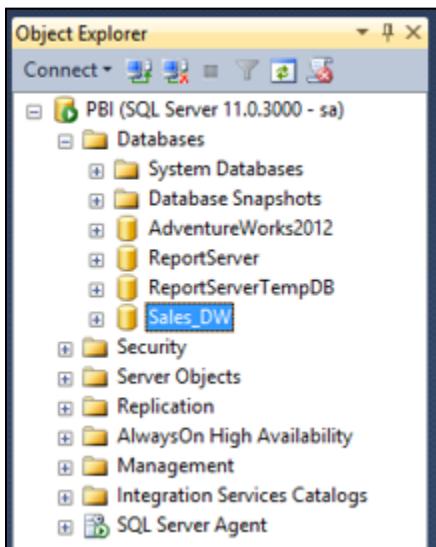
Create table DimCustomer
(
CustomerID int primary key identity,
CustomerAltID varchar(10) not null,
CustomerName varchar(50),
Gender varchar(20)
)

```

DateKey	Date	FullDateUK	FullDateUSA	DayOfMonth	DaySuffix	DayName	DayOfWeekUSA	DayOfWeekUK	Day
20130101	2013-01-01 00:00:00.000	01/01/2013	01/01/2013	1	1st	Tuesday	3	2	1
20130102	2013-01-02 00:00:00.000	02/01/2013	01/02/2013	2	2nd	Wednesday	4	3	1
20130103	2013-01-03 00:00:00.000	03/01/2013	01/03/2013	3	3rd	Thursday	5	4	1
20130104	2013-01-04 00:00:00.000	04/01/2013	01/04/2013	4	4th	Friday	6	5	1
20130105	2013-01-05 00:00:00.000	05/01/2013	01/05/2013	5	5th	Saturday	7	6	1
20130106	2013-01-06 00:00:00.000	06/01/2013	01/06/2013	6	6th	Sunday	1	7	1
20130107	2013-01-07 00:00:00.000	07/01/2013	01/07/2013	7	7th	Monday	2	1	1
20130108	2013-01-08 00:00:00.000	08/01/2013	01/08/2013	8	8th	Tuesday	3	2	2
20130109	2013-01-09 00:00:00.000	09/01/2013	01/09/2013	9	9th	Wednesday	4	3	2
20130110	2013-01-10 00:00:00.000	10/01/2013	01/10/2013	10	10th	Thursday	5	4	2

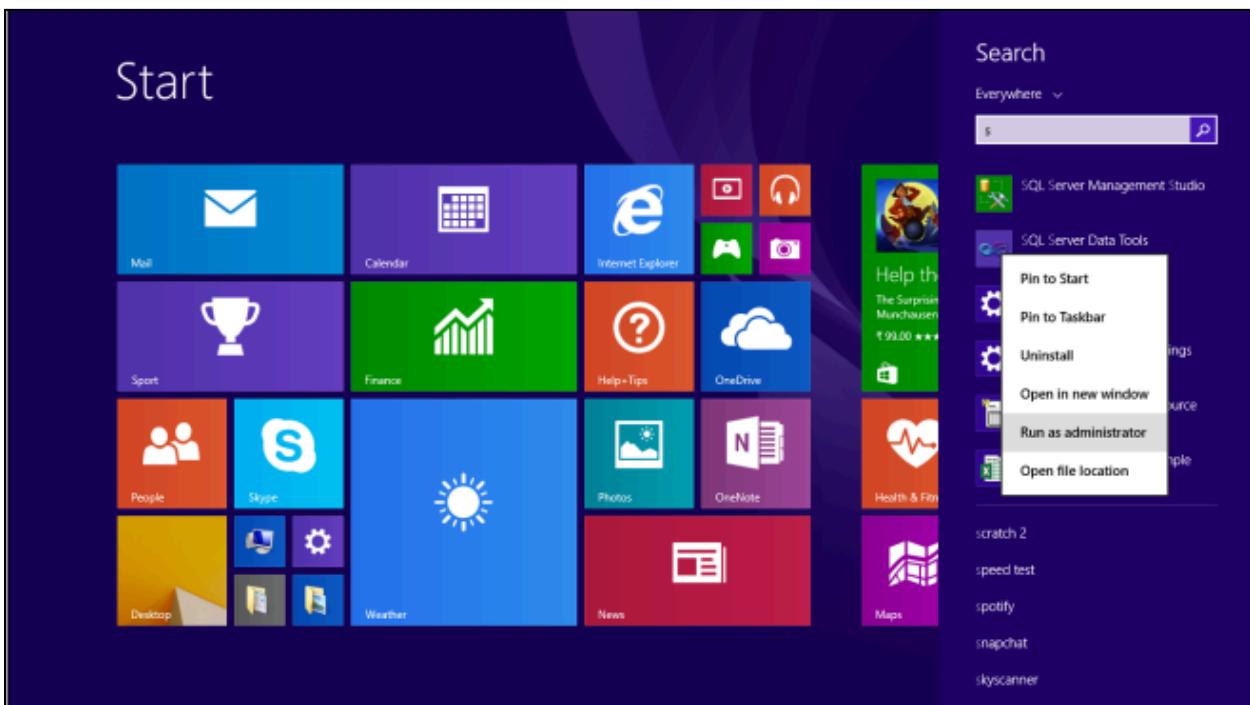
Query executed successfully.

4) After completing execution, save and close SQL Server Management studio & reopen to see Sales_DW Database Tab.

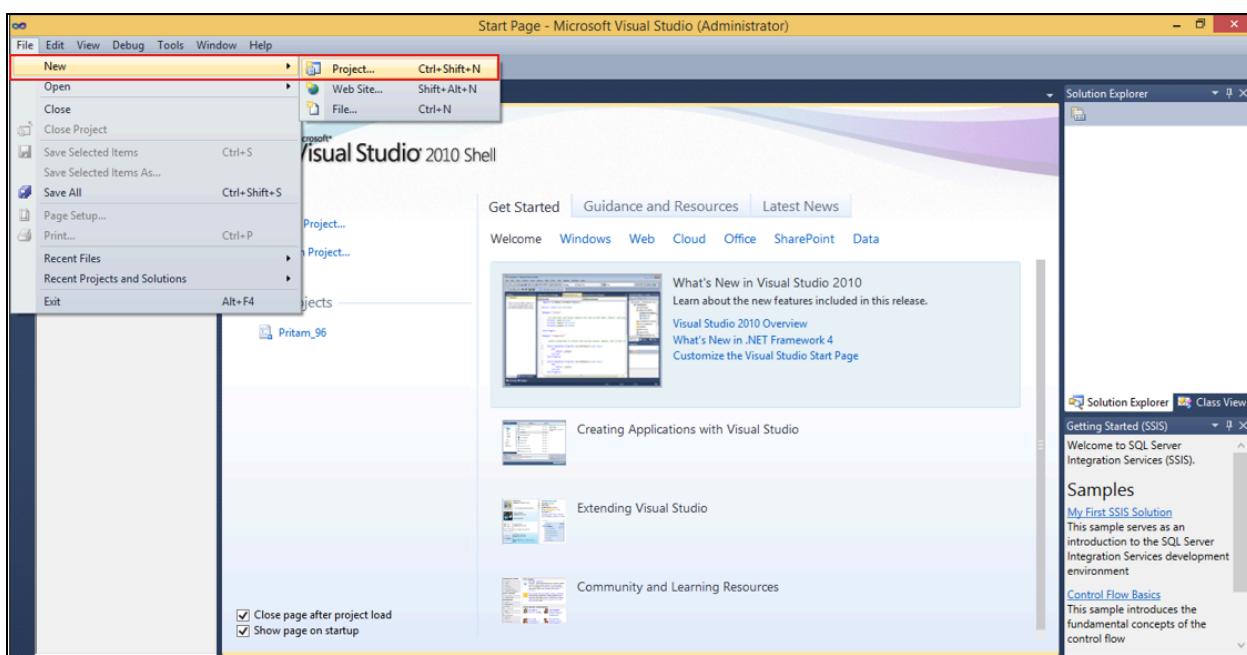


Step 2 : Start SSDT environment and Create New Data Source:

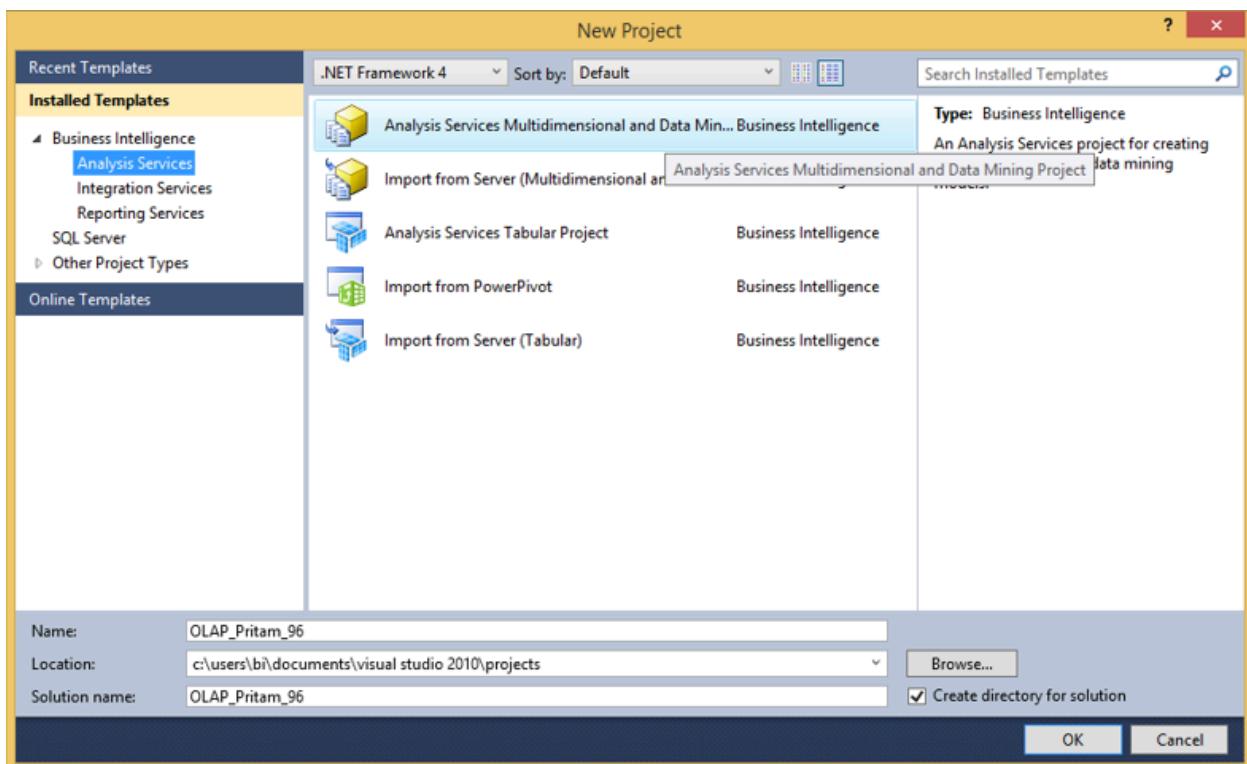
Go to SQL Server Data Tools → Right Click and Run as Administrator.



