

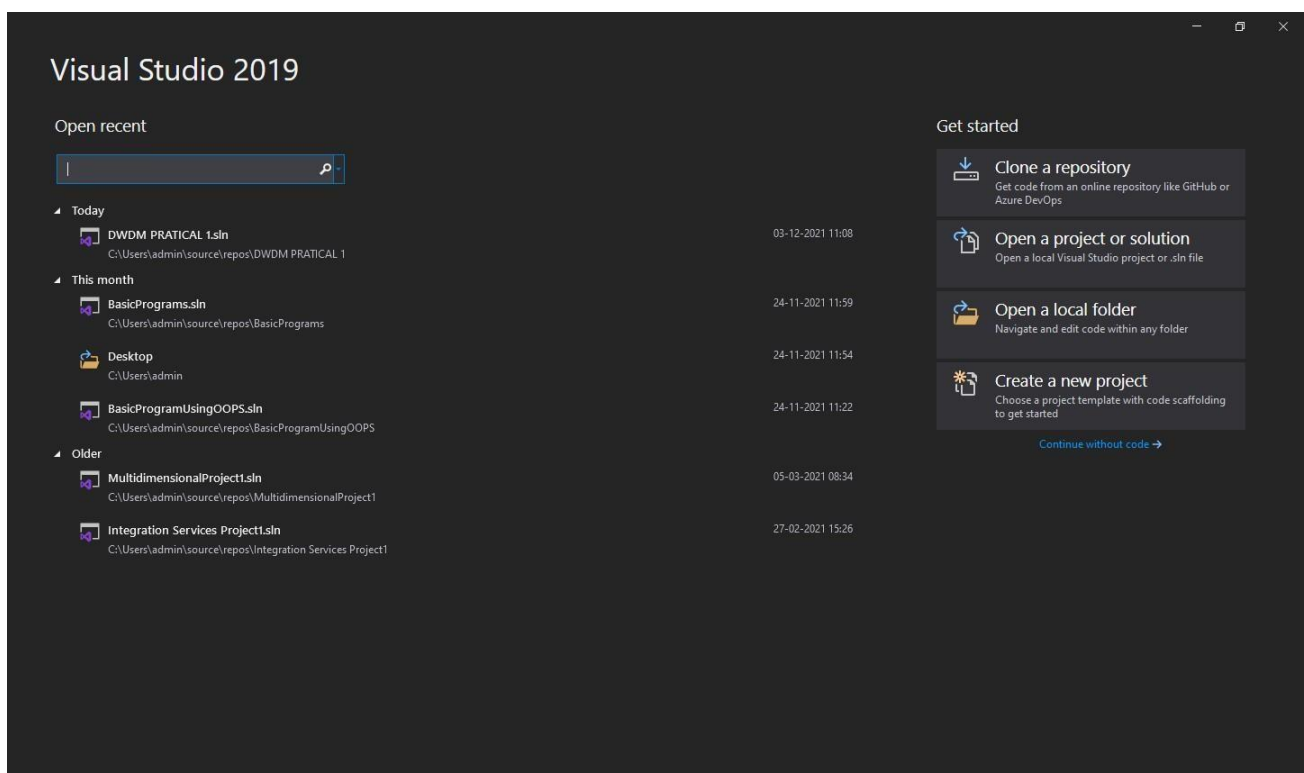
Name: Sayed Mohammed Owais
Class: MSc CS Part I

Roll no: 45
Subject: DWDM

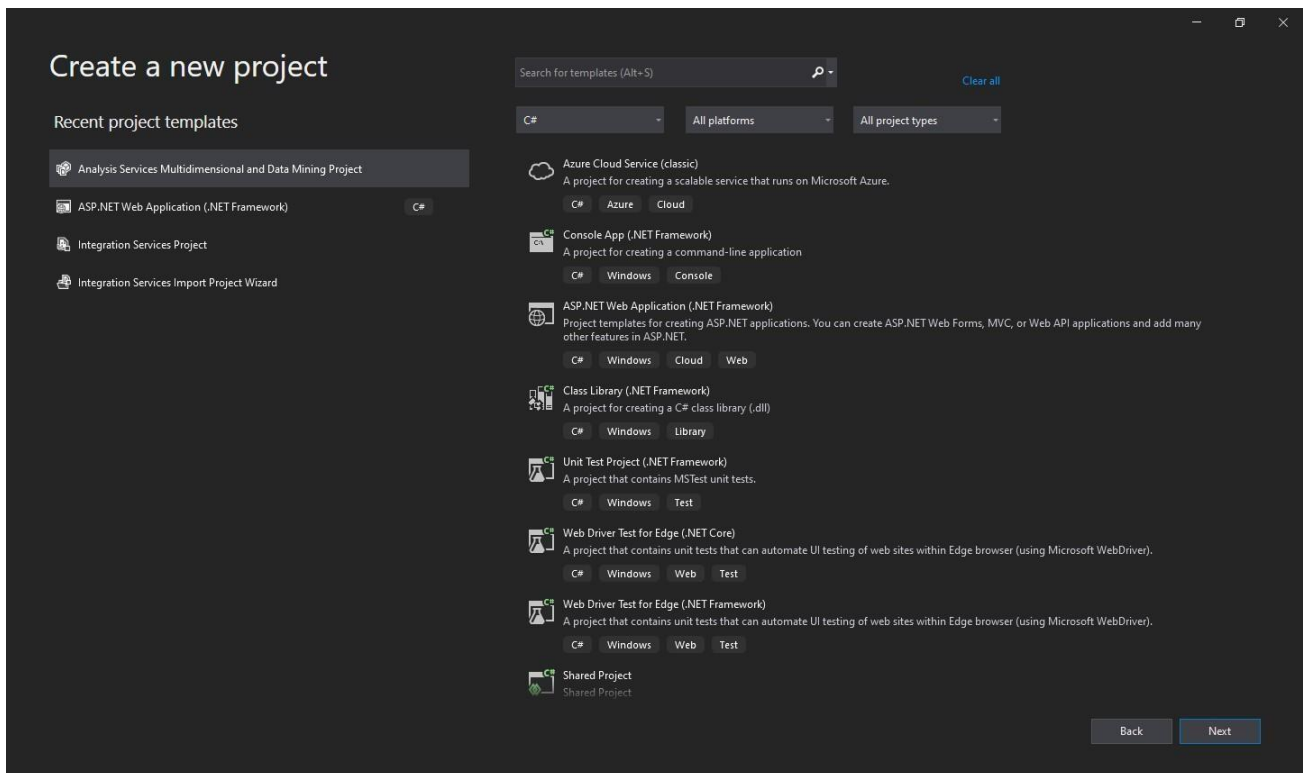
DMDW Practicals

Aim: Perform analysis on Adventure Works dataset using Microsoft Excel and Visual Studio 2019.

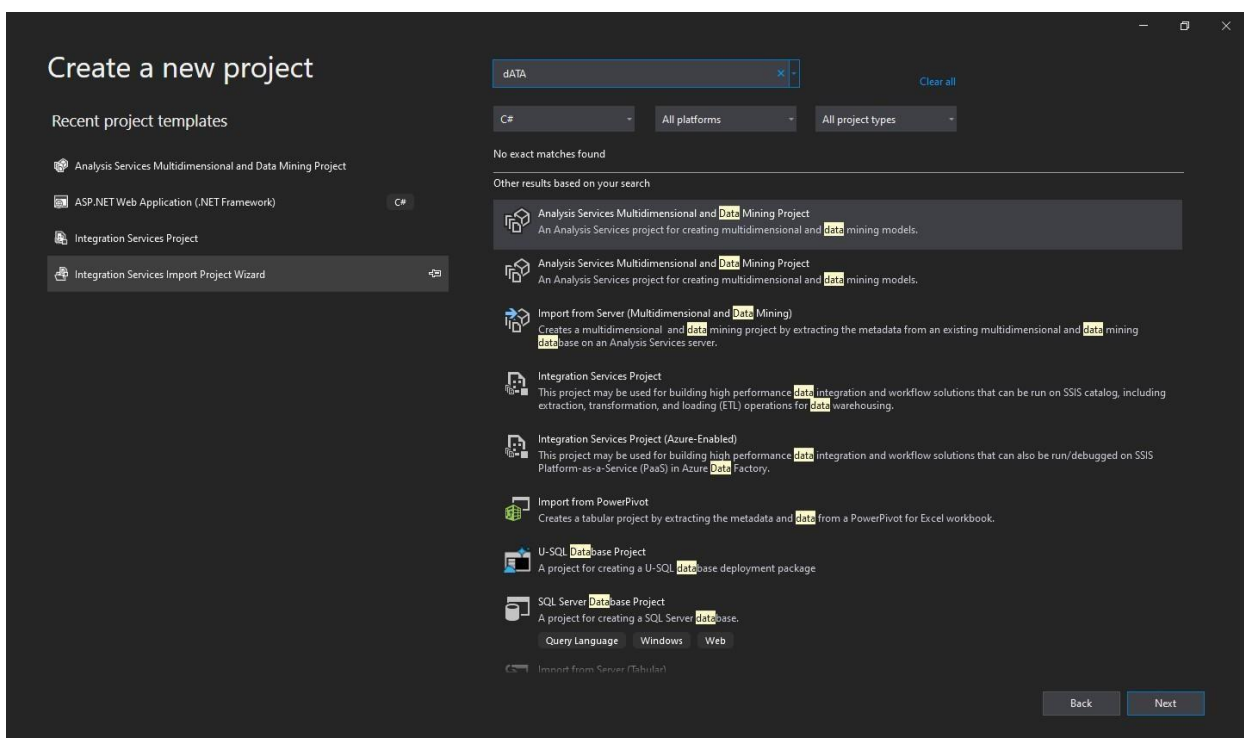
- Open Visual Studio 2019. You should be greeted with this screen.



