

DWDM Lab by Usman Shehzaib

Lab Task Week # 3. Working with a Data source View

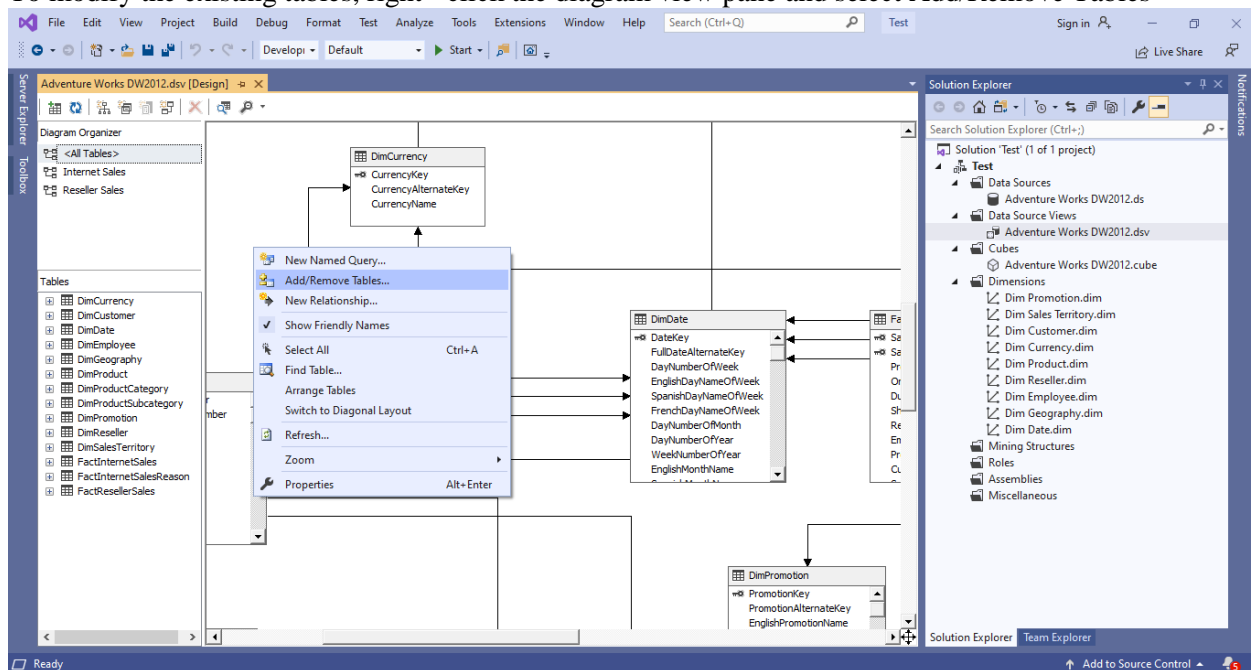
In this Week you will learn how we perform different settings and manipulate a Data source view. Remember to start SSMS and SQL Server 2019 before you proceed.

Following tasks will be performed on a DSV

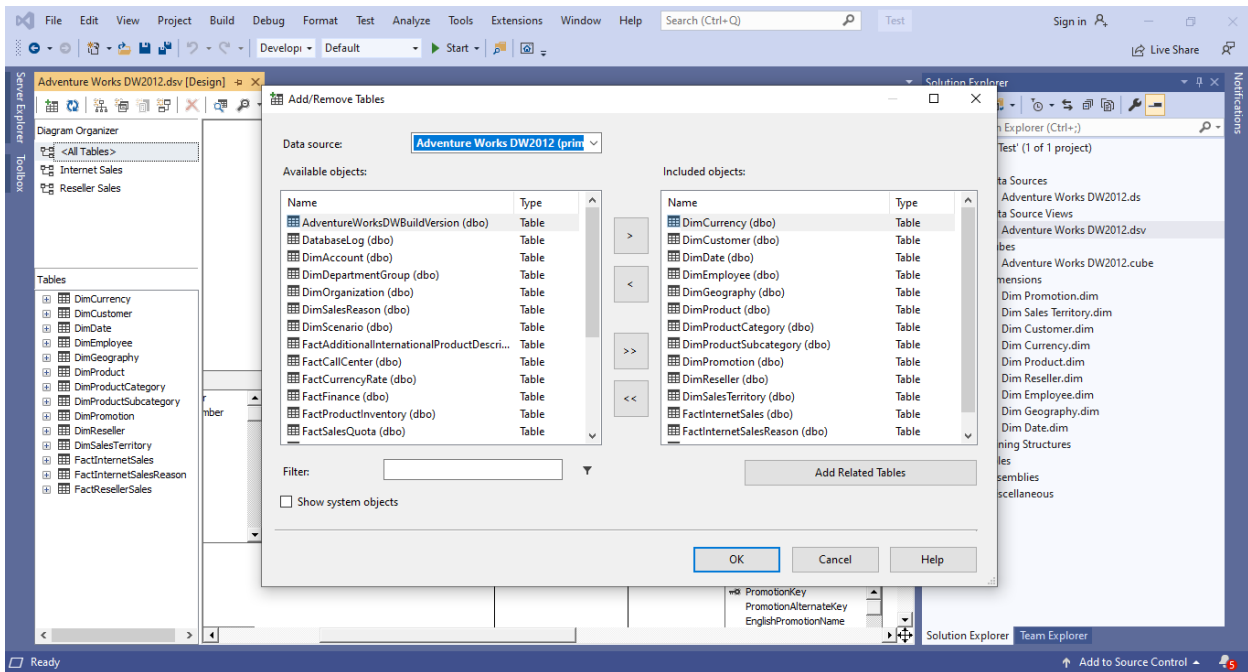
- 1) Adding/Removing Tables in a DSV:
- 2) Specifying Primary Keys in the DSV:
- 3) Specifying Relationships in the DSV:
- 4) Customizing Your Tables in the DSV:
- 5) Create a new diagram in the DSV:
- 6) Data Source View Properties:
- 7) Analyzing sample data in DSV:

Adding/Removing Tables in a DSV:

- To modify the existing tables, right - click the diagram view pane and select Add/Remove Tables

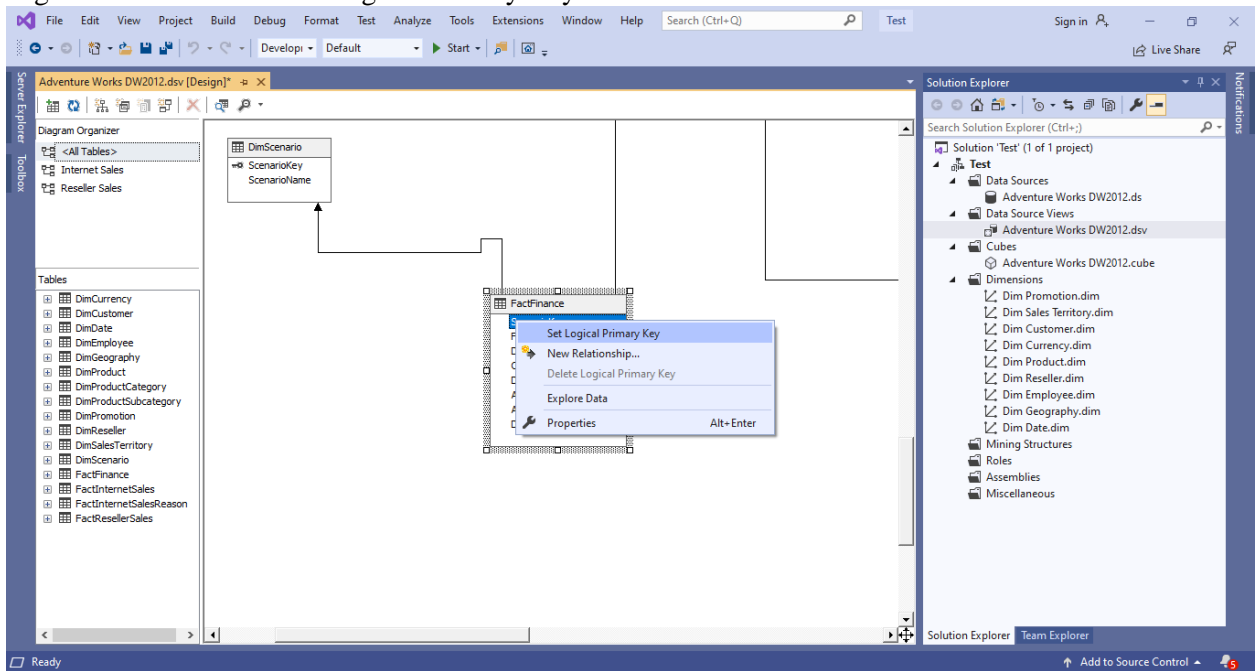


- This invokes the Add/Remove Tables dialog as shown.
- Using this dialog, you can add additional tables to the DSV by moving tables from the Available objects list to the Included objects list or remove existing tables by moving them from the Included objects list to the Available objects list.
- You can also remove a table from the DSV in the DSV Designer in the graphical view pane or the table view pane