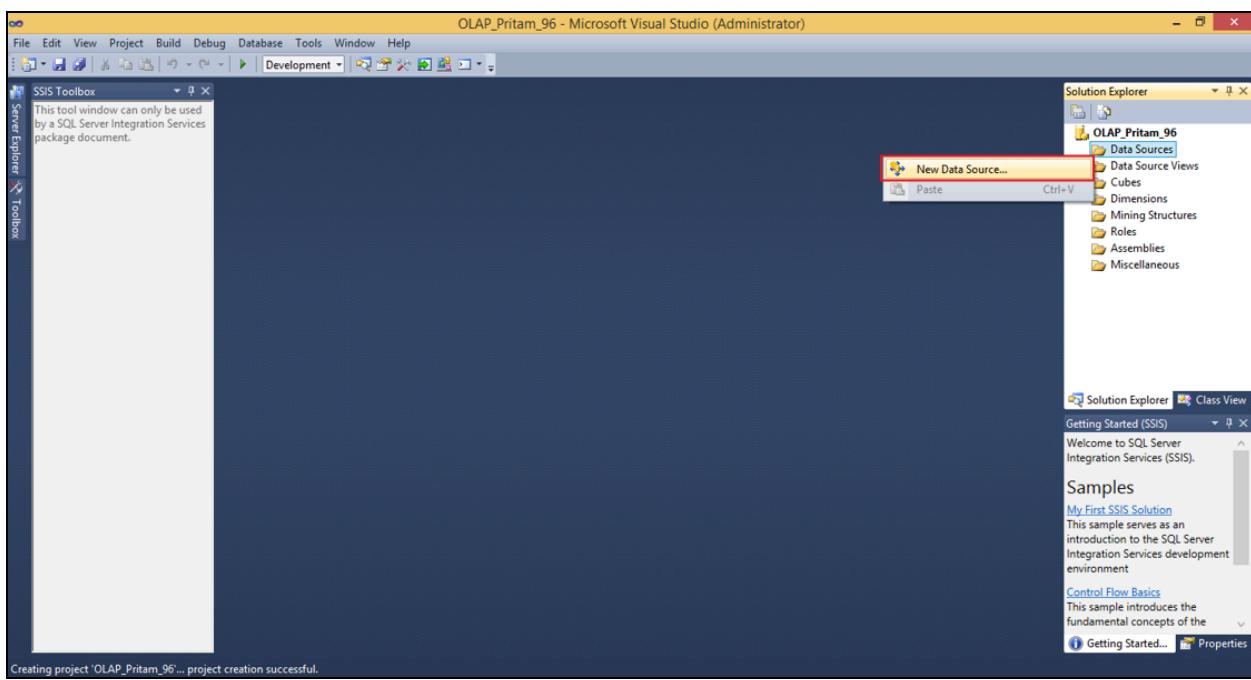
Click on File → New → Project.



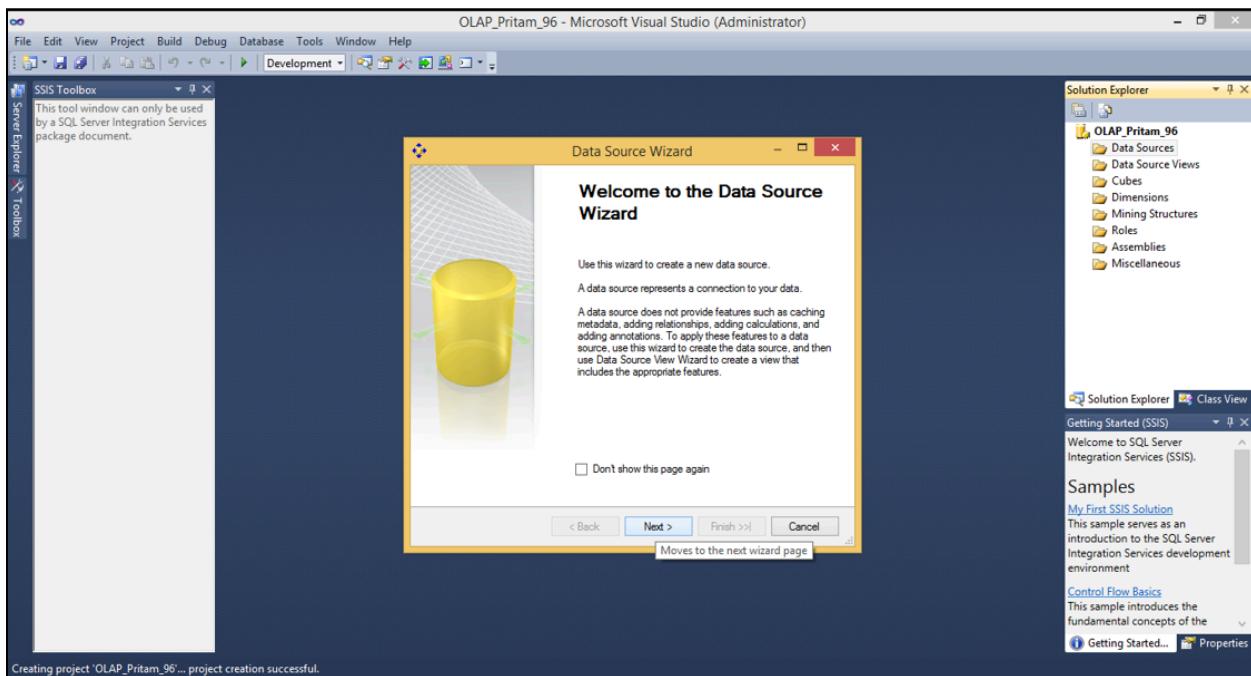
In Business Intelligence → Analysis Services Multidimensional and Data Mining Models
 → appropriate project name → Click OK.



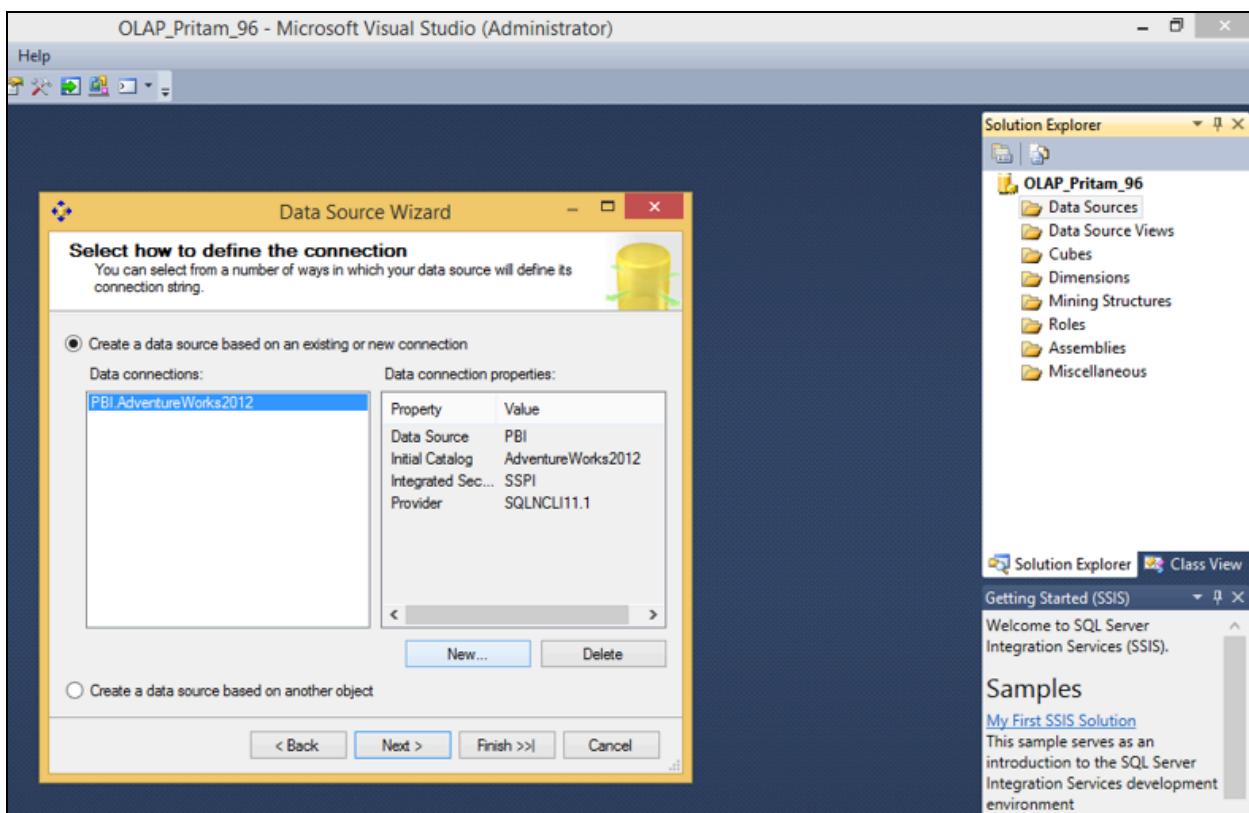
Right Click on Data Sources in Solution Explorer → New Data Source.



Data Source Wizard appears → Click on Next.