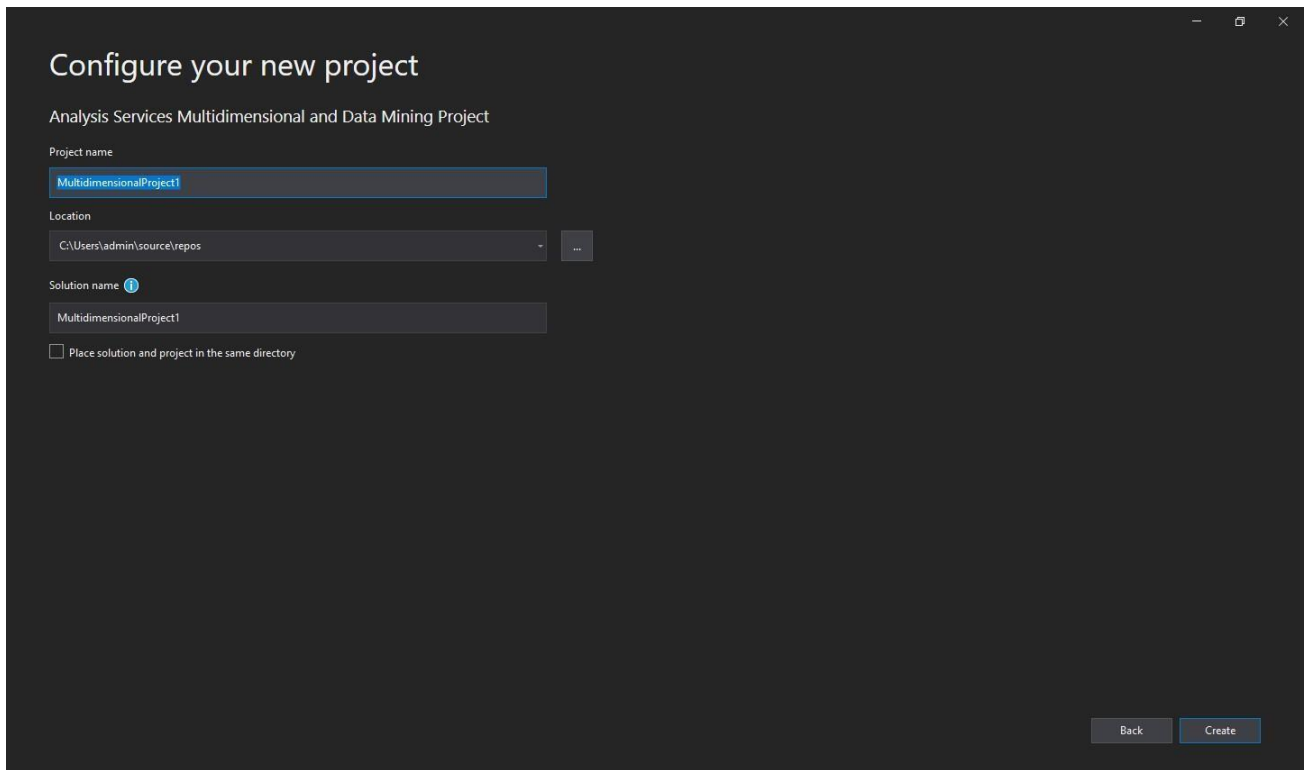
- Click on the “Create a new project” button present on the right hand side of the screen. The application will now transition to this screen.



- Now, select “Analysis Services Multidimensional and Data Mining Project” button from the ‘Recent Project Templates’ list if present else search for the same using the search bar. You may be prompted to install this package if it is not available locally. Searching for the above template yields this screen:



- Click on “Next”. The screen will now transition to this screen:



Configure your new project

Analysis Services Multidimensional and Data Mining Project

Project name

MultidimensionalProject1

Location

C:\Users\admin\source\repos

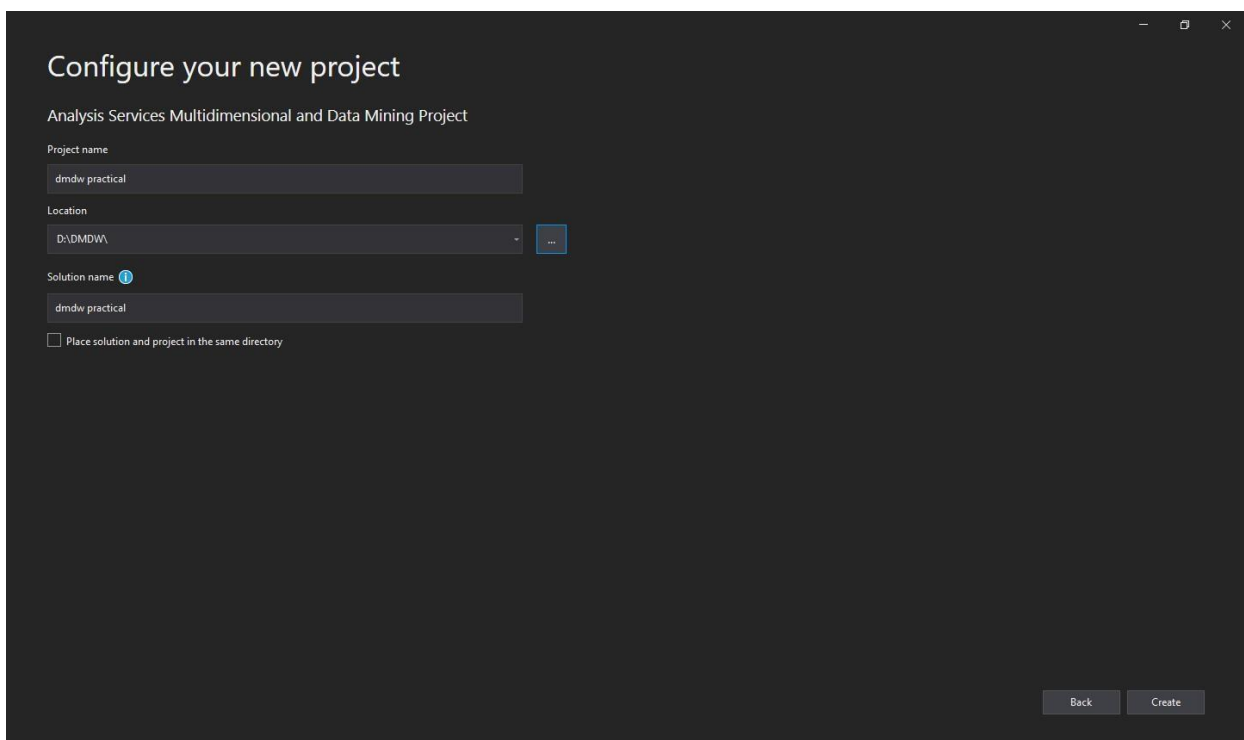
Solution name ⓘ

MultidimensionalProject1

☐ Place solution and project in the same directory

Back Create

- You can provide the location of the project as well its name.