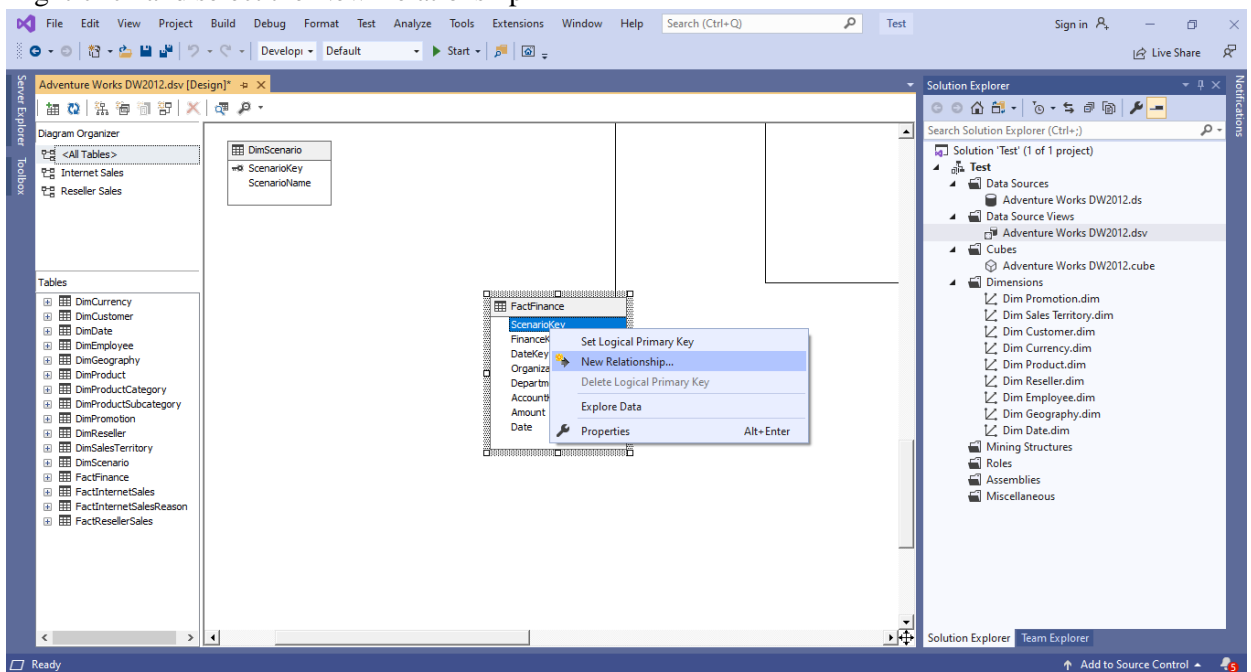
Specifying Primary Keys in the DSV:

- Selecting the primary is only applicable to that table which don't have any, in the visual studio.
- Specifying the primary is same when creating the table in SQL.
- If you forget it and the data is loaded in the DSV. You can add the primary key by following.
- Select the column in the table that you want to specify as a primary key. If there is more than one column that forms the primary key, you can select multiple columns by holding down the Ctrl key while selecting
- Right - click and select Set Logical Primary Key.



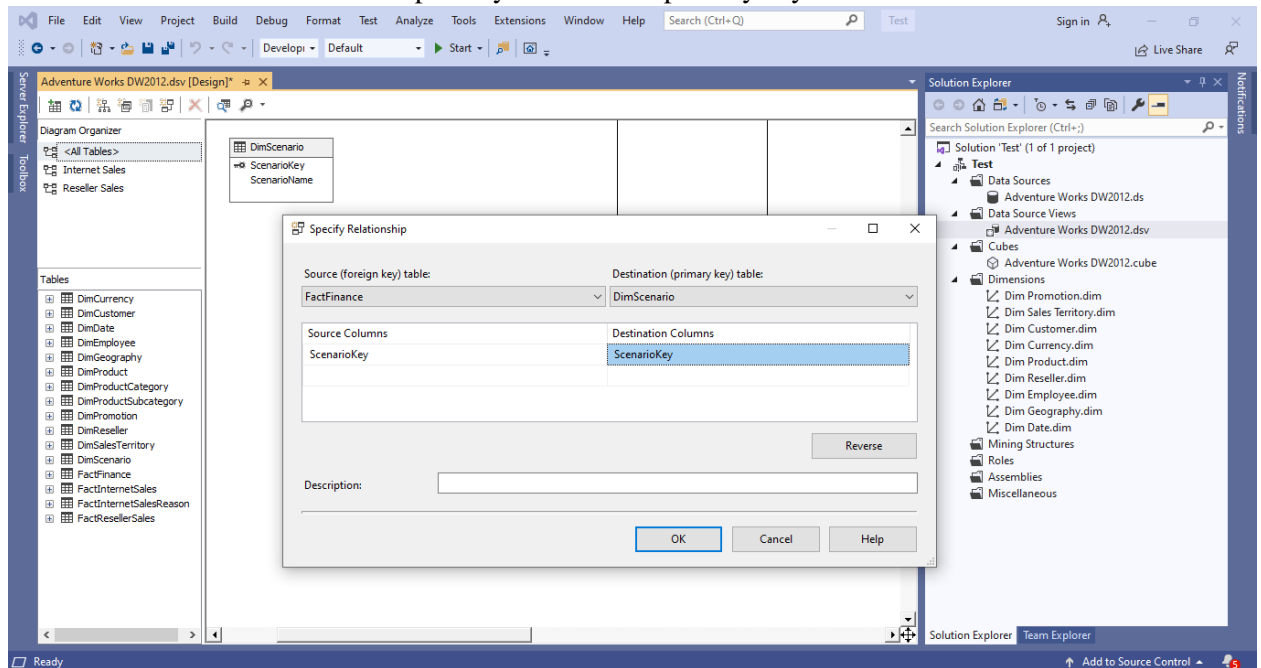
Specifying Relationships in the DSV:

- Select column in the table
- Right-click and select the New Relationship

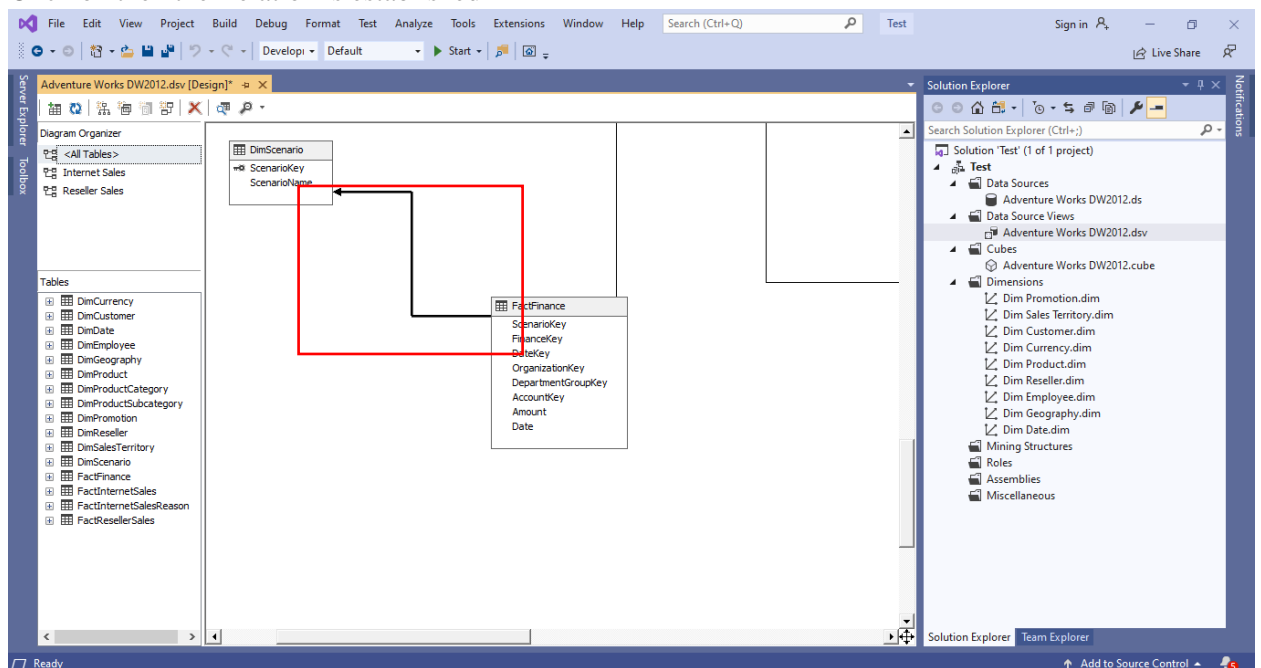


- You need to choose the columns in the source and destination tables that are involved in the join.
- The Source in the left side will act as a foreign table for the foreign key.

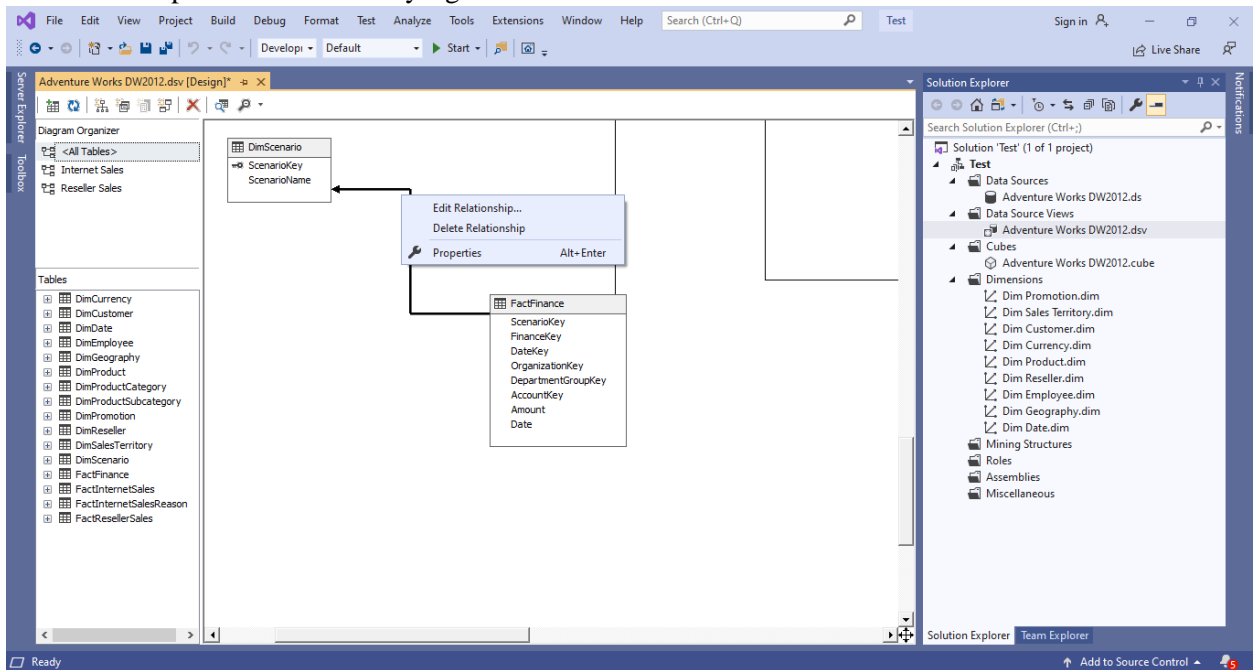
- The Destination table will act as a primary table for the primary key.



- Click ok then the Relation is established



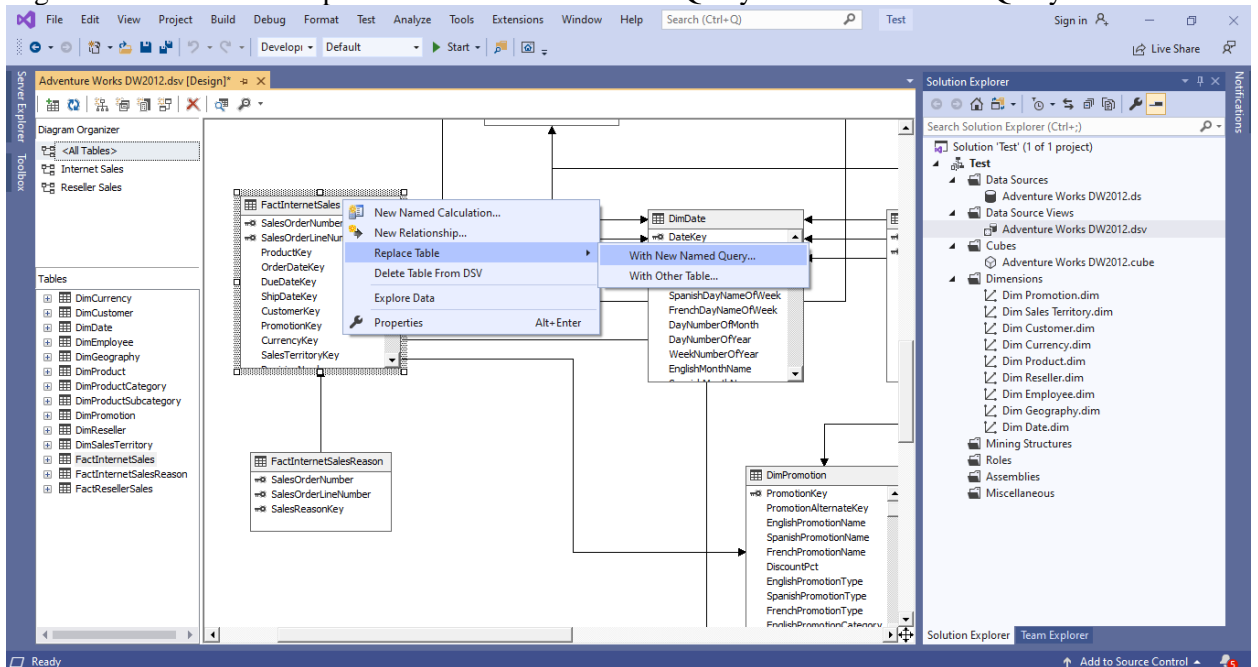
- You can manipulate the relation by right click the Created Line