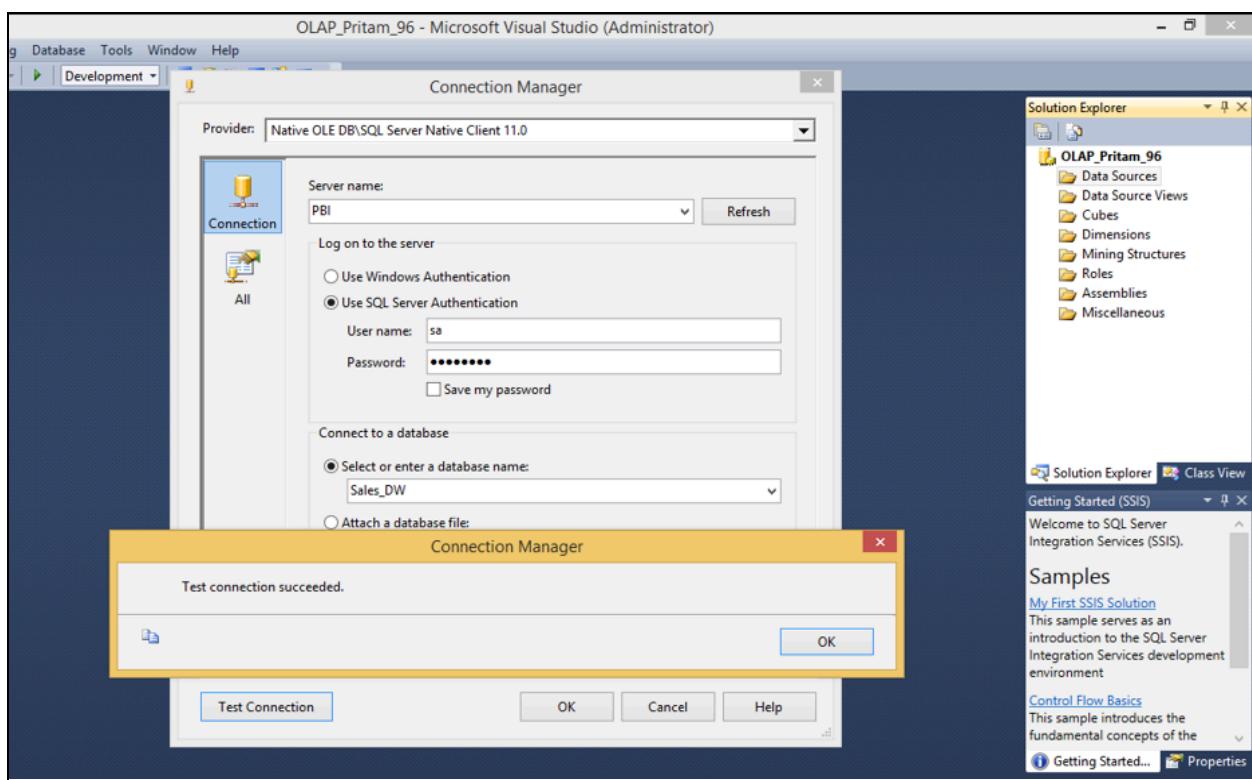


Click on New.

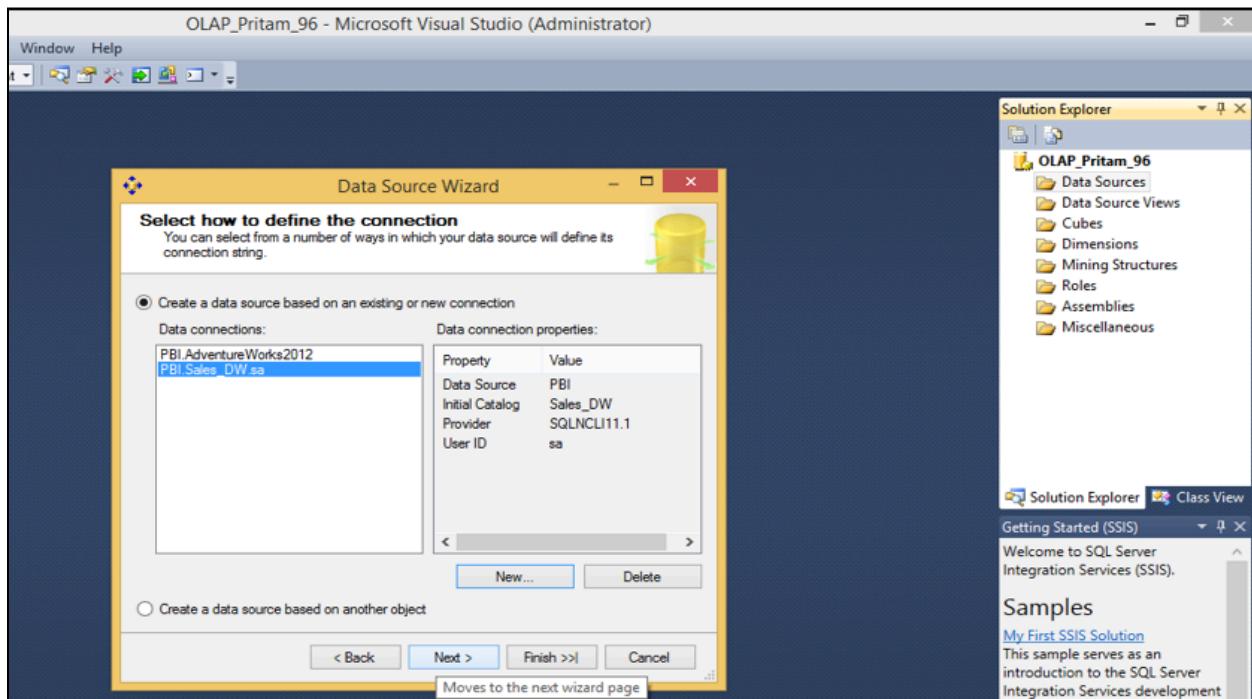


Select Server Name → Select Use SQL Server Authentication → Select or enter Database name (Sales_DW)

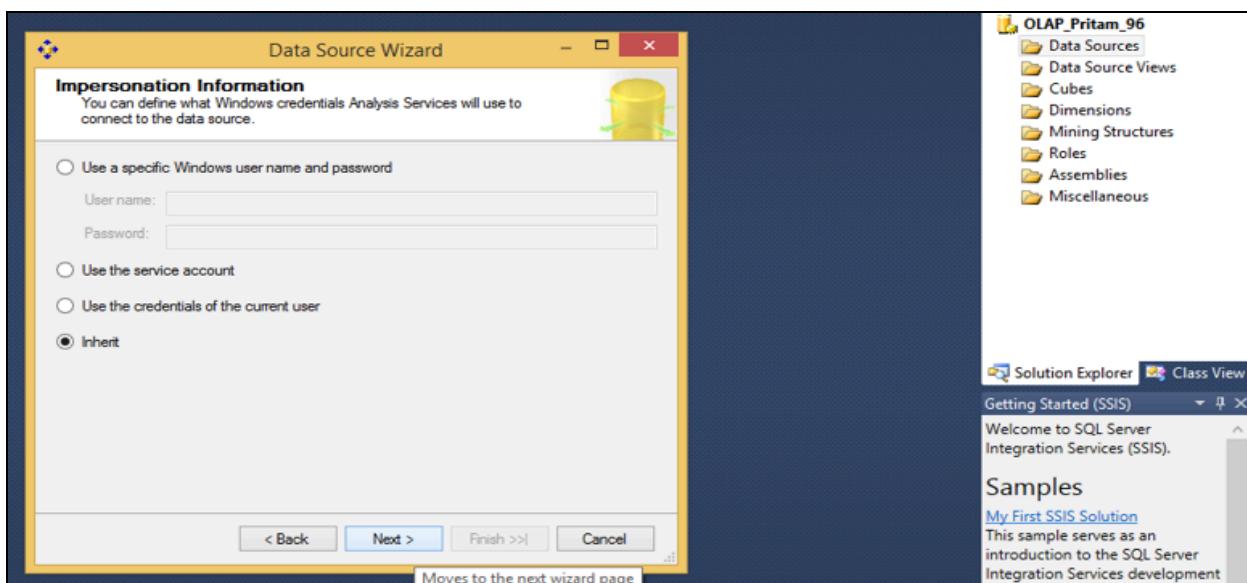
Enter Username and Password (given during installation of SQL 2012 Full Version.)



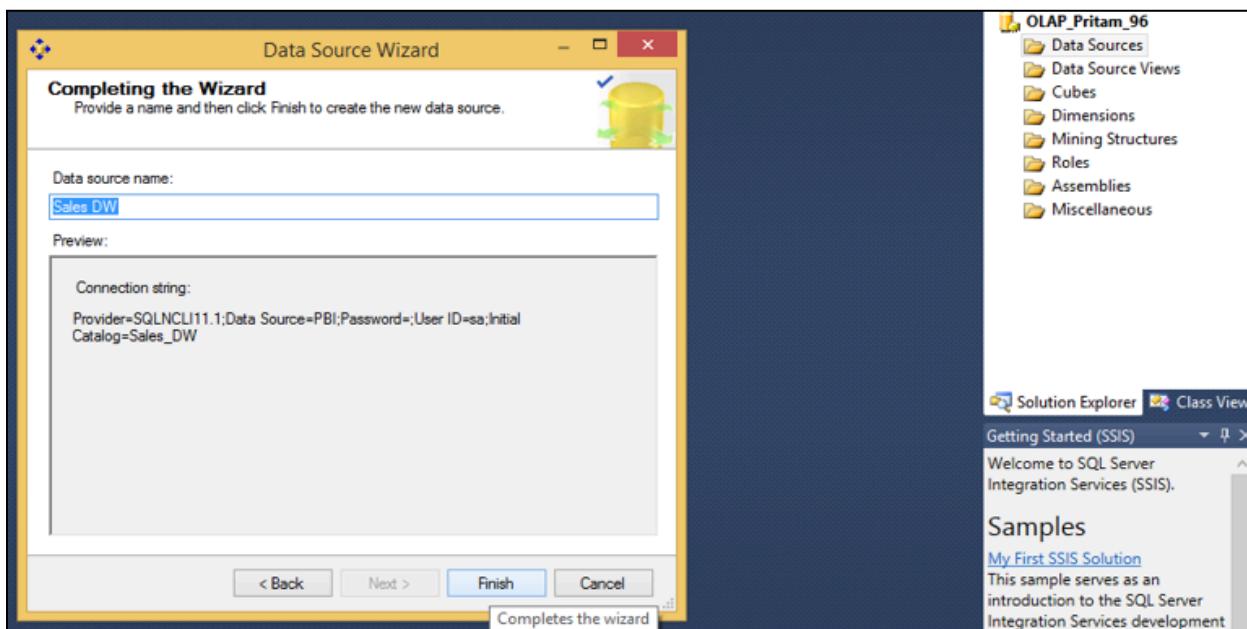
Click OK.



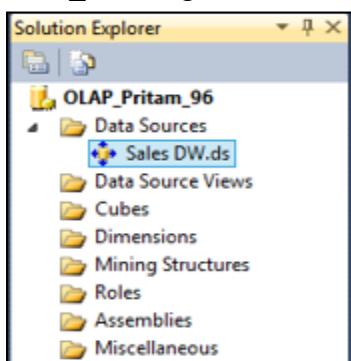
Click Finish and then Select Inherit → Next.



Click Finish.