Configure your new project

Analysis Services Multidimensional and Data Mining Project

Project name

dmdw practical

Location

D:\DMDW\

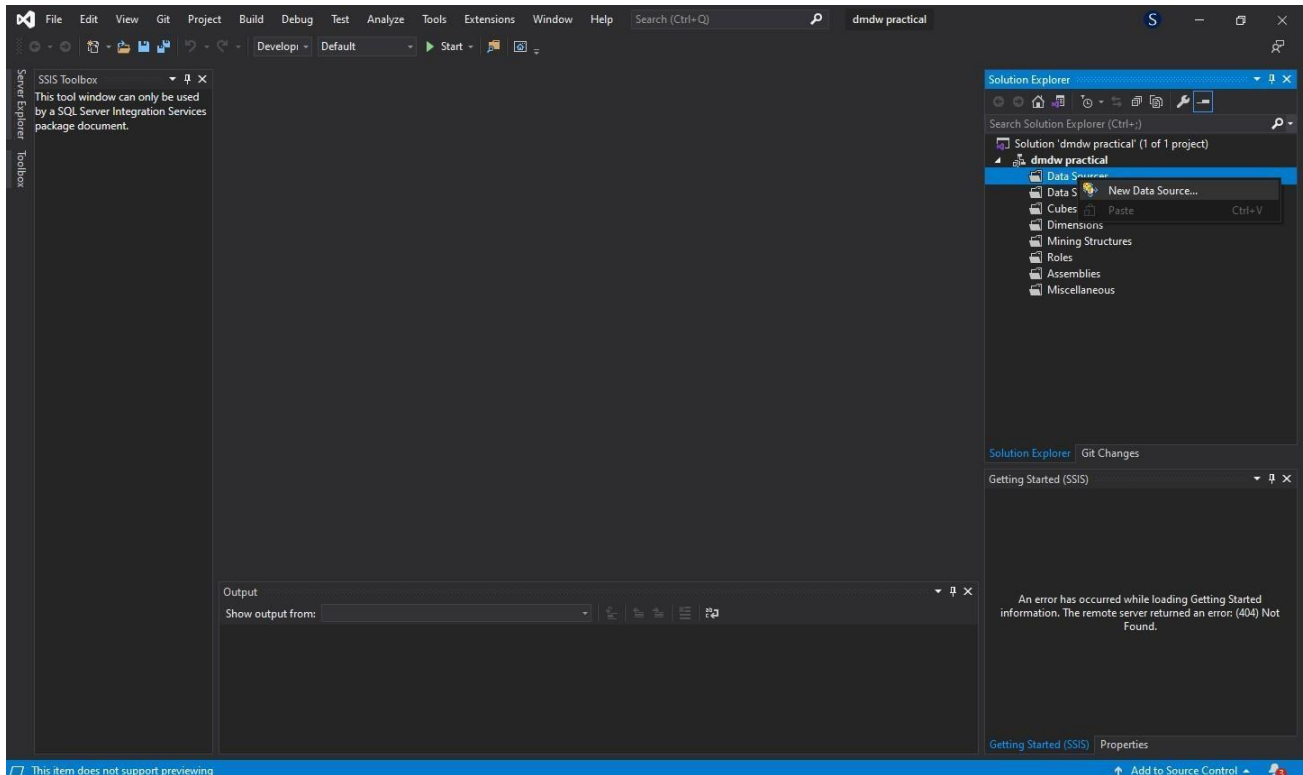
Solution name ⓘ

dmdw practical

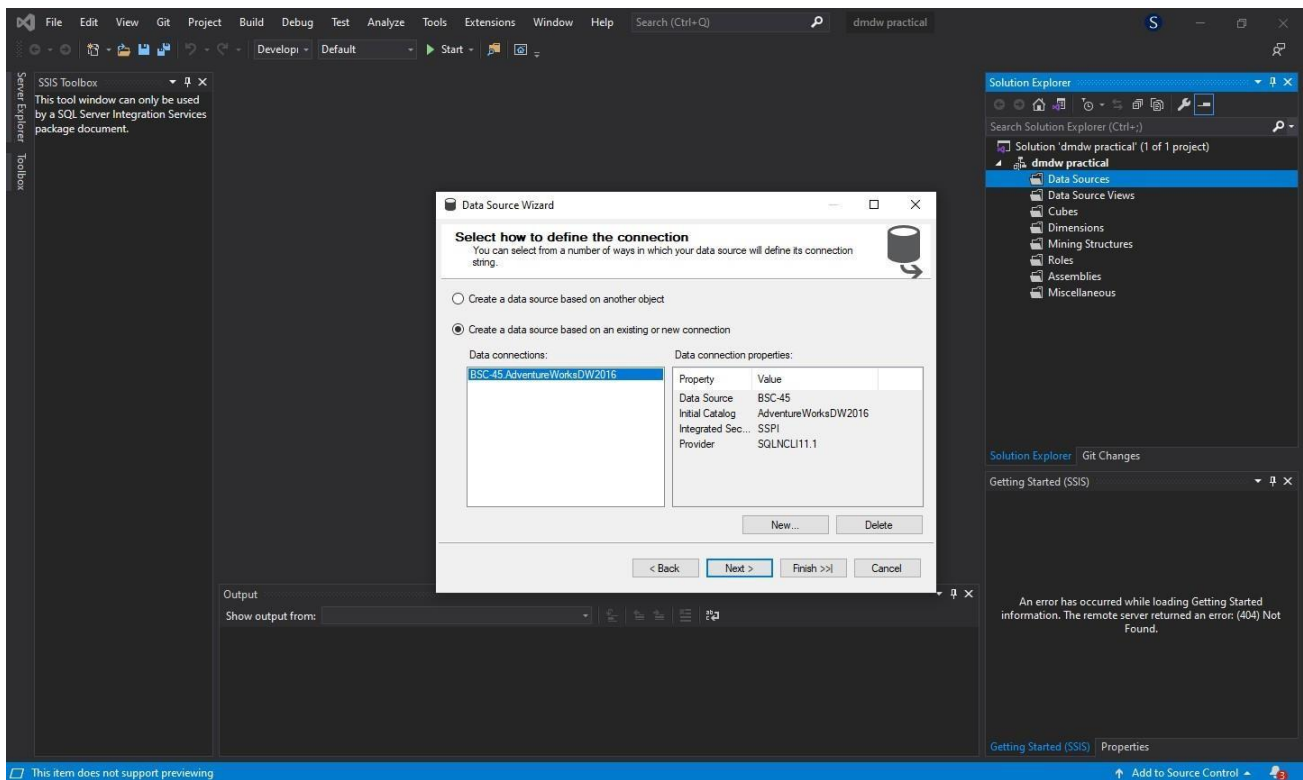
☐ Place solution and project in the same directory

Back Create

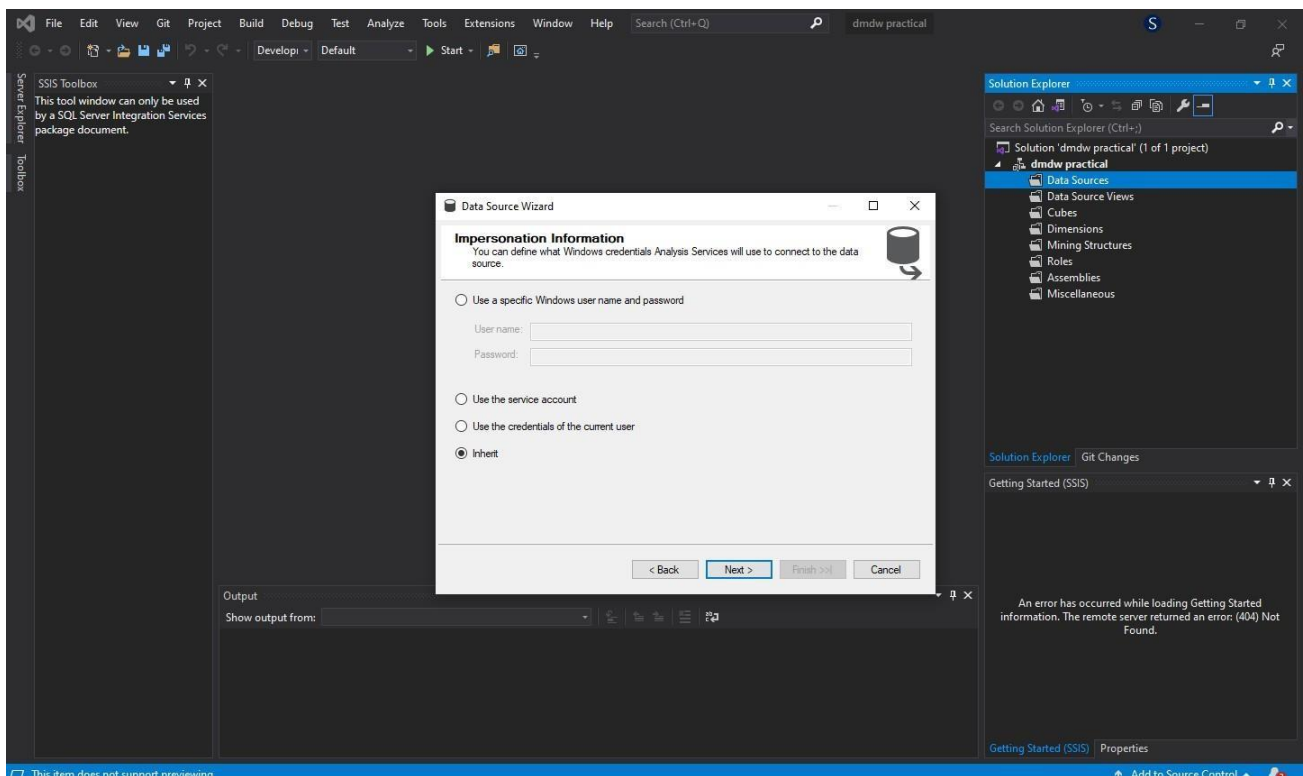
- Click on “Create”. The main window of Visual Studio will be displayed. Now, on the right pane, the child node ‘Data Sources’ can be found. Right click it to get the option “New Data Source”.



- Click on “New Data Source” option. A new window named ‘Data Source Wizard’ will appear. Click on “Next”. Now, the window should transition to the ‘Select how to define the connection’ window. Select the “Create a data source based on new or existing connection”. An entry should now appear in the ‘Data Connections’ and ‘Data Connection Properties’. Select the appropriate connection.