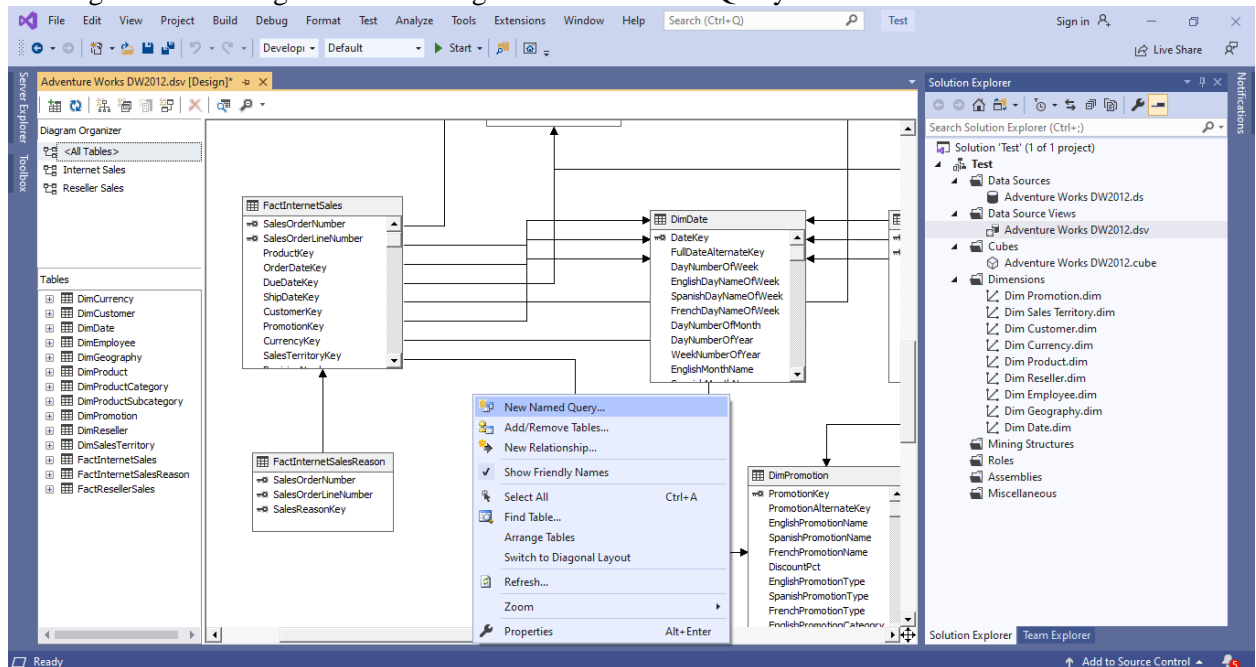
Customizing Your Tables in the DSV:

While modeling your data warehouse you will often want to select a few columns from tables or restrict the fact table rows based on some specific criteria. Or you might want to merge columns from several tables into a single table. All these operations can be done by creating views in the relational database. the functionality of performing all these particular operations within the DSV using a *Named Query*.

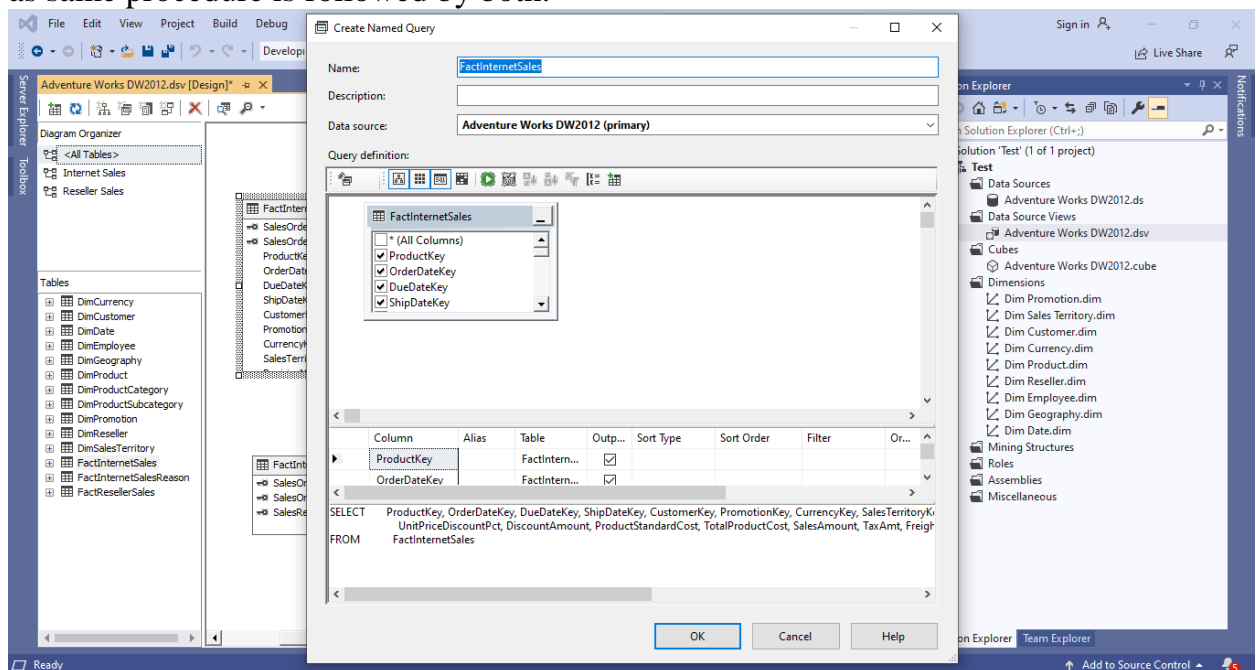
- Right-click a Table and Replace Table with New Named Query select New Named Query



- If you want to add a specific table twice in your DSV, you can launch the query designer by right-clicking the DSV Designer and selecting With New Named Query.



- From above both option you can add a Query on a specific table or by adding new one as same procedure is followed by both.



Named Queries are created using a query designer that helps you build custom queries to create a view.

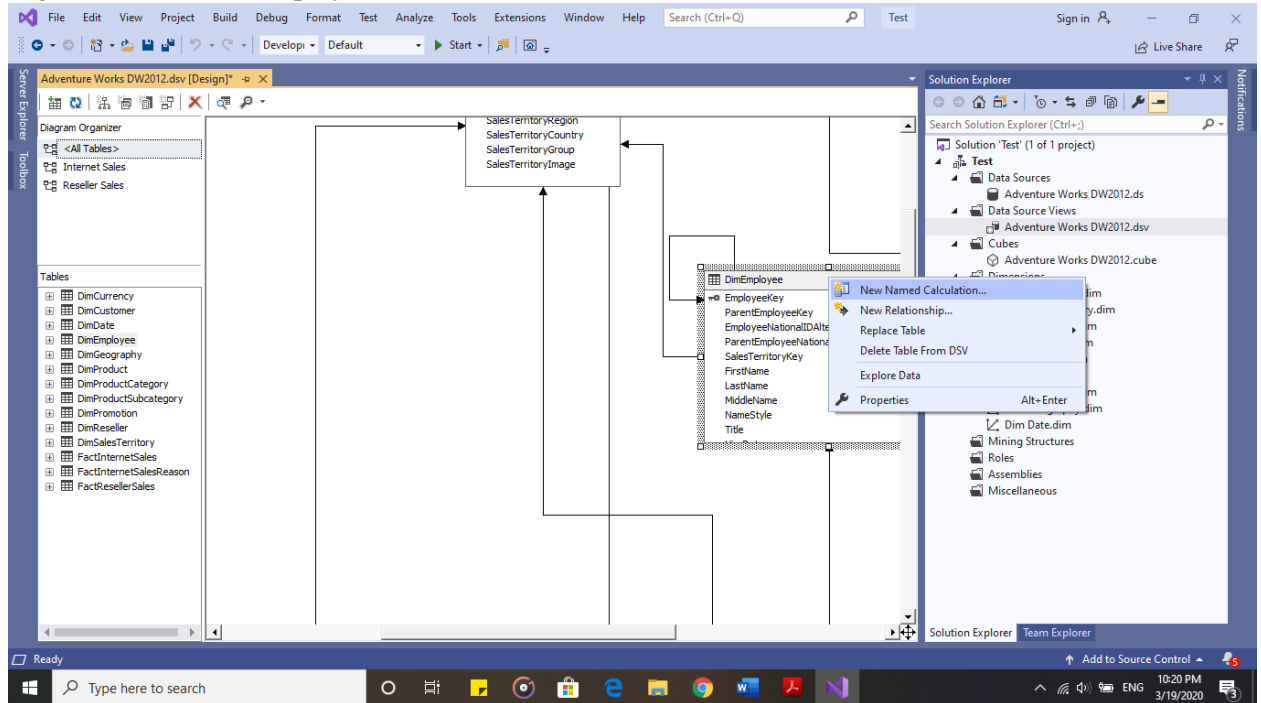
The Create Named Query designer dialog is shown above. The Named Query editor in the designer is Visual Studio's Visual Database Tools query (VDT) editor. This shows the tight integration SQL Server has with Visual Studio. In this dialog you can add tables from the data source, select specific columns from the tables, and apply restrictions or filters using the graphical interface.