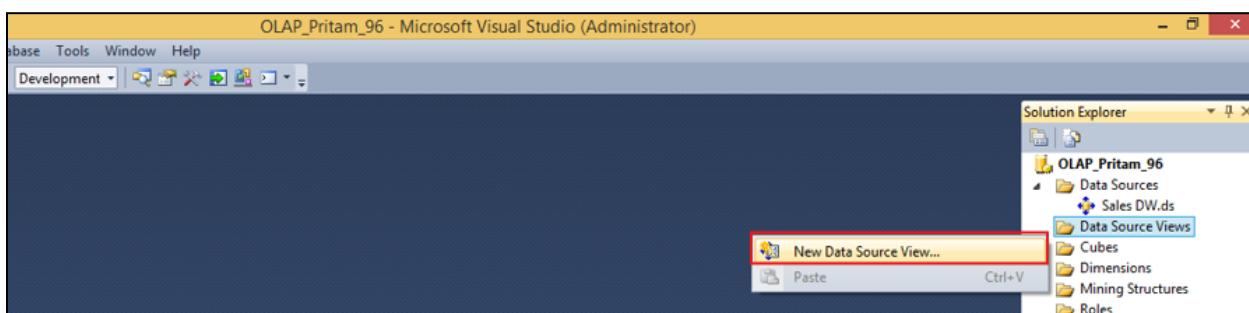


Sales_DW.ds gets created under Data Sources in Solution Explorer.

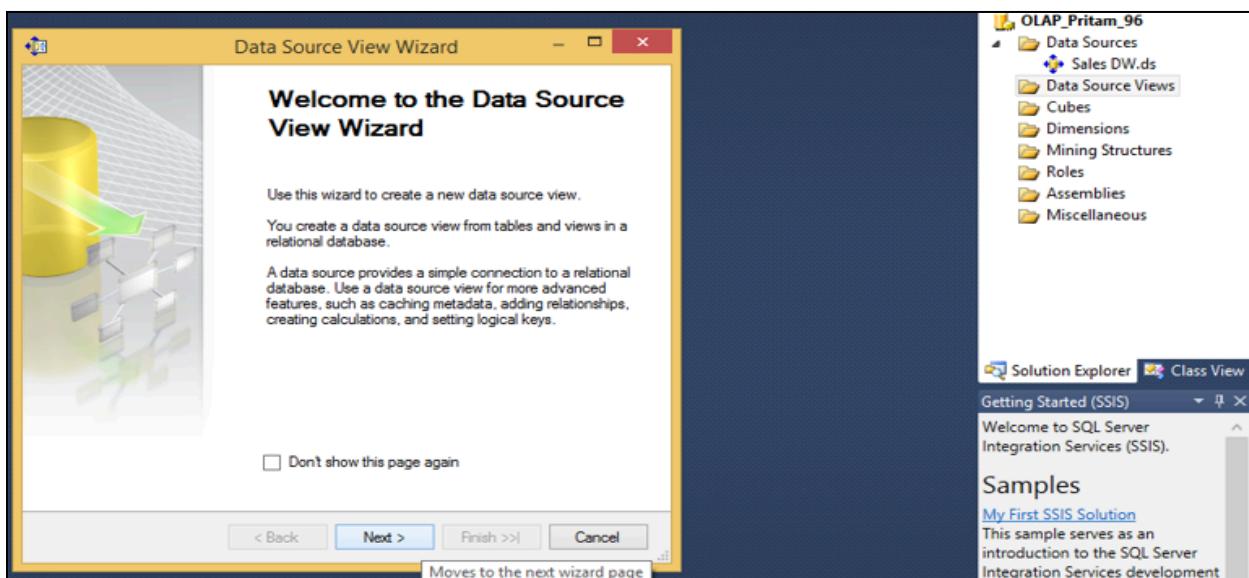


Step 3 : Creating New Data Source View:

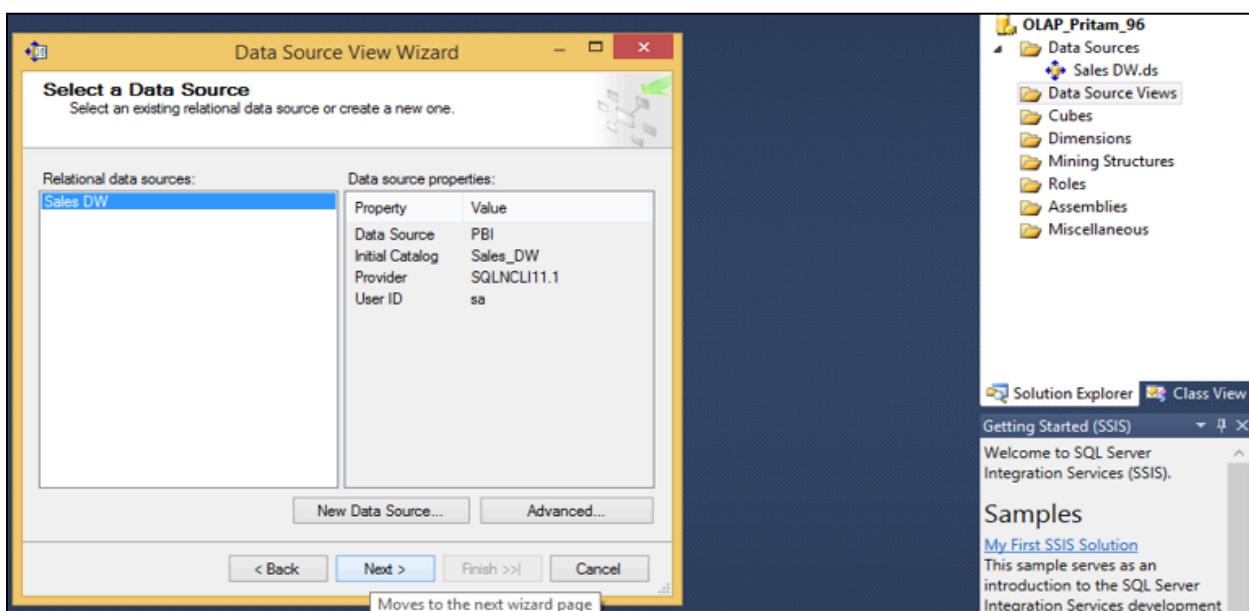
In solution Explorer Right click on Data Source View → Select New Data Source View.



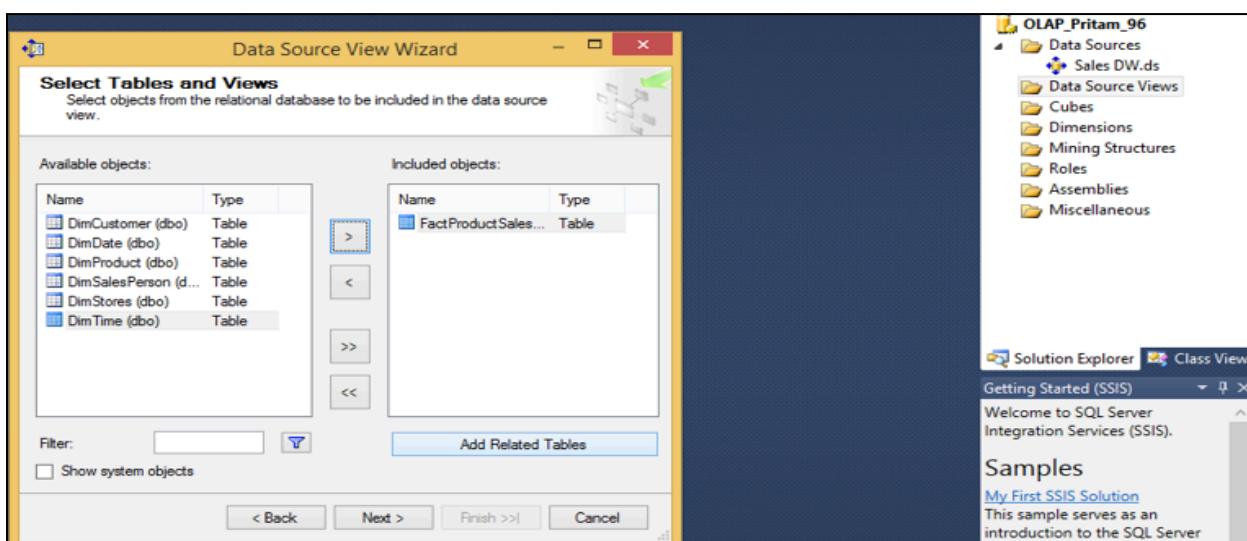
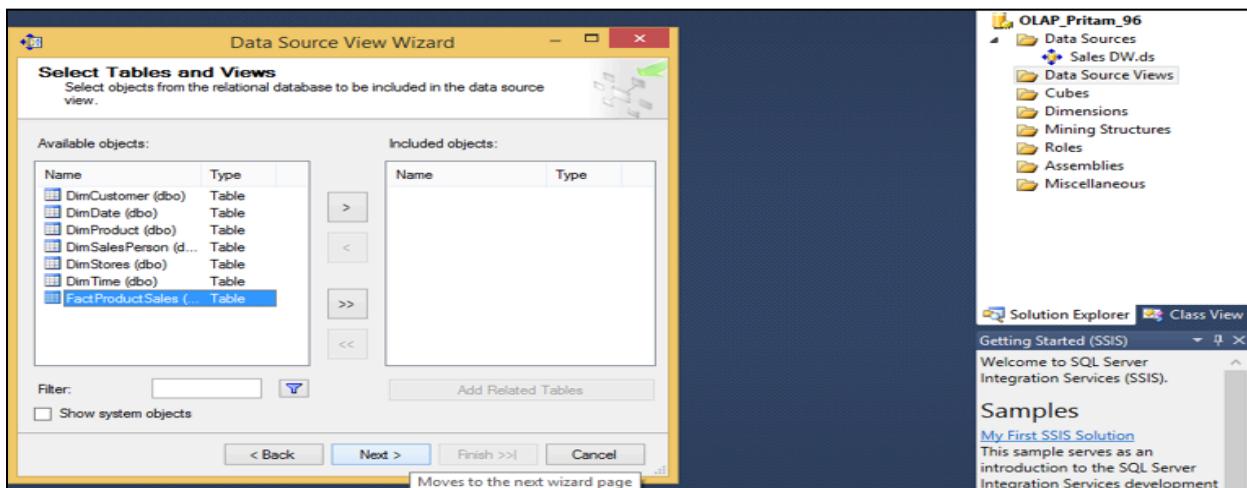
Click Next.