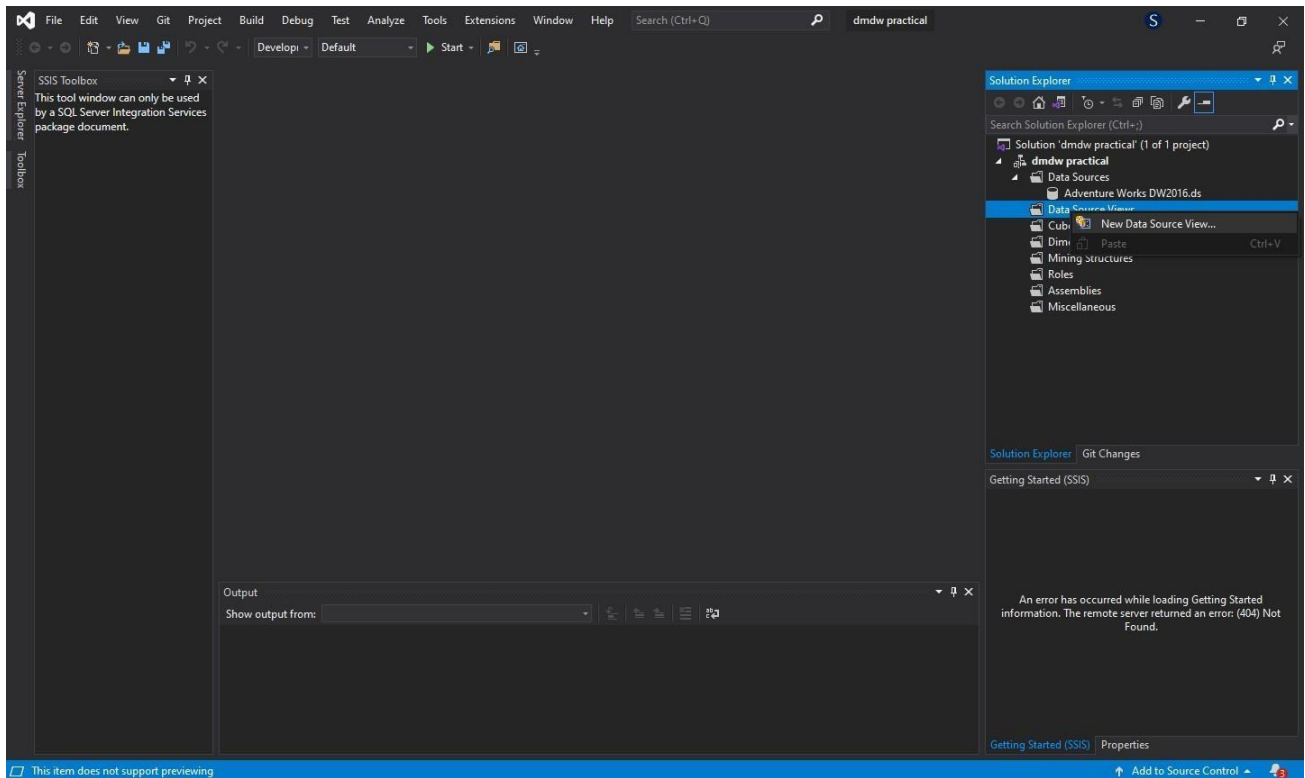


- Click on “Next”. The window will further transition to the ‘Impersonation Information’ window. Select the “Inherit” option.

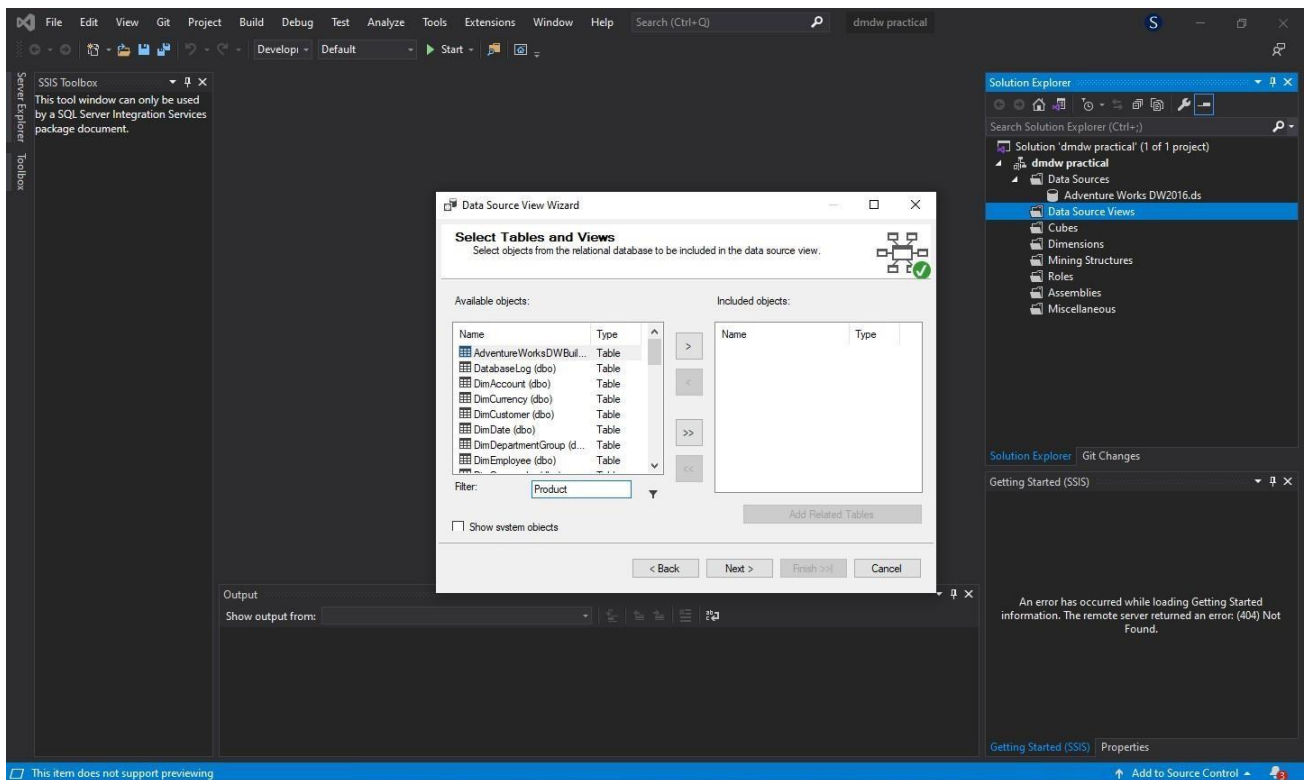


- Click on “Next”. The window will now transition to the last window.
Click on “Finish”. The window will now close to reveal a child element in the ‘Data Sources’ tree item. Right click on the ‘Data

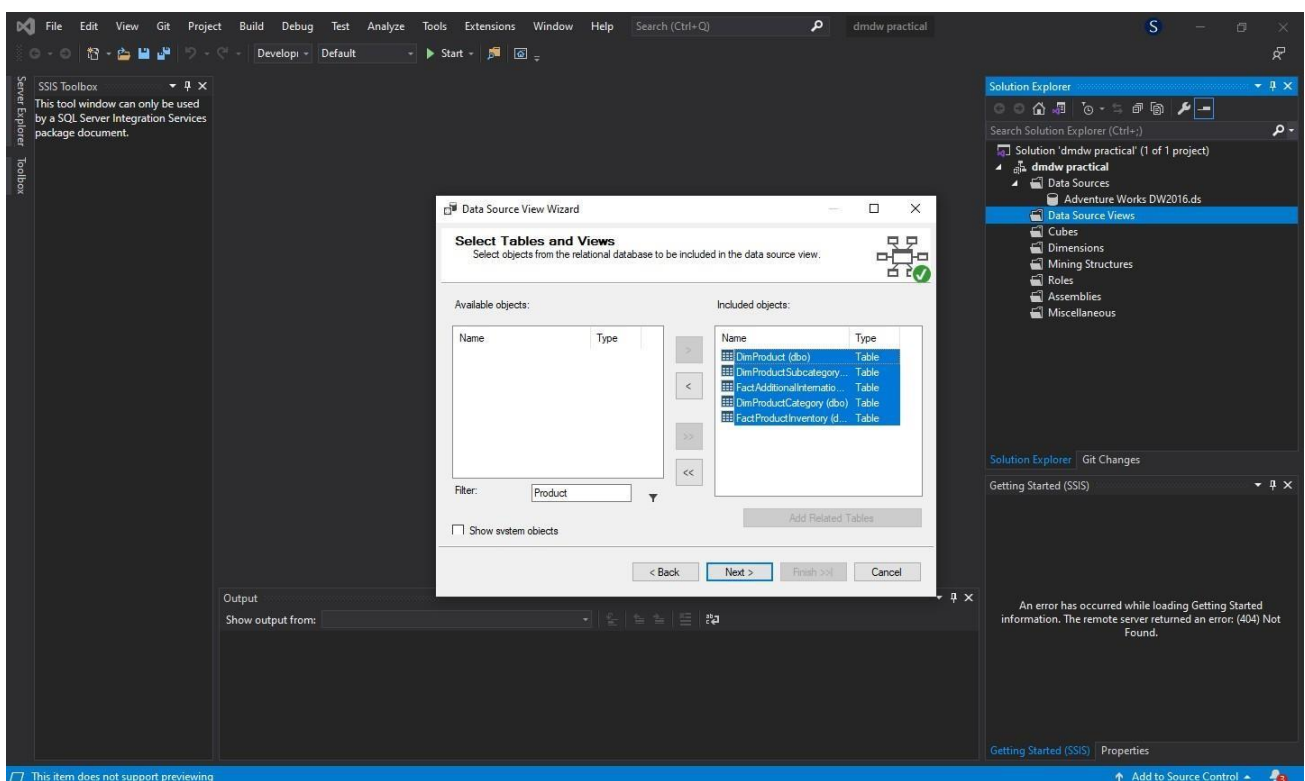
Source Views' tree item present directly below the 'Data Sources' parent node to generate a popup menu with the "New Data Source View" menu item.