A SQL query is created based on your selections and is displayed in the SQL pane in the editor. If you're a SQL wizard, you can forego filling out the dialog elements and enter or paste a valid SQL query directly into the SQL pane. We recommend that you then execute the query to make sure the query is correct. The results from the underlying relational database will then be visible in a new pane beneath the SQL pane. Click OK once you have formed and validated your query. The table is now replaced with

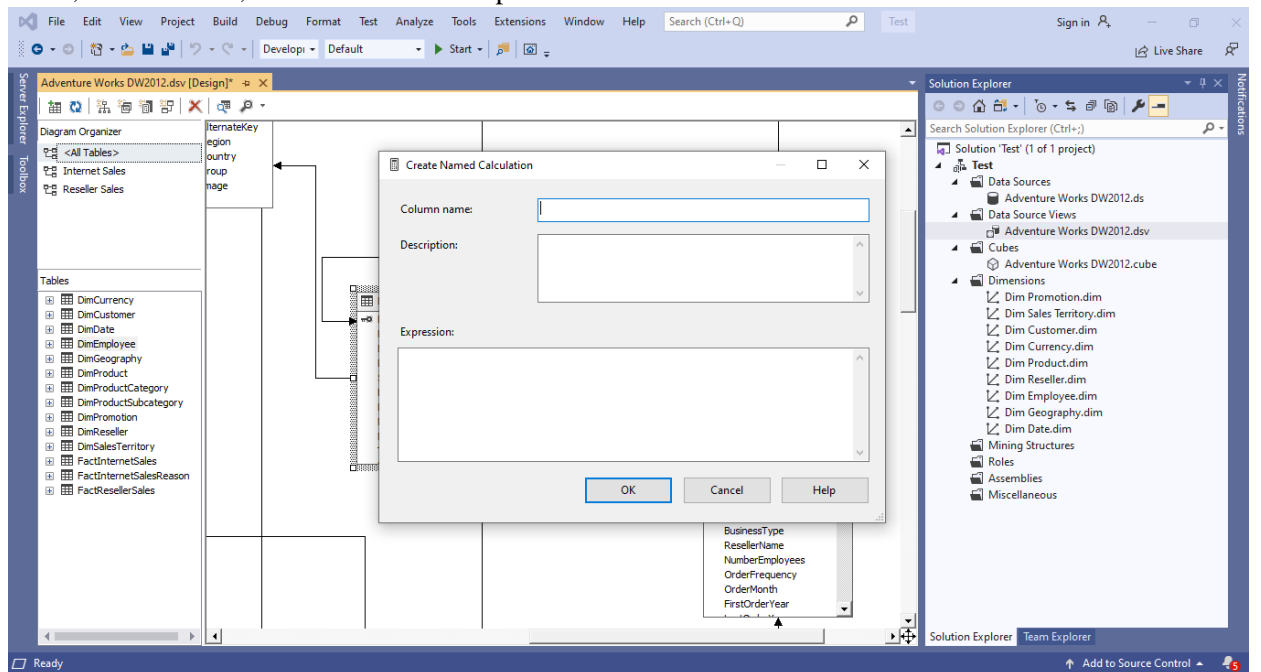
results from the Named Query you have specified in the DSV.

In certain instances, you might want to create a new column in the table.

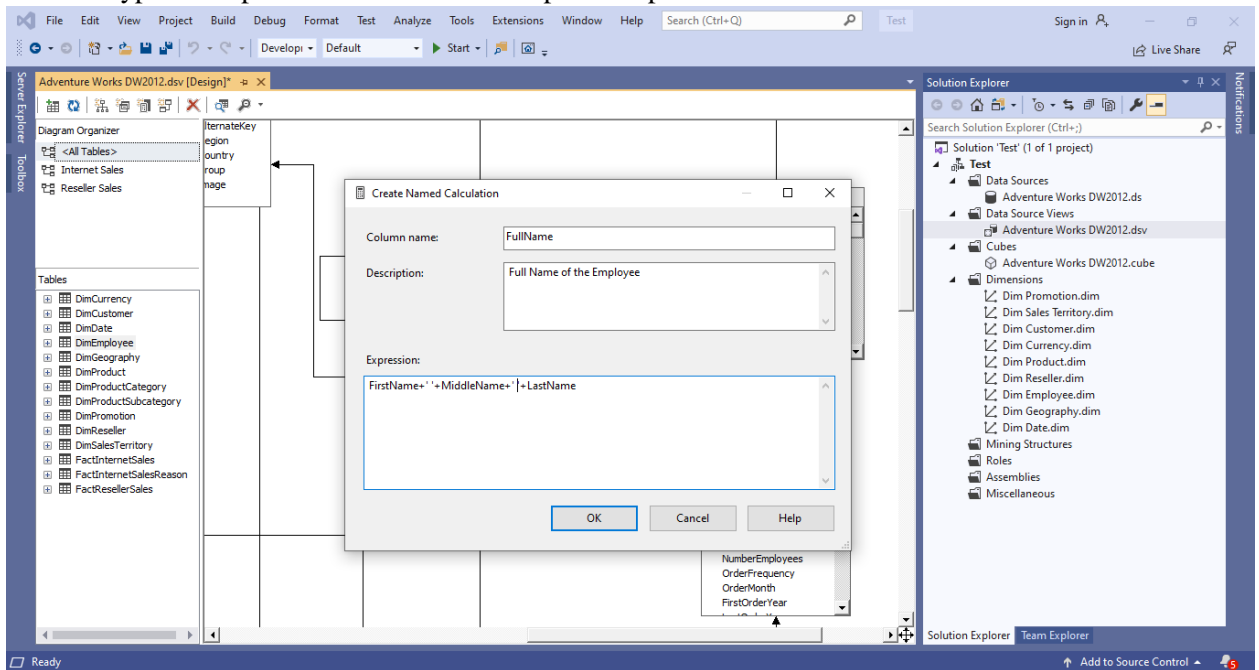
- Right – click i.e. the Employee table and select New Named Calculation.



- To add a column like called Full Name to the Employee table as you can just need to combine the first name, middle name, and last name in the pre-defined table.

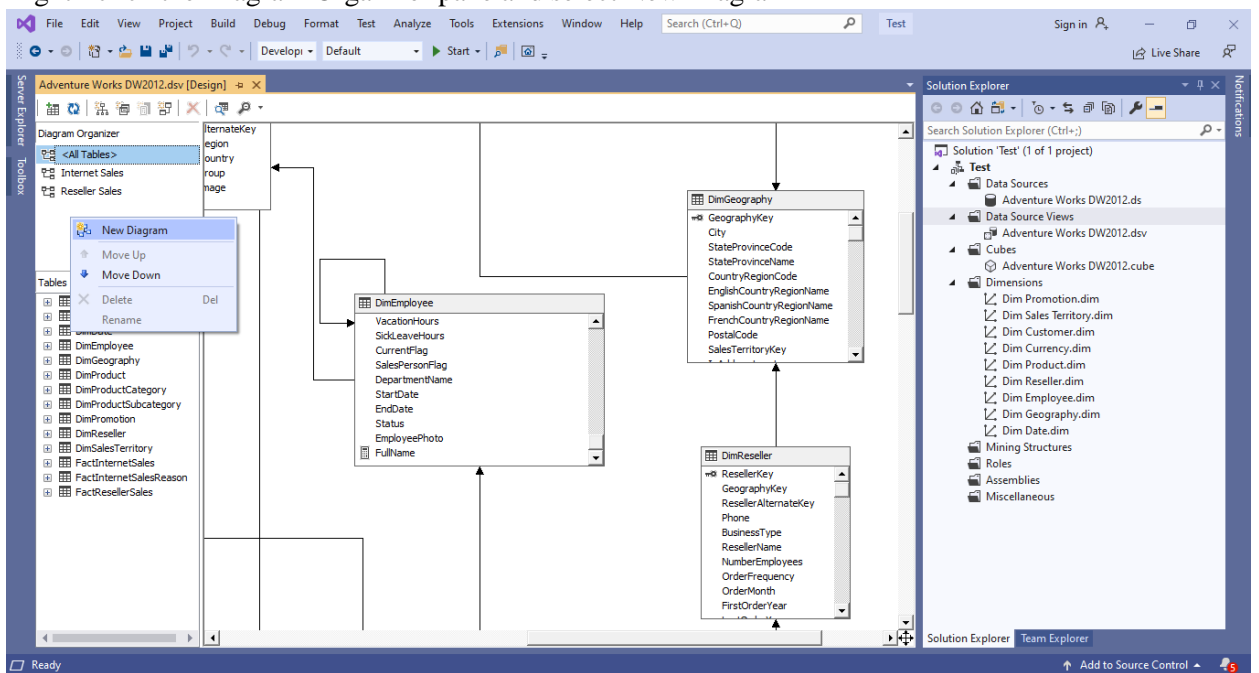


- You can type the expression for this in the Expression pane as shown and then click the OK button.