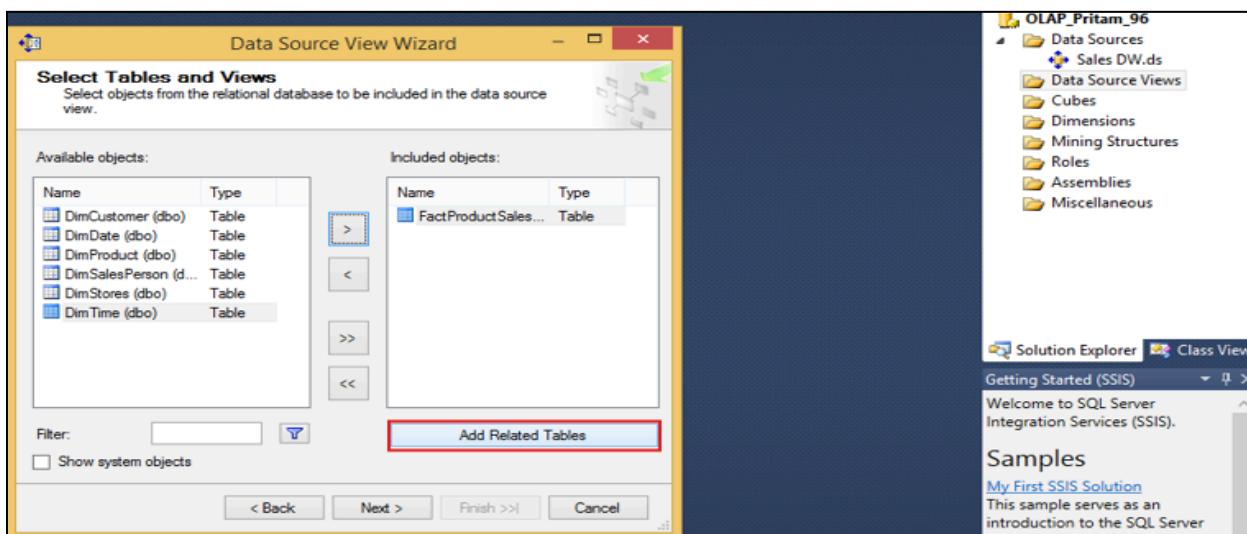
Click Next



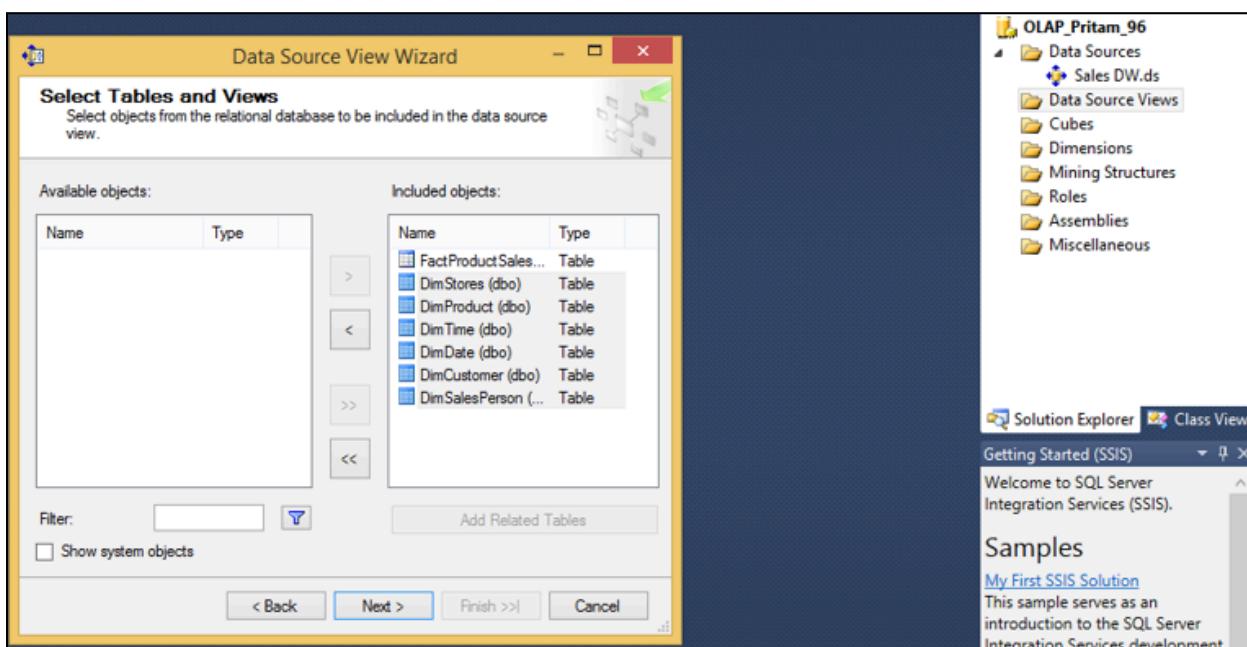
Select FactProductSales (dbo) from Available Objects and put in Include Object by clicking on the Arrow button.



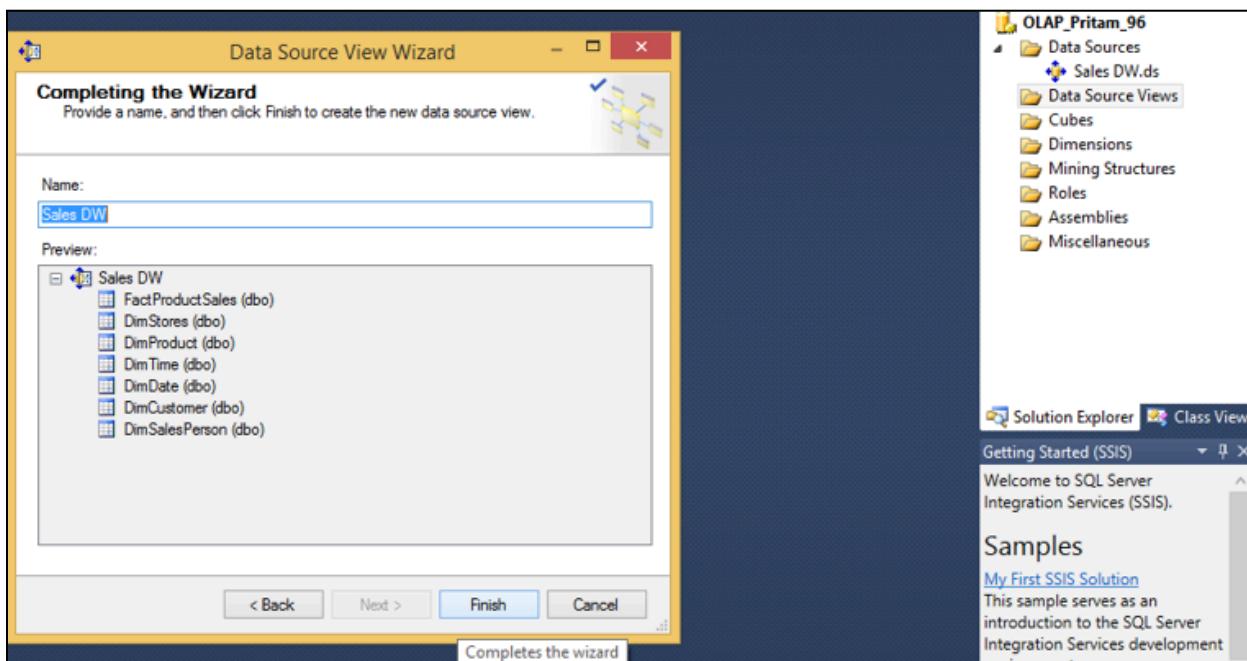
Click on Add Related Tables.



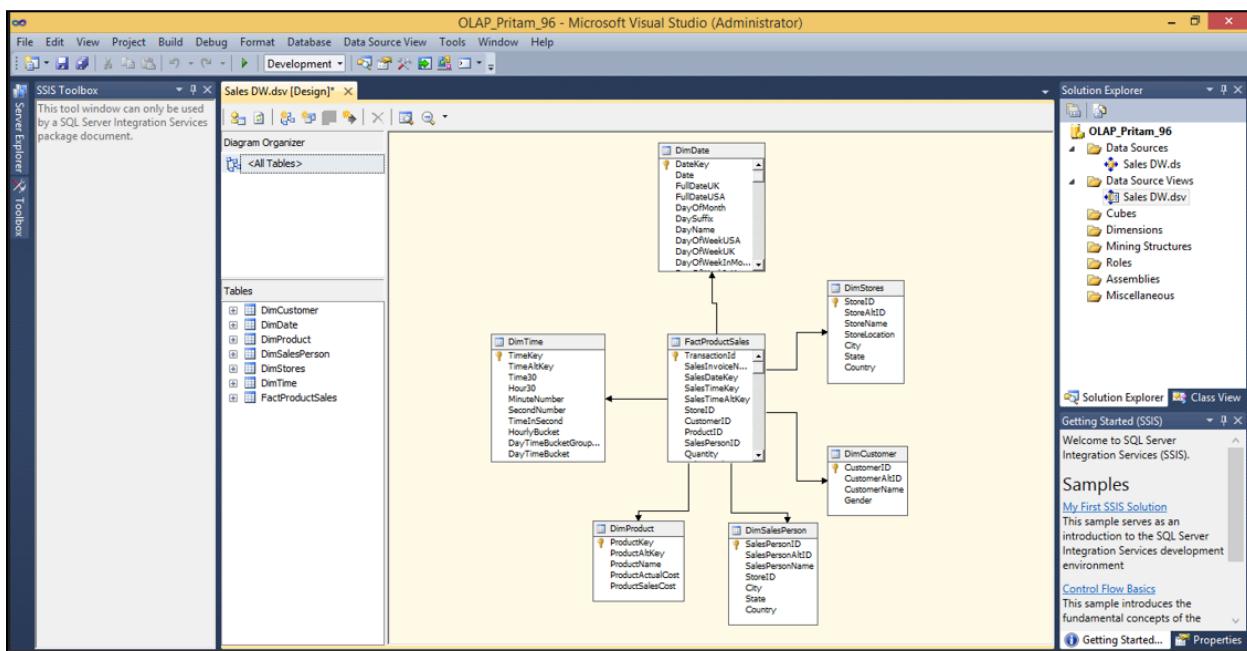
Click Next.



Click Finish.

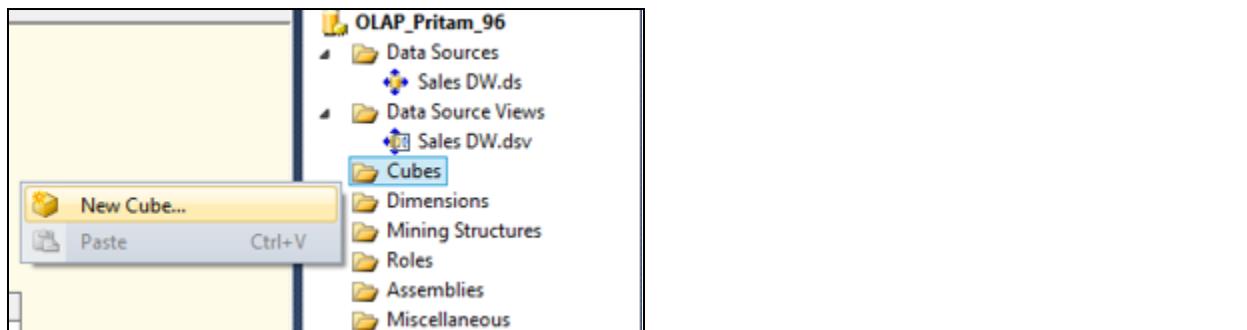


Sales DW.dsv appears in Data Source Views in Solution Explorer.