- Click "New Data Source View" to create a new window titled 'Data Source View Wizard'. Click on "Next" to transition the window to 'Select Tables and Views' state. Enter a filter of your choice and press the adjoining button to apply the filter.

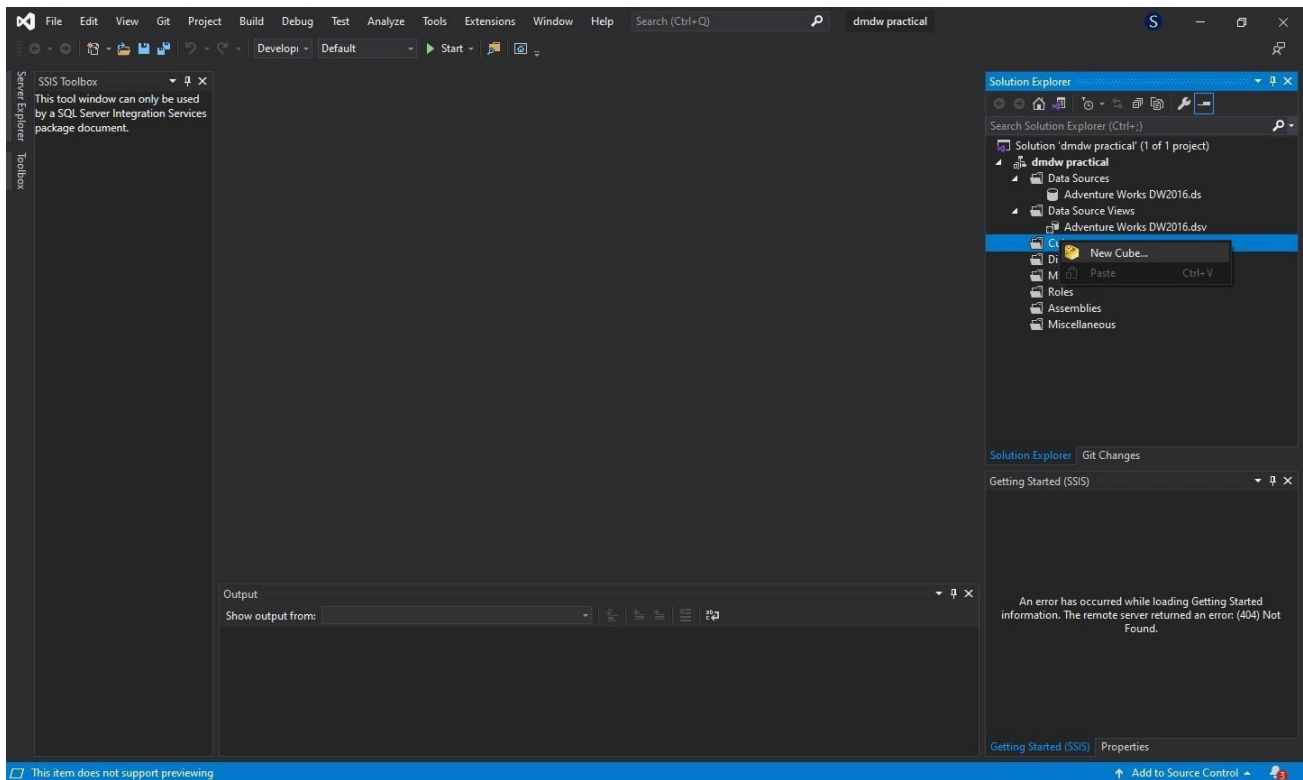


- Now, click on the “>>” button to select all the filtered entries from the ‘Available Objects’ into the ‘Included Objects’ list.

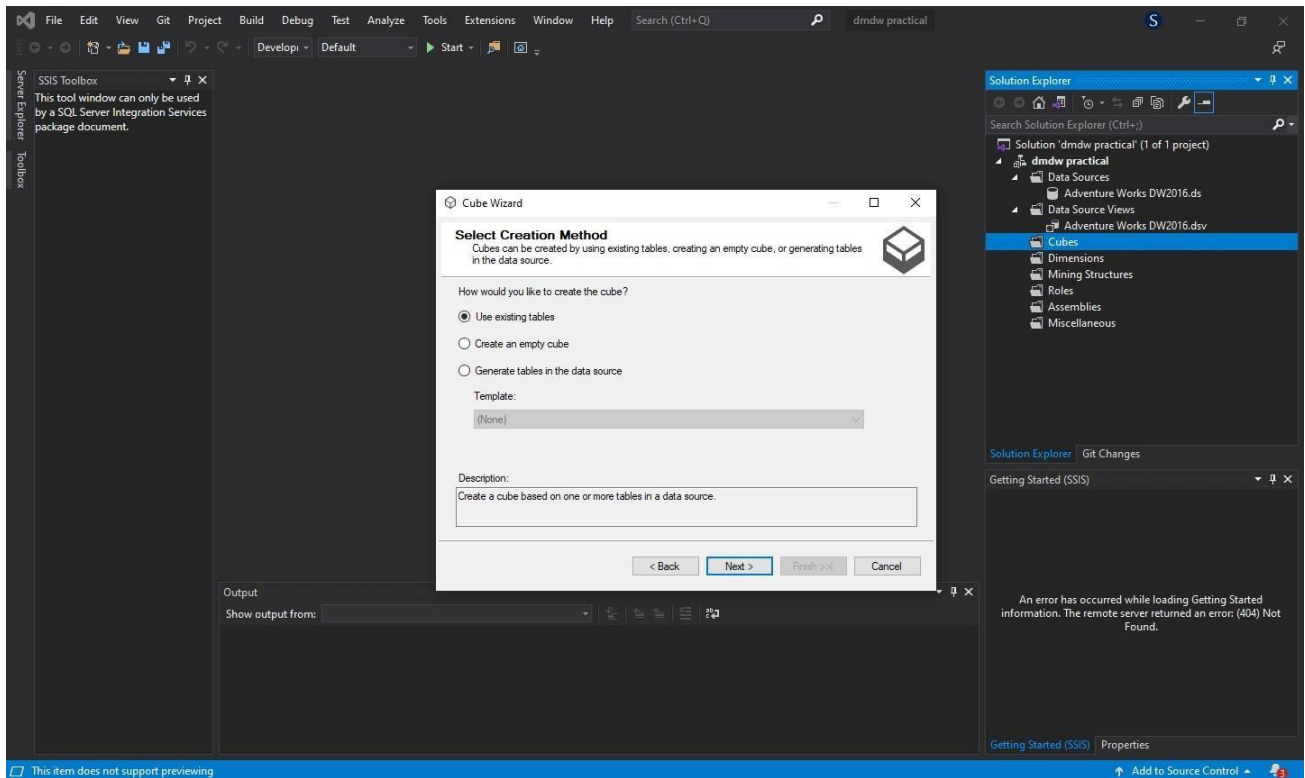


- Click on “Next”. The window will further transition to a new state. Click on “Finish” to close the window. The window will now close to reveal a child node in the ‘Data Source Views’ tree item. Right