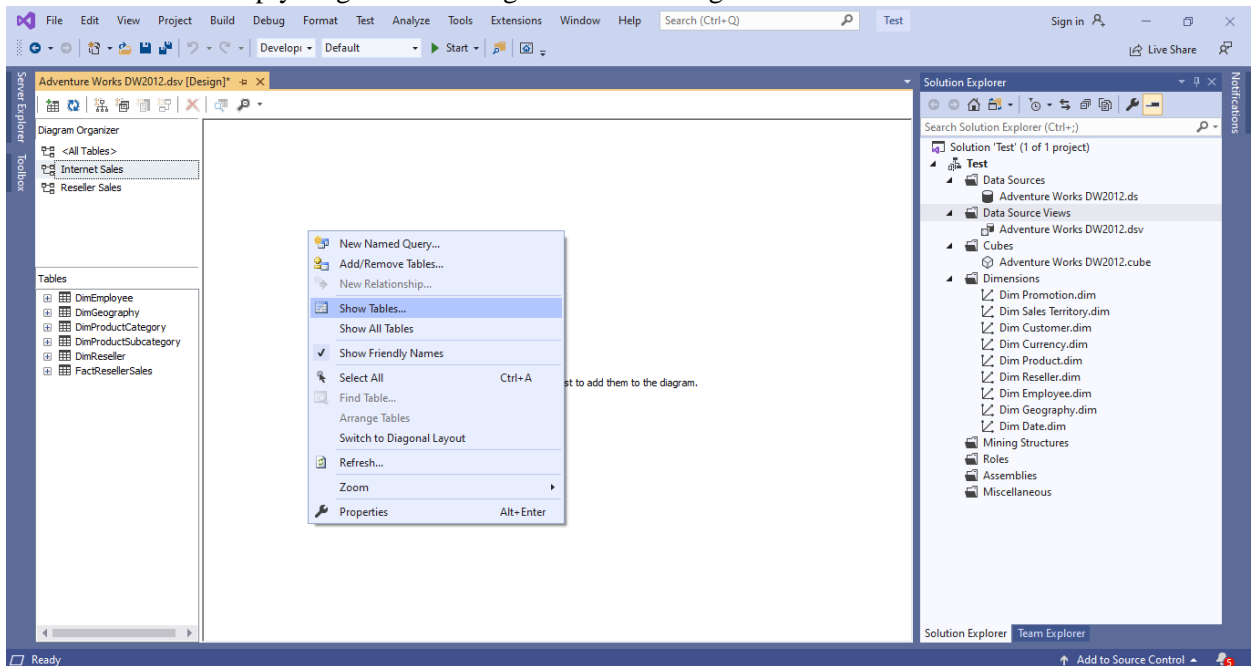
Create a new diagram in the DSV:

- Right - click the Diagram Organizer pane and select New Diagram

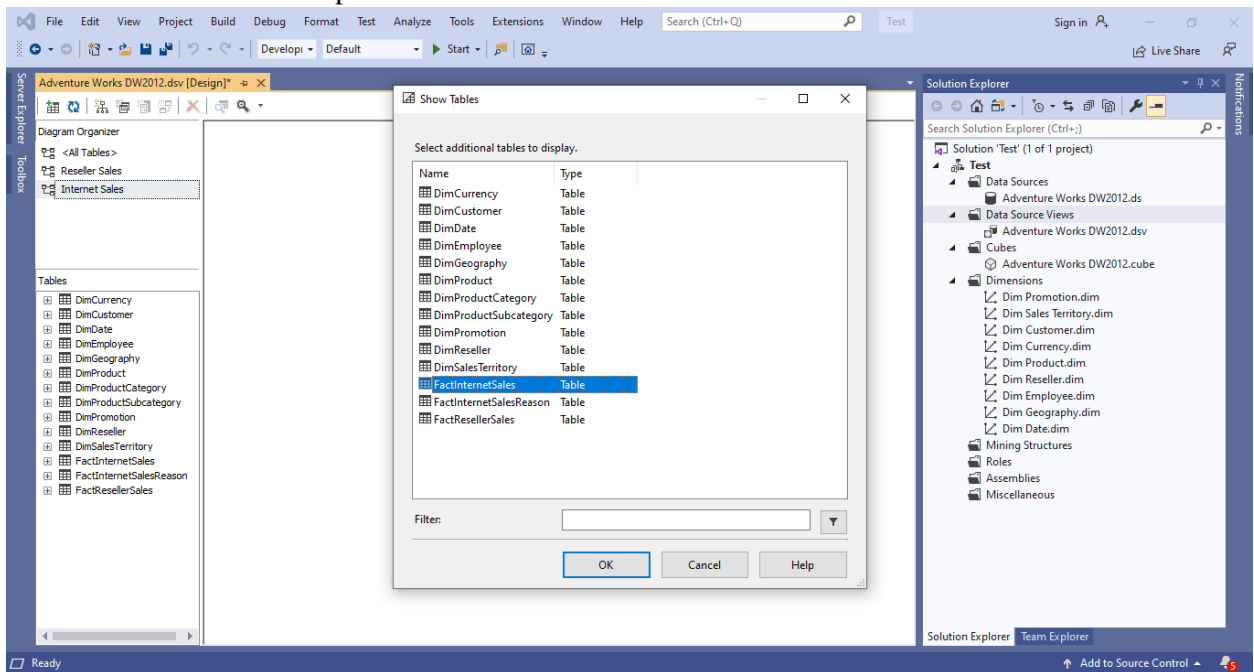


- Name the new diagram i.e. “Internet Sales.”

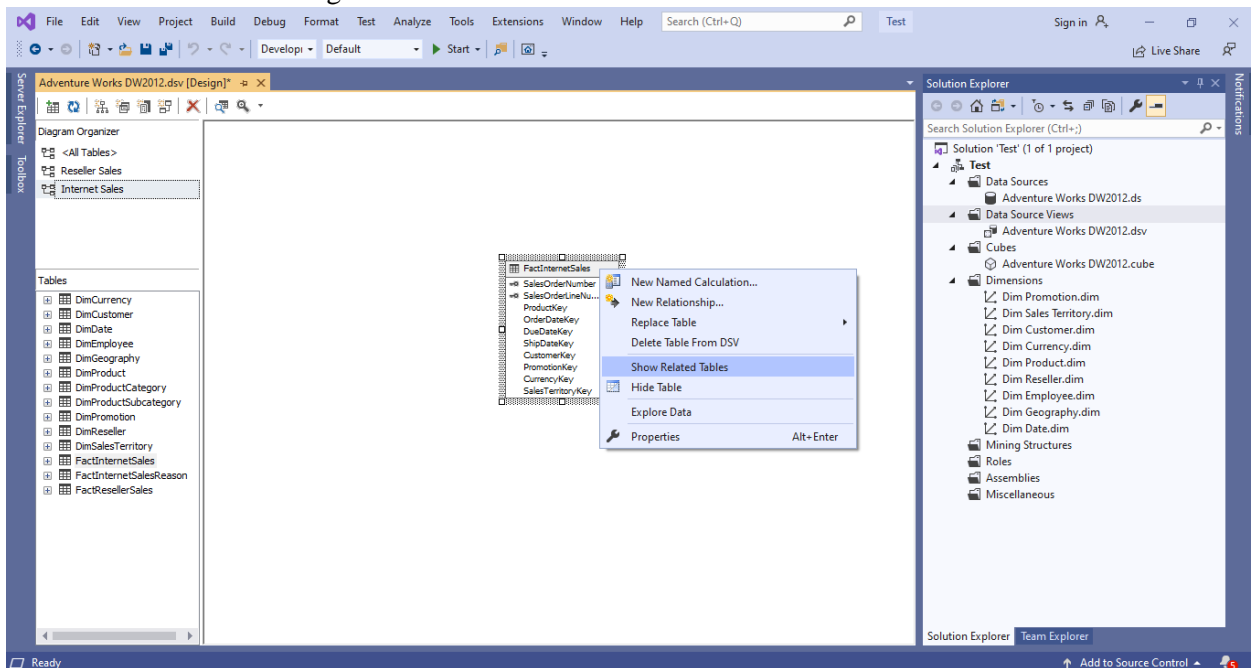
- You now have an empty diagram view. Right - click the diagram view and select Show Tables