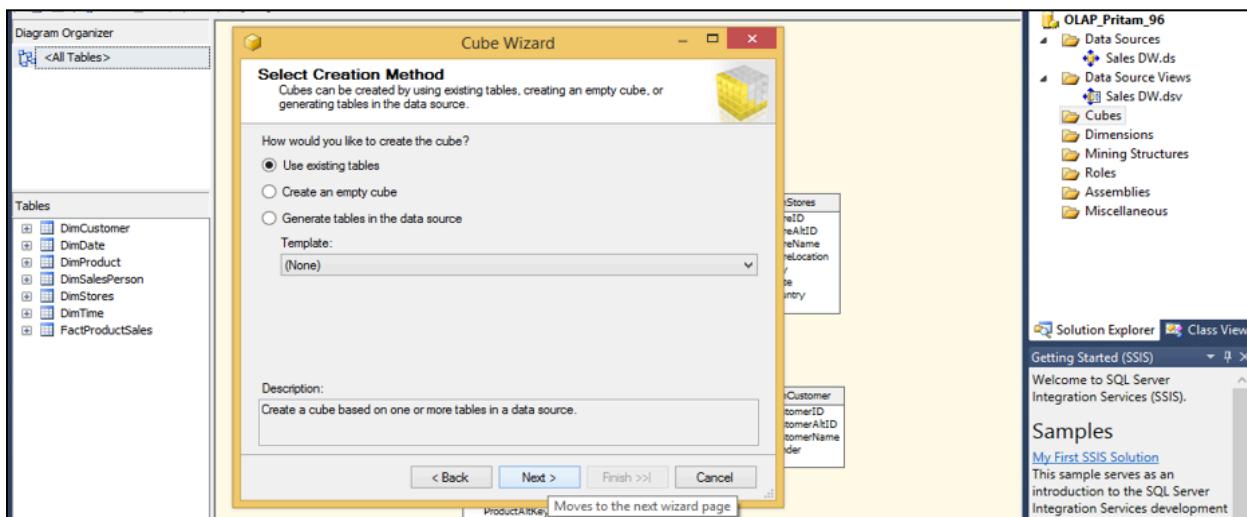


Step 4 : Creating New Cube:

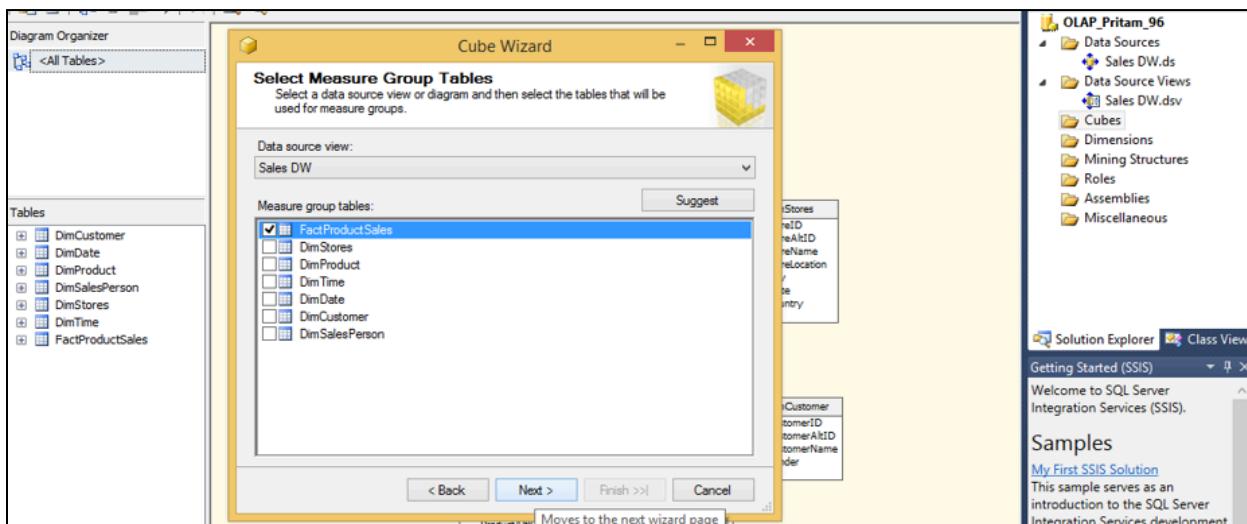
Right Click on Cubes → New Cube.



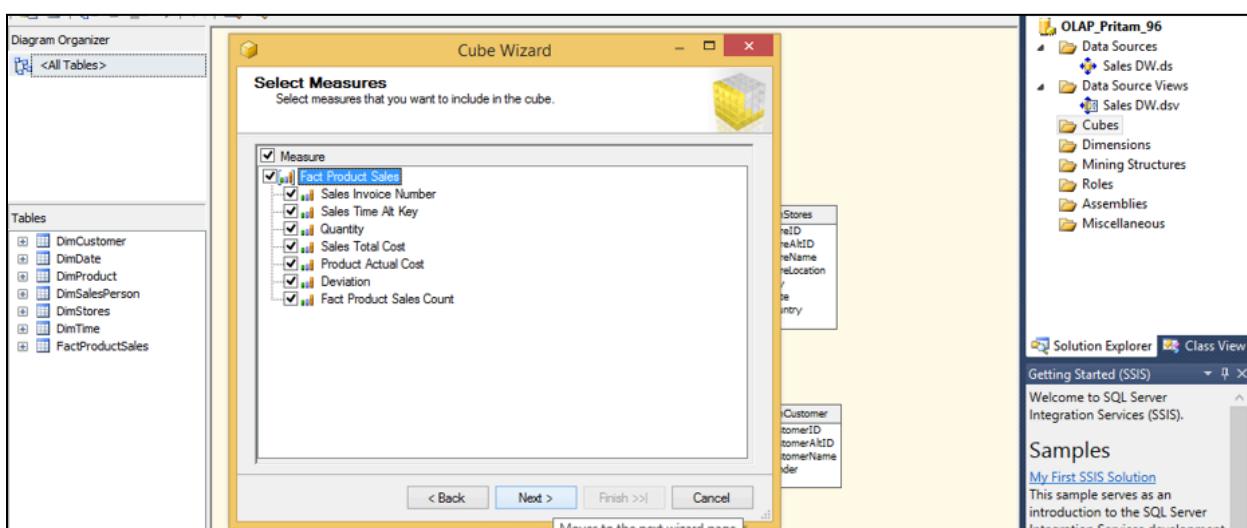
Select Use Existing Tables in Select Creation Method → Next.



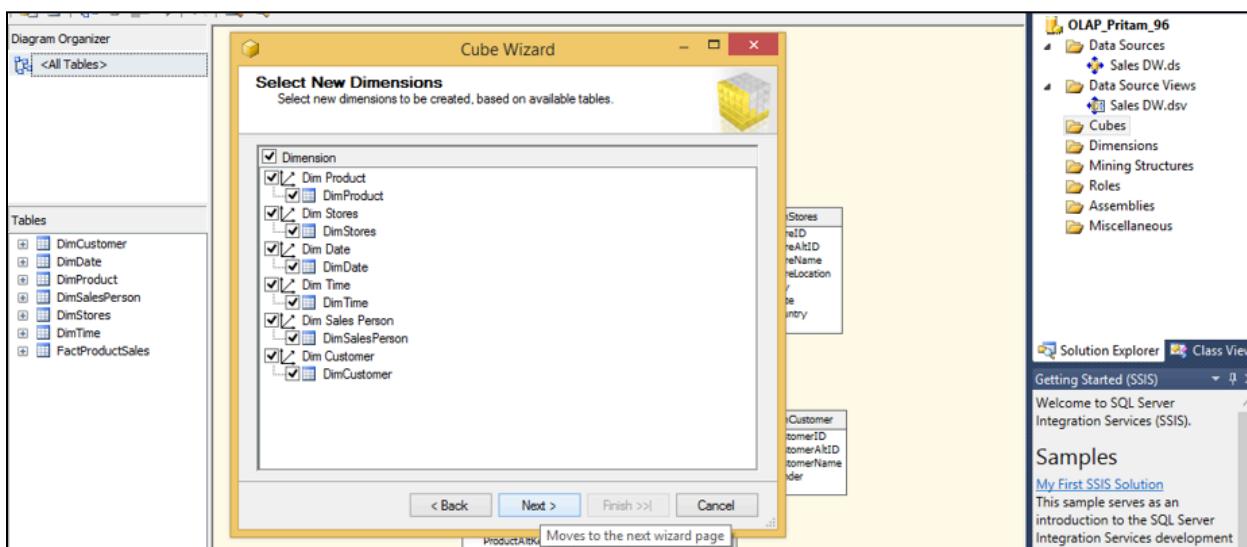
In Select Measure Group Tables → Select FactProductSales → Next.



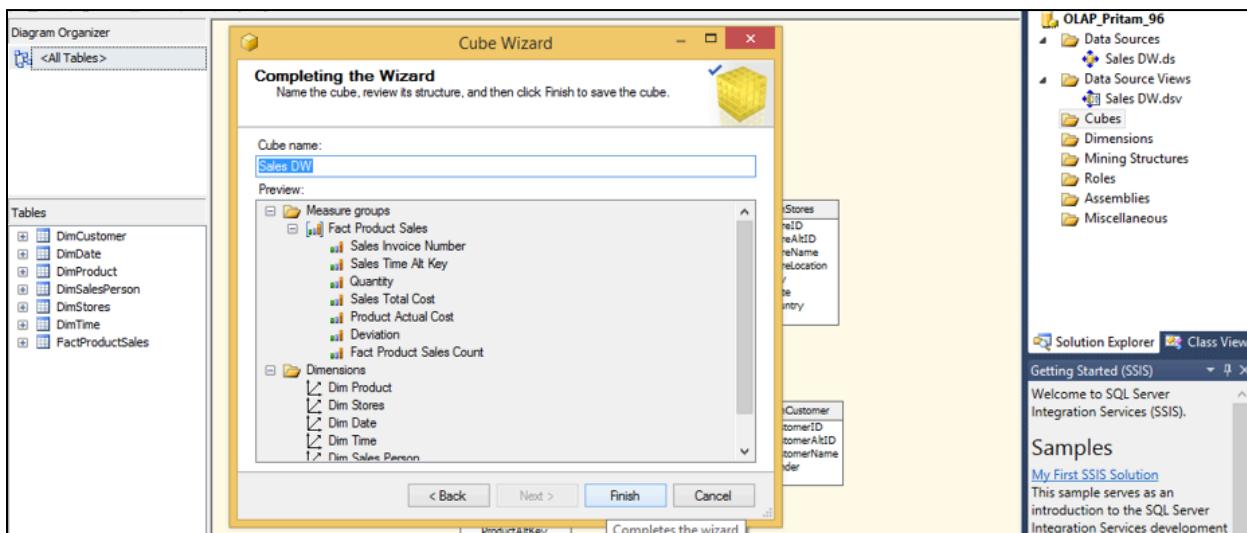
In Select Measure → Check all Measures → Next.