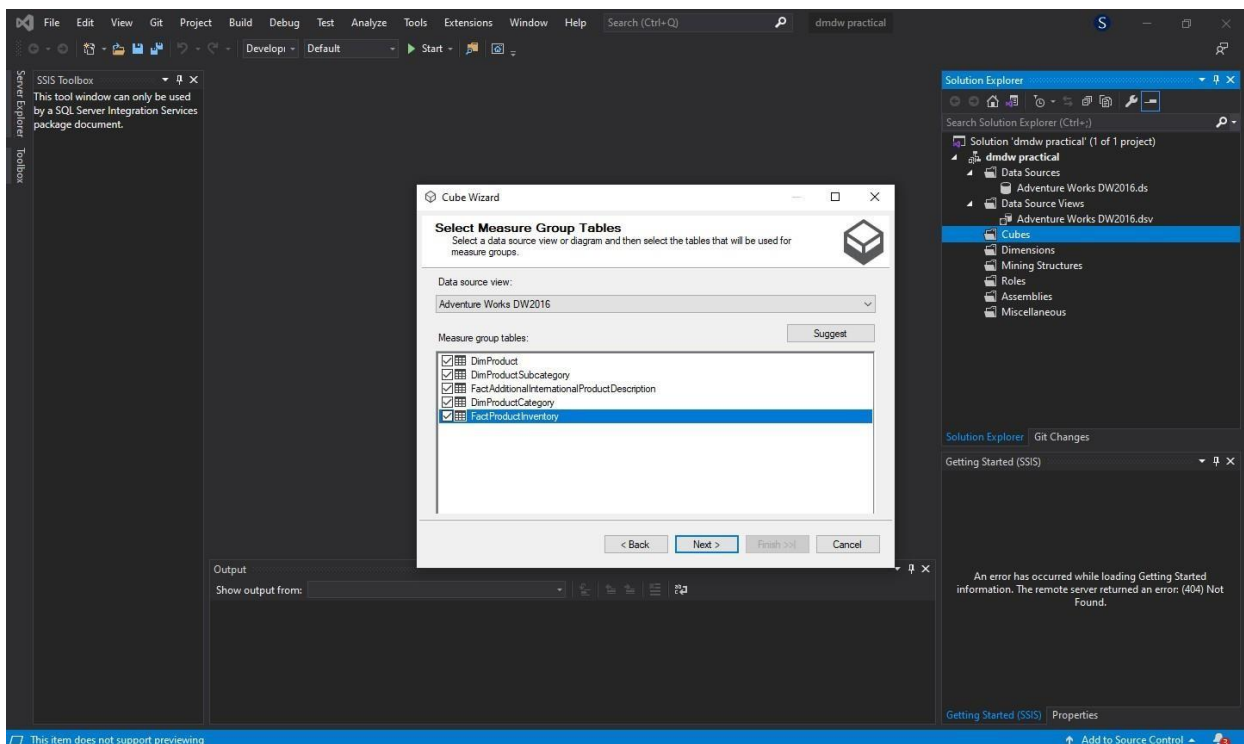
click on the 'Cubes tree item present directly below the 'Data Source Views' parent node to generate a popup menu with the "New Cube" menu item.



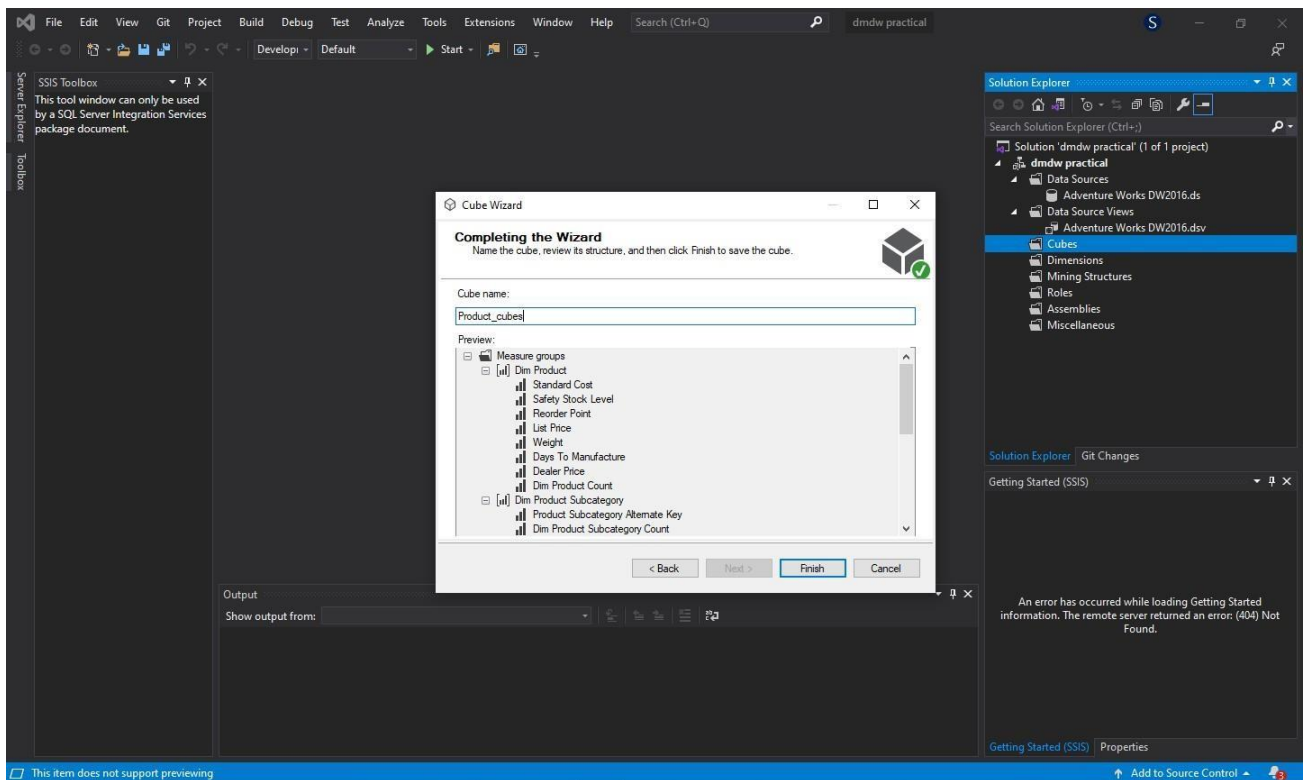
- Click "New Cube..." to create a new window titled 'Cube Wizard'. Click on "Next" to transition the window to 'Select Creation Method' state. Select the "Use existing tables" option.



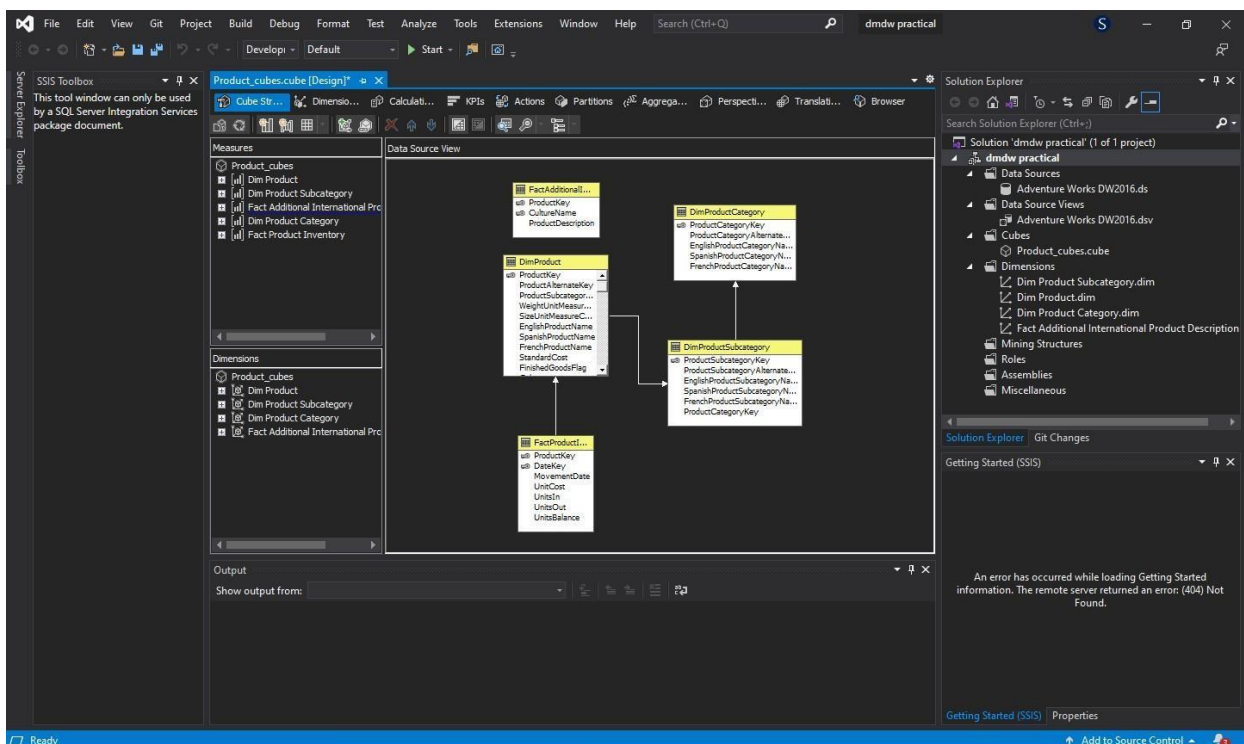
- Click on “Next”. The window will now transition to the ‘Select Measure Group Tables’ state. Select the tables from the ‘Measure Group Tables’ list.