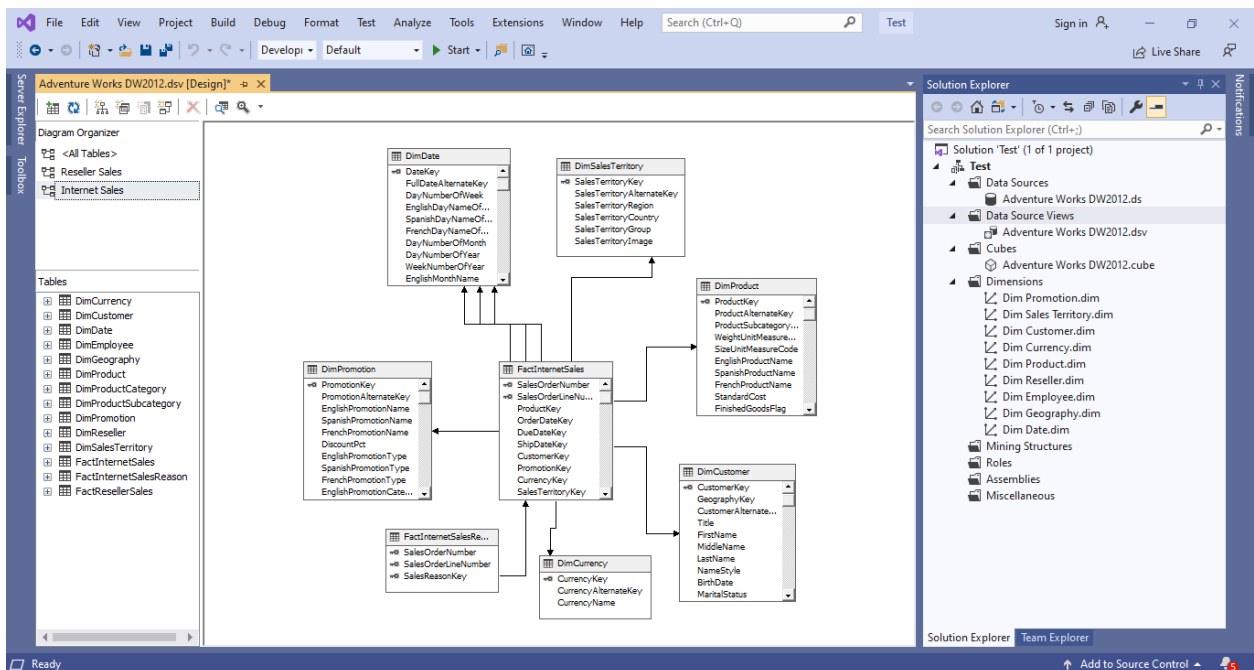
- Select all the tables that are part of the InternetSales fact table and click OK.



- This will add the Fact table of Internet Sales, to see it's related table Right-click the table then Show Related Tables as Following



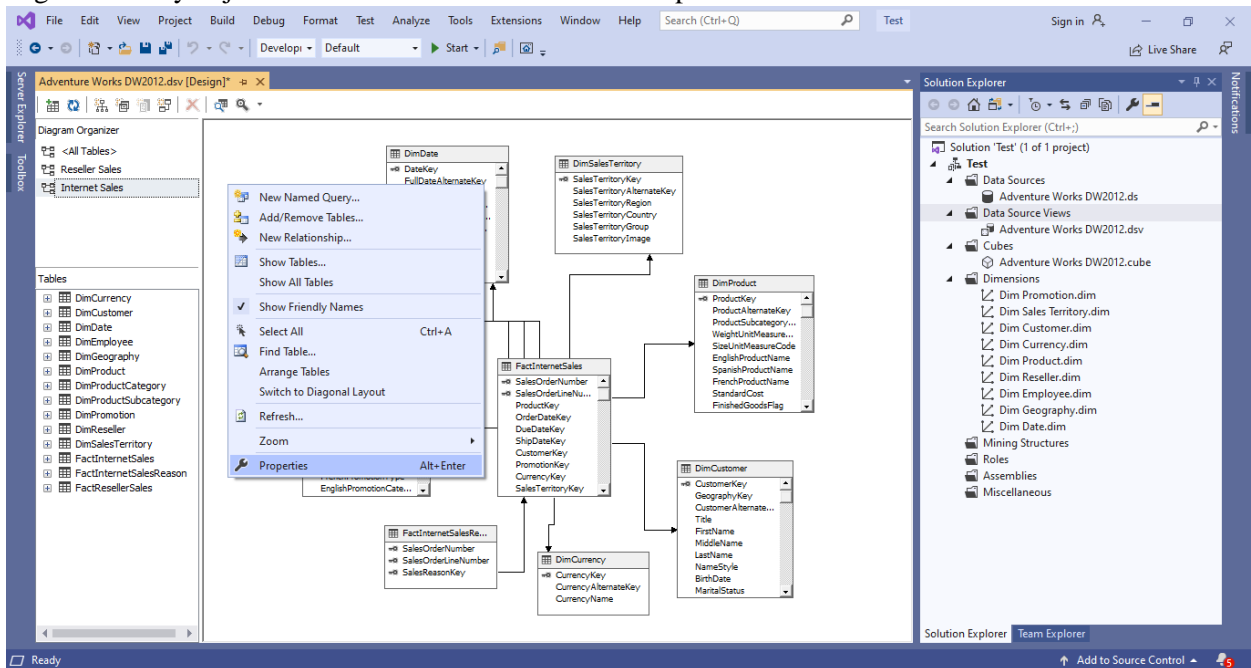
- This gives you a diagram view of Internet Sales that contains the Internet Sales fact table and the related dimension tables



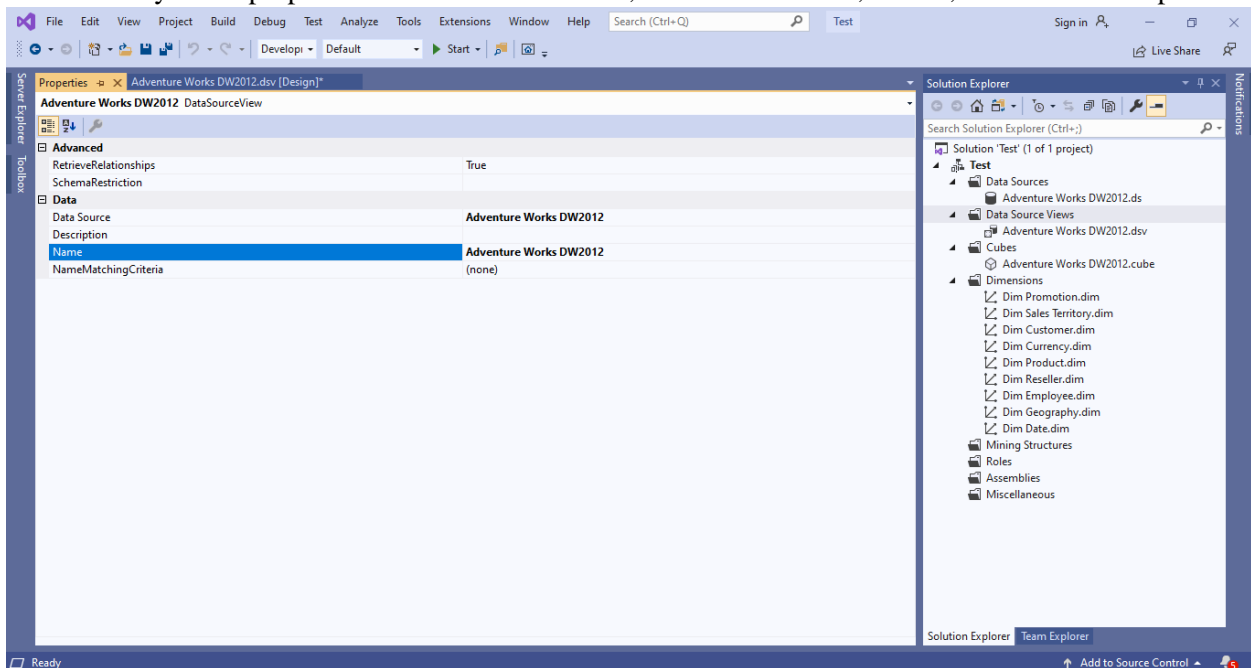
Data Source View Properties:

Each object created within Visual Studio has certain properties. Within the DSV you can view the properties of the objects in the DSV such as tables, views, columns, and relationships. Properties of these objects are shown in the Properties window within Visual Studio as Following

- Right-click any object or table or column then Select Properties



- It will show you the properties of a column in a table, calculated column, a table, and a relationship.

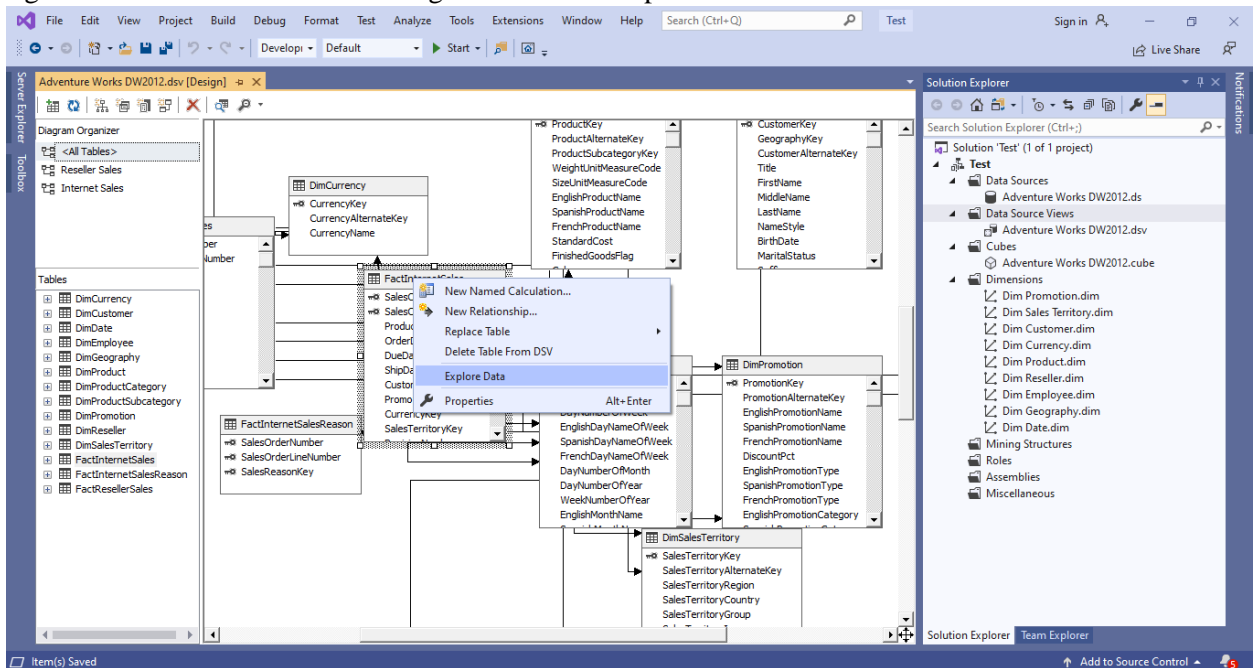


Analyzing sample data in DSV:

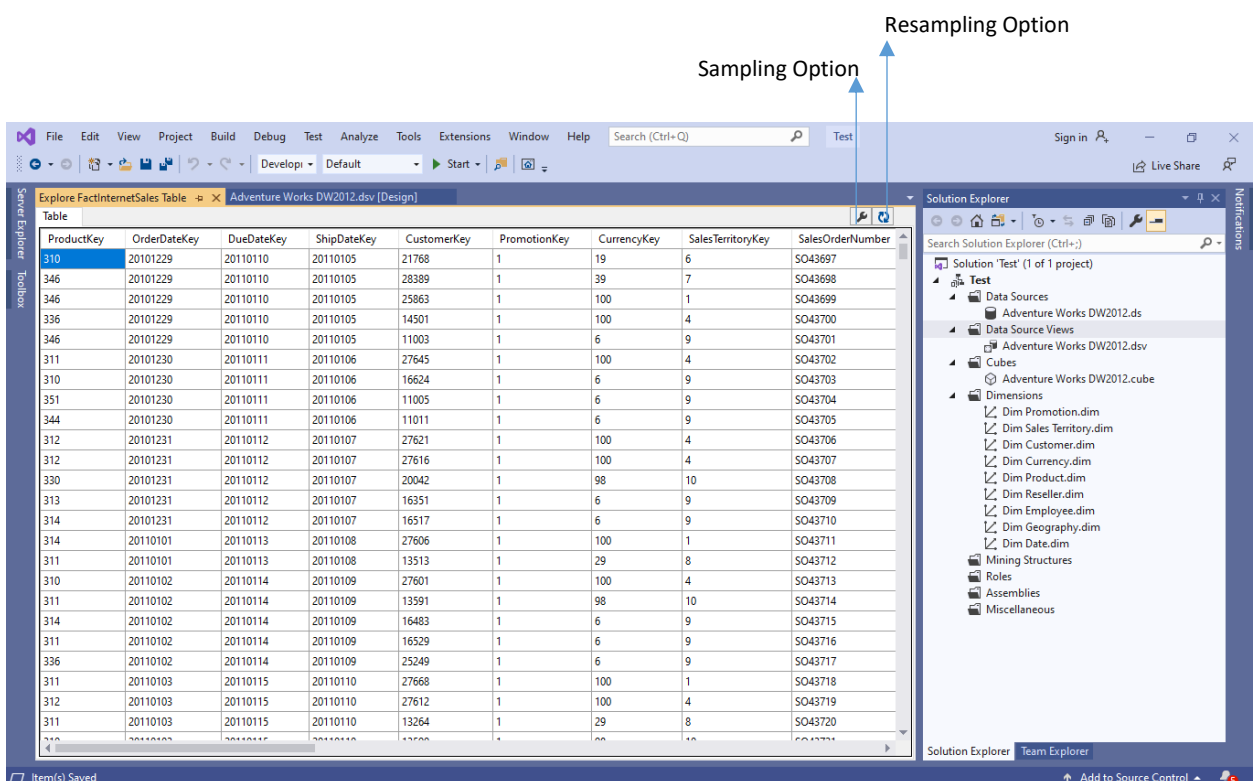
a sample of data from the tables in the DSV helps you in identifying the measures of the cube as well as the hierarchies of each dimension. Analyzing sample data in the DSV also helps you identify dimensions that can be created from the fact table data. The analysis of sample data within the DSV is even more important when creating Data Mining models. You learn more about analyzing the data with respect to Data Mining in Chapter 16.

To see a sample of the data specified by your DSV,

- right - click a table in the DSV Designer and select Explore Data.



- You can now see rows from the underlying table presented within the Explore < table name > Table window



The data presented is only a subset of the underlying table data.

By default, the first 5,000 rows are retrieved and shown within this window.

You can change the number of rows retrieved by clicking the Sampling Options button. Clicking the Sampling Options button launches the Data Exploration Options dialog where you can change the sampling method, sample count, and number of states per chart, which is used for displaying data in the chart formats. Once you have changed the sample count value you can click the Resample Data button to retrieve data based on the new settings.