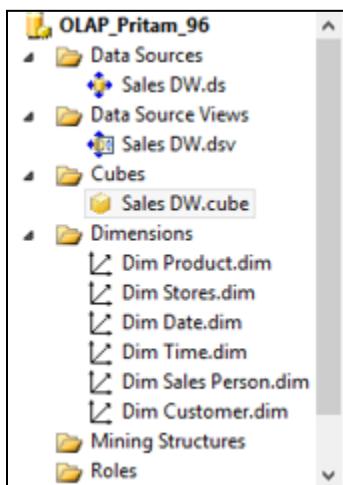
In Select New Dimensions → Check all Dimensions → Next.



Click on Finish.

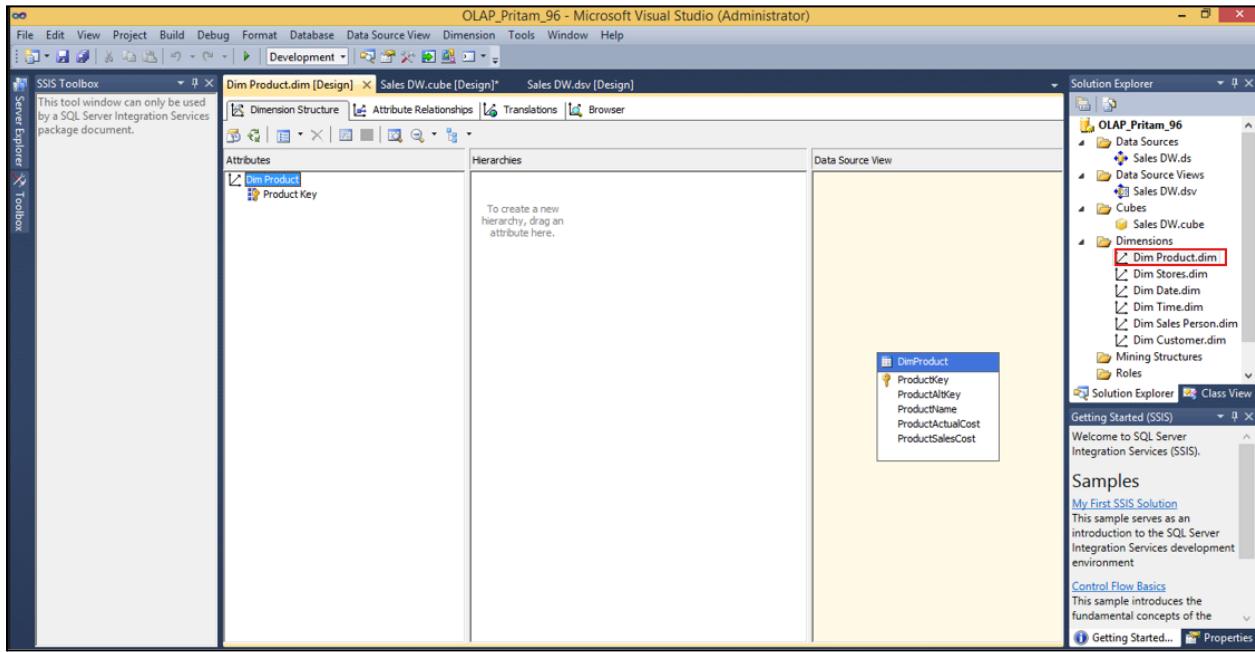


Sales_DW is created.

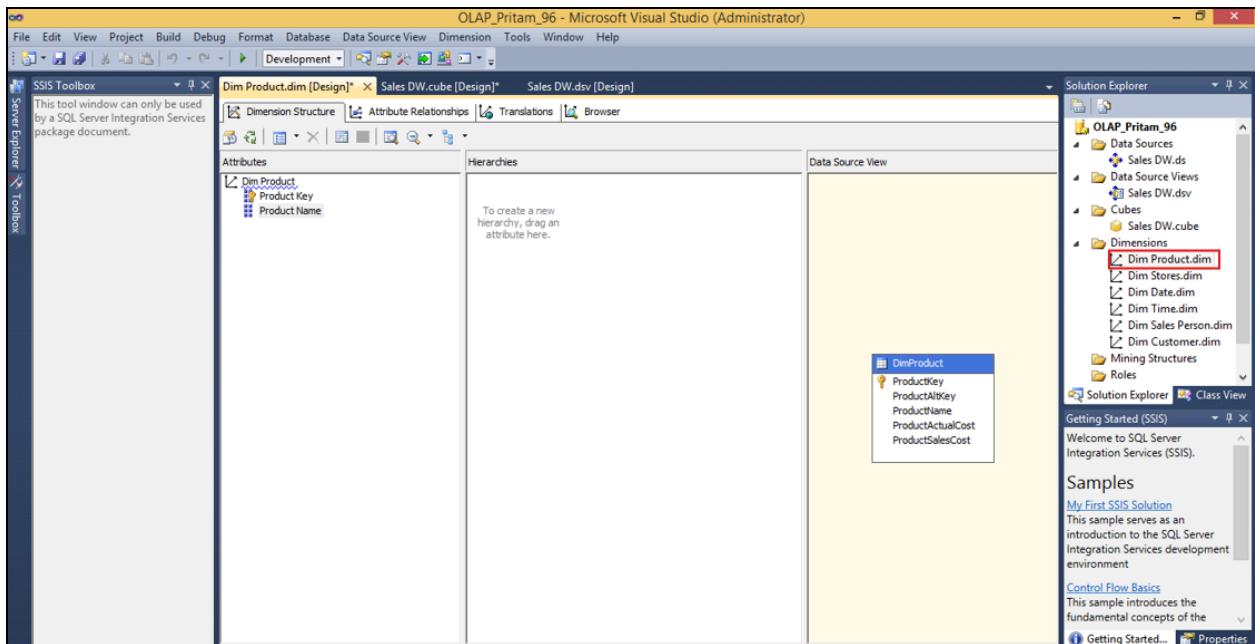


Step 5 : Dimension Modification:

In Dimension Tab → Double Click Dim Product.dim



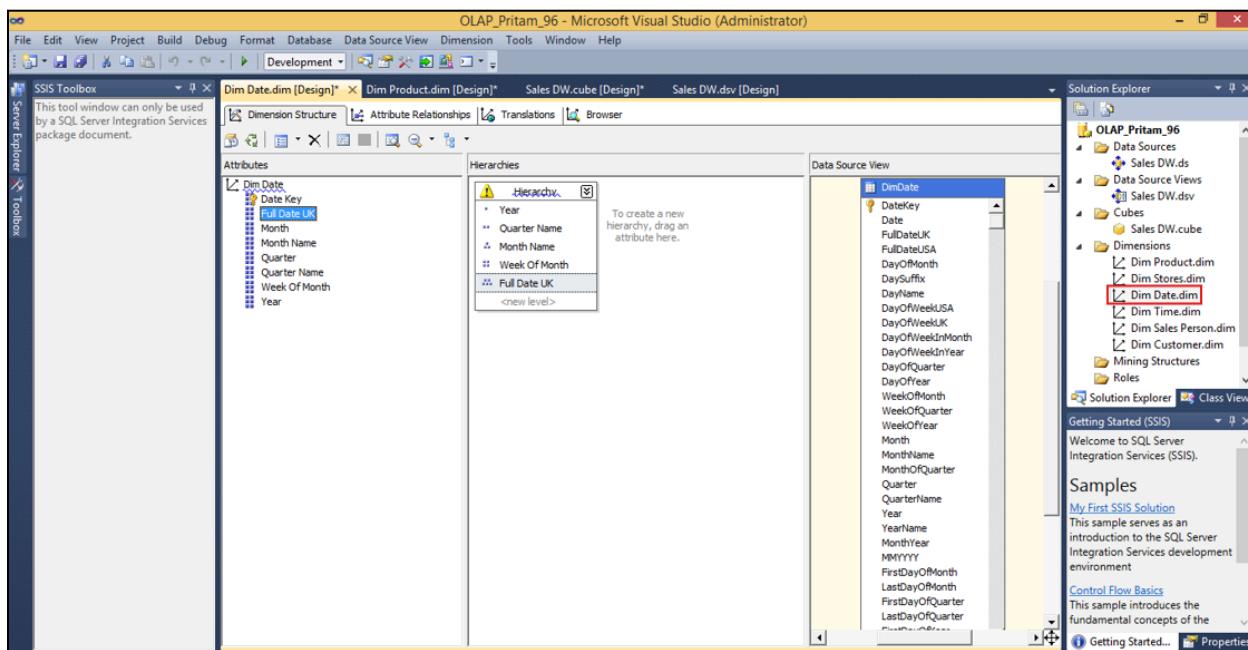
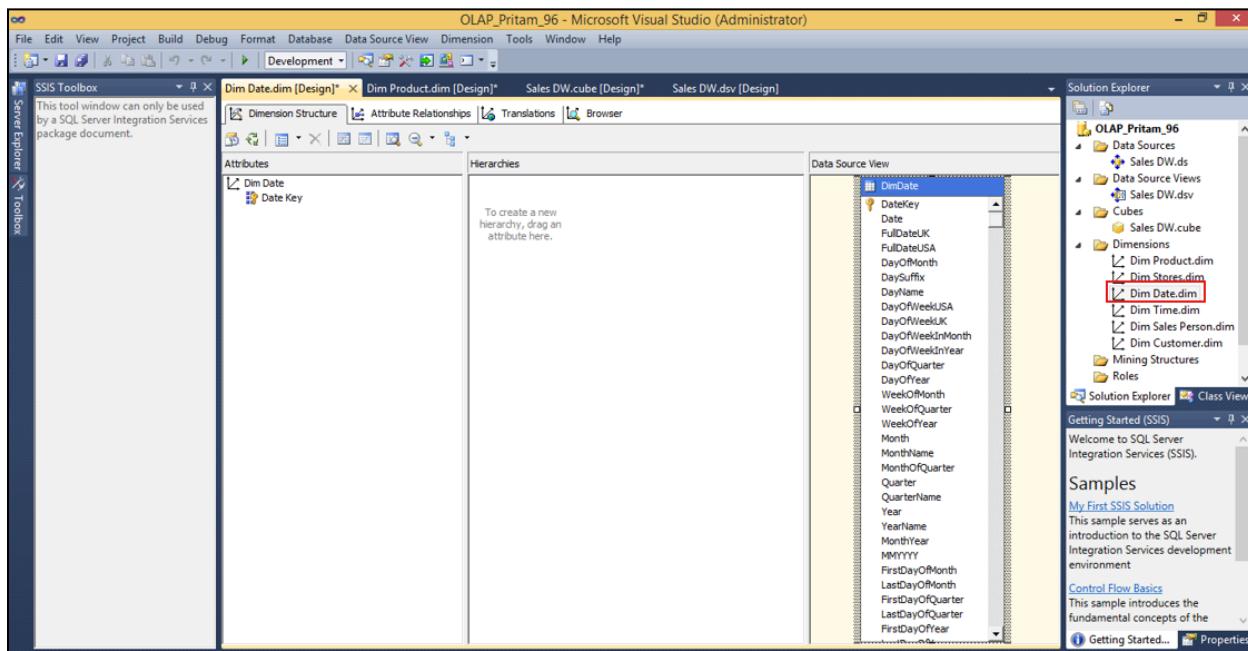
Drag and Drop Product Name from Table in Data Source View and Add in Attribute Panel at Left Side.