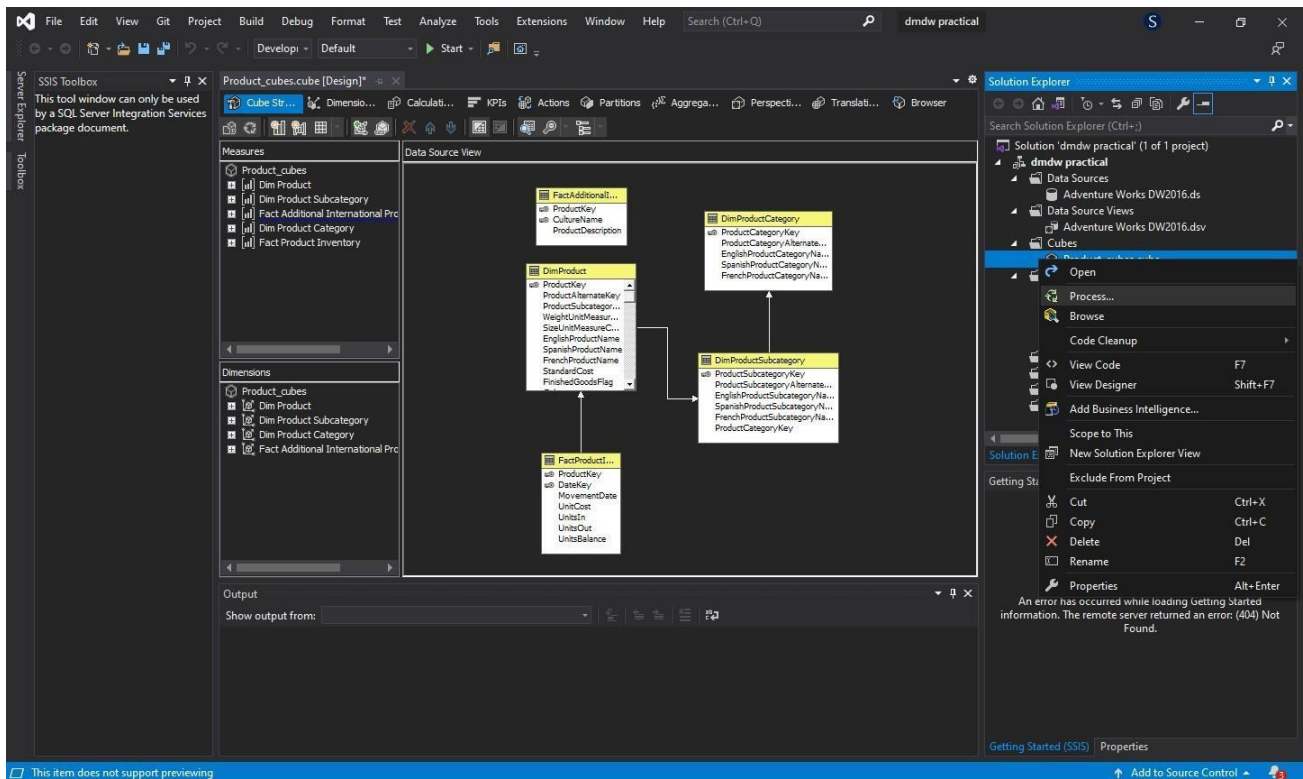
- Click on “Next”. The window will now transition to its final state named ‘Completing the Wizard’. Check the ‘Preview’ section and if everything is okay, click on “Finish”.



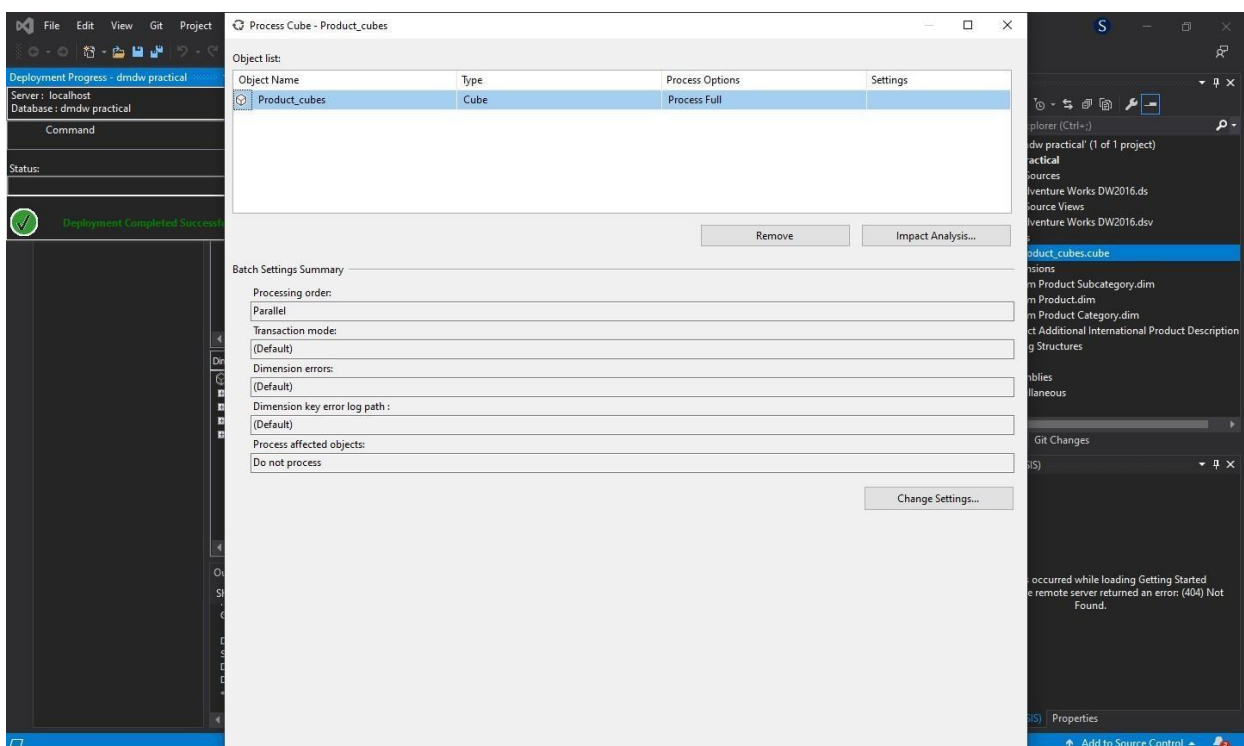
- A diagram should now appear on the screen displaying the logical star schema of the selected tables.



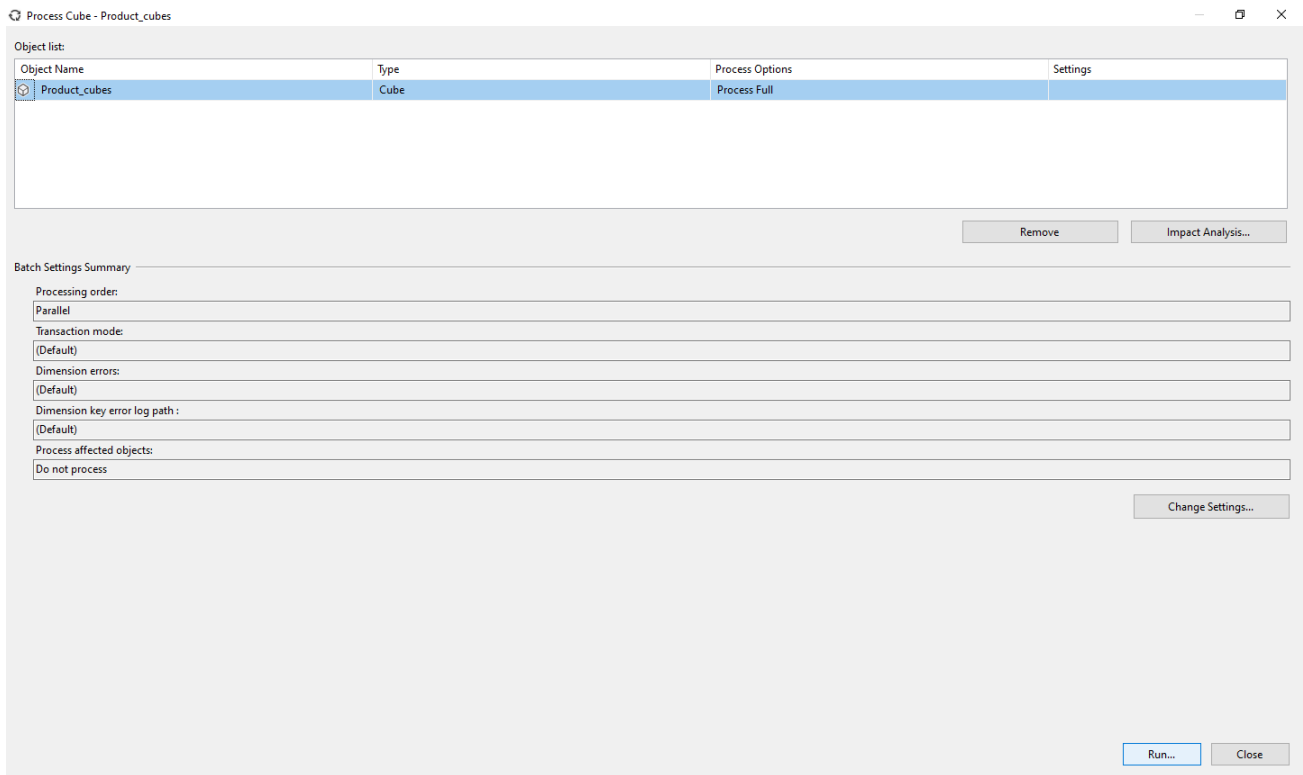
- Now right click the generated cube to reveal a popup menu.