Step 6 : Creating Attribute Hierarchy in Date Dimension:

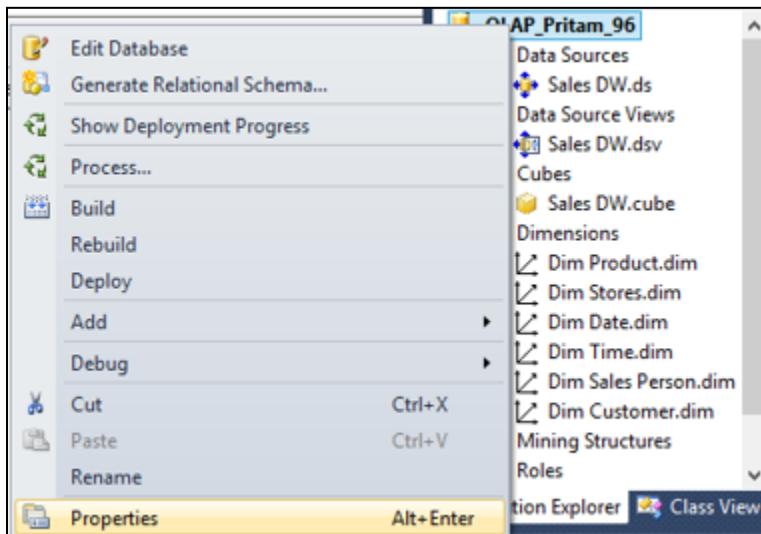
Double Click on Dim Date Dimension → Drag and Drop Fields from Table shown in Data Source View to Attributes → Drag and Drop Attributes from leftmost pane of attribute of middle pane of Hierarchy.

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.

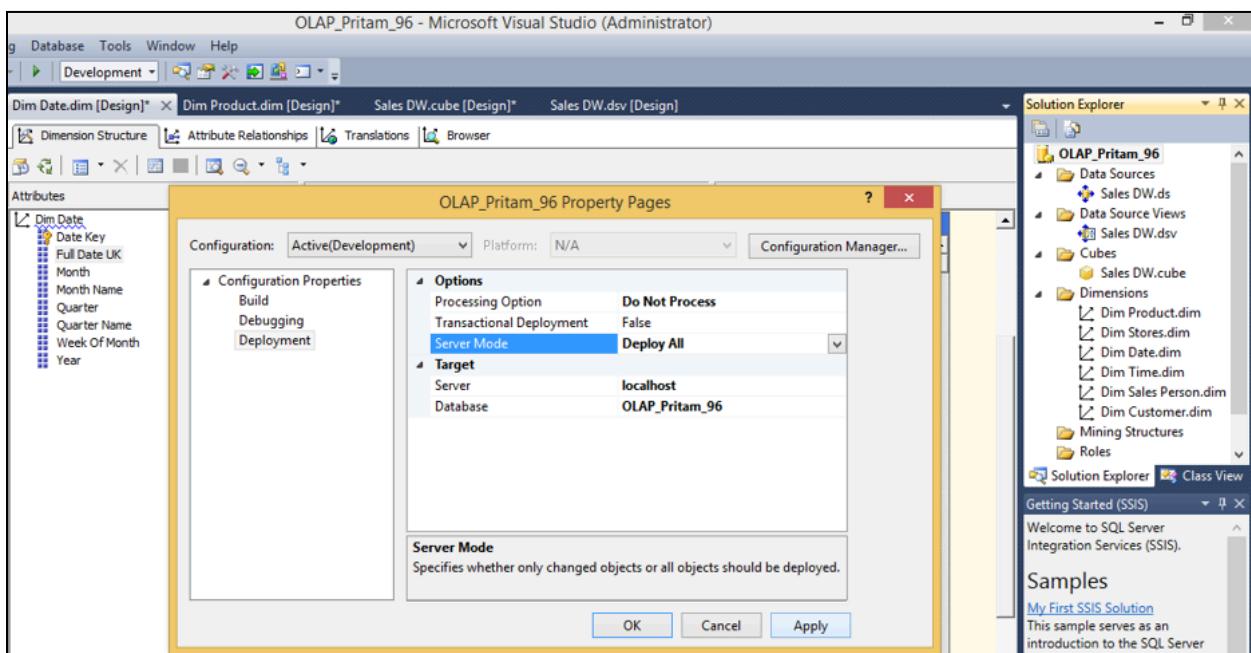


Make Following Changes:

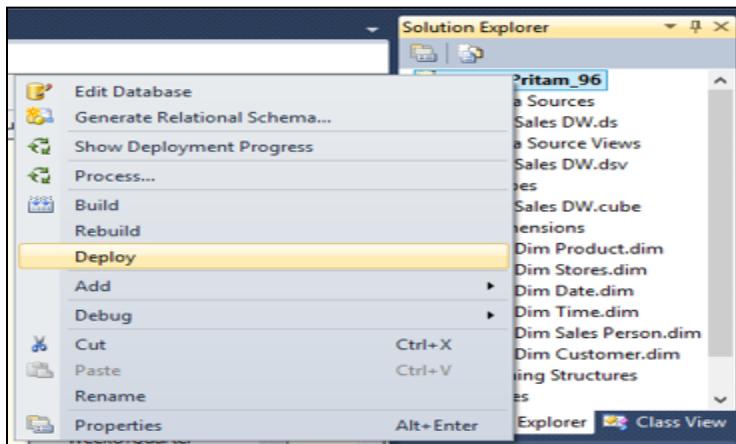
Processing Option: Do Not Process

Server Mode: Deploy All

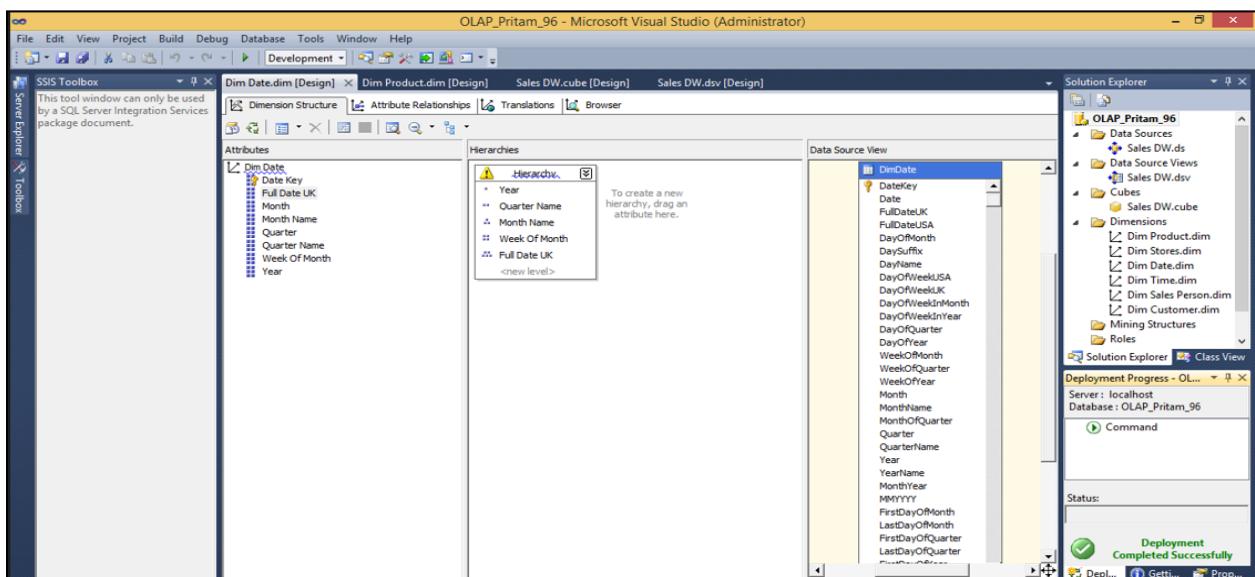
Then Click Apply & OK.



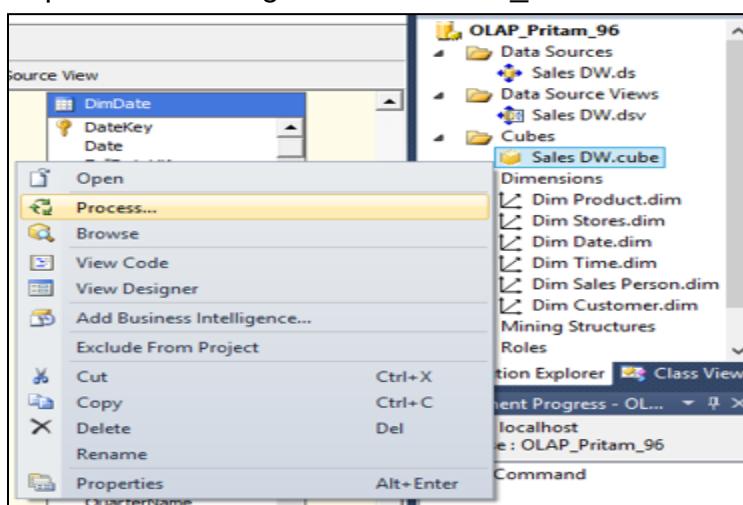
Right Click on Project Name → Deploy.



Deployment Successful.



To process cube right click on Sales_DW(cube) → Process.



Click Run.