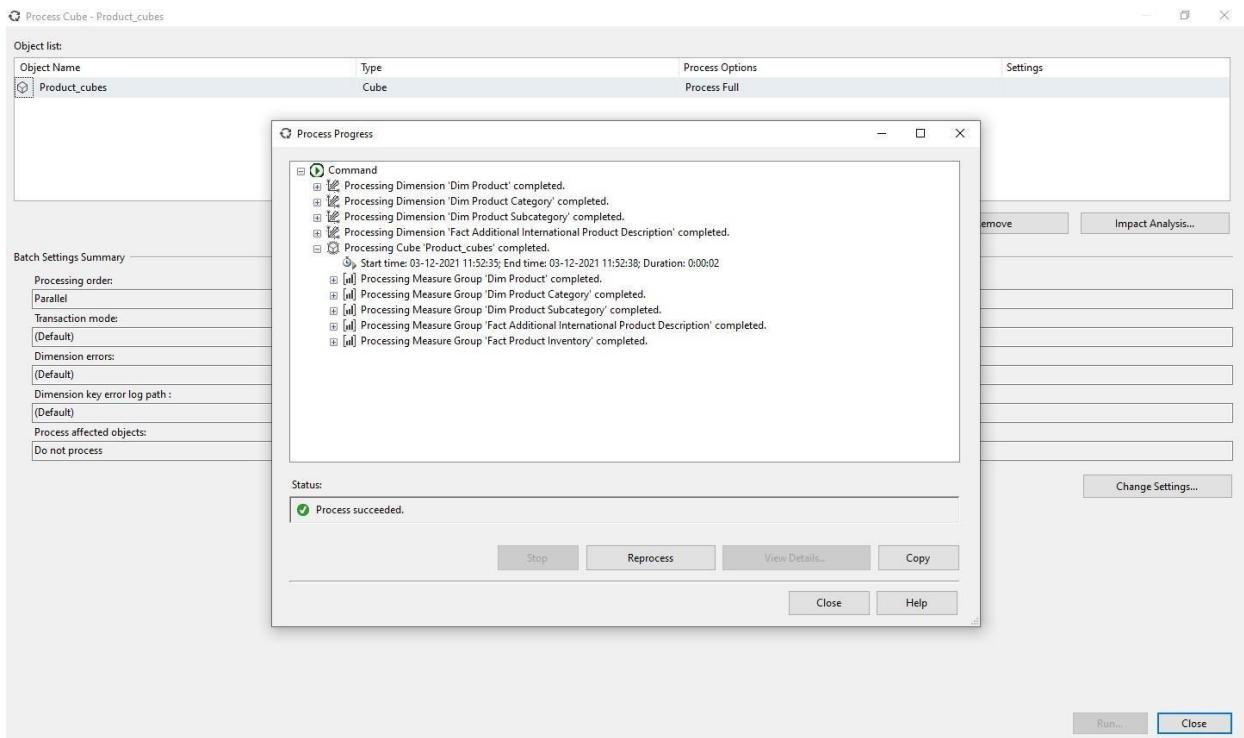
- Click on the “Process...” menu item to generate the ‘Process Cube – {Cube_Name}’ window.



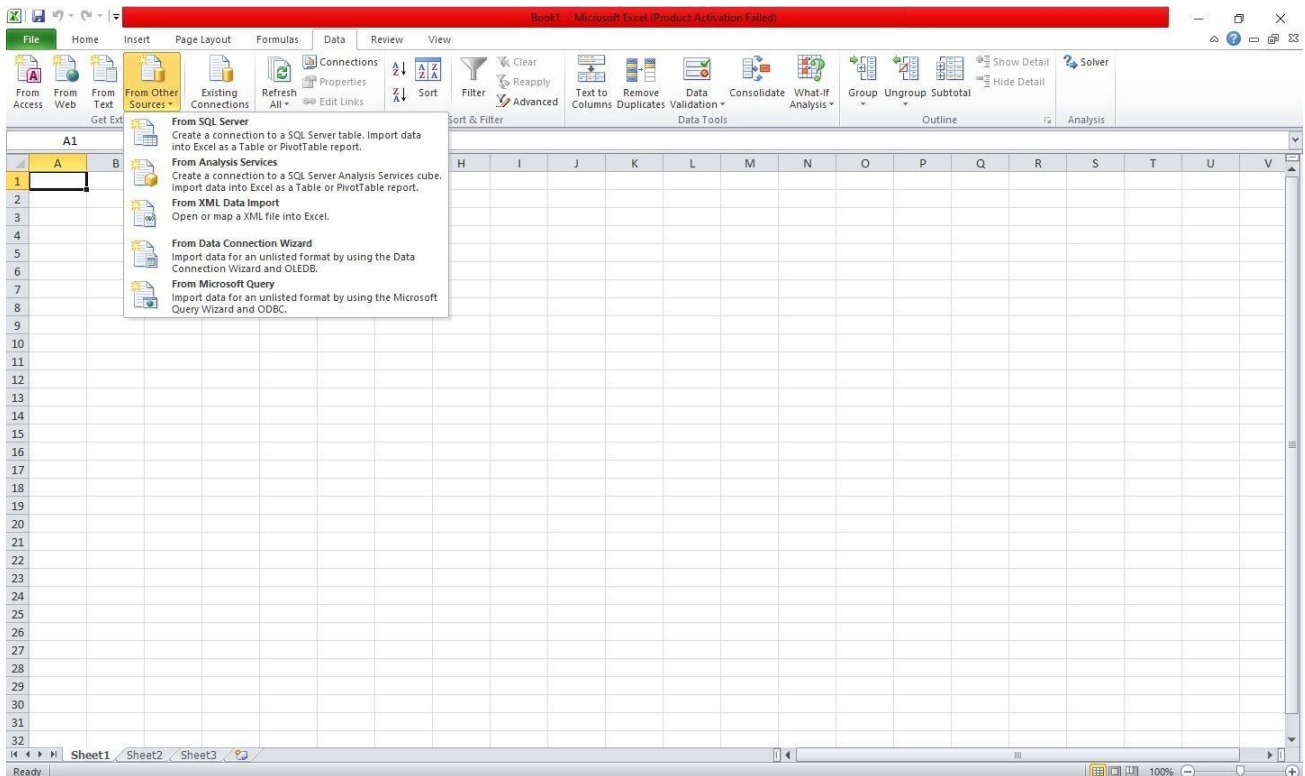
- Maximise this window to see the “Run” button.



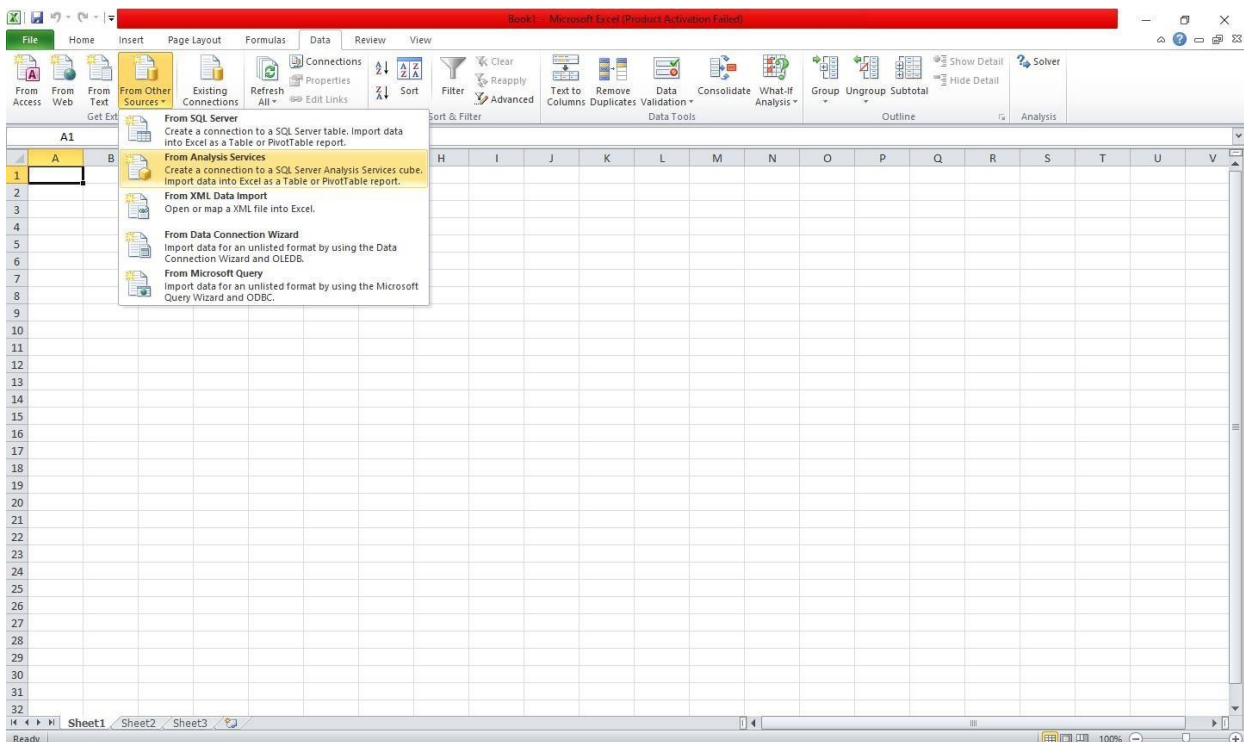
- Click the “Run” button to process the cube. If everything goes right, you should see the ‘Status’ as ‘Process succeeded’.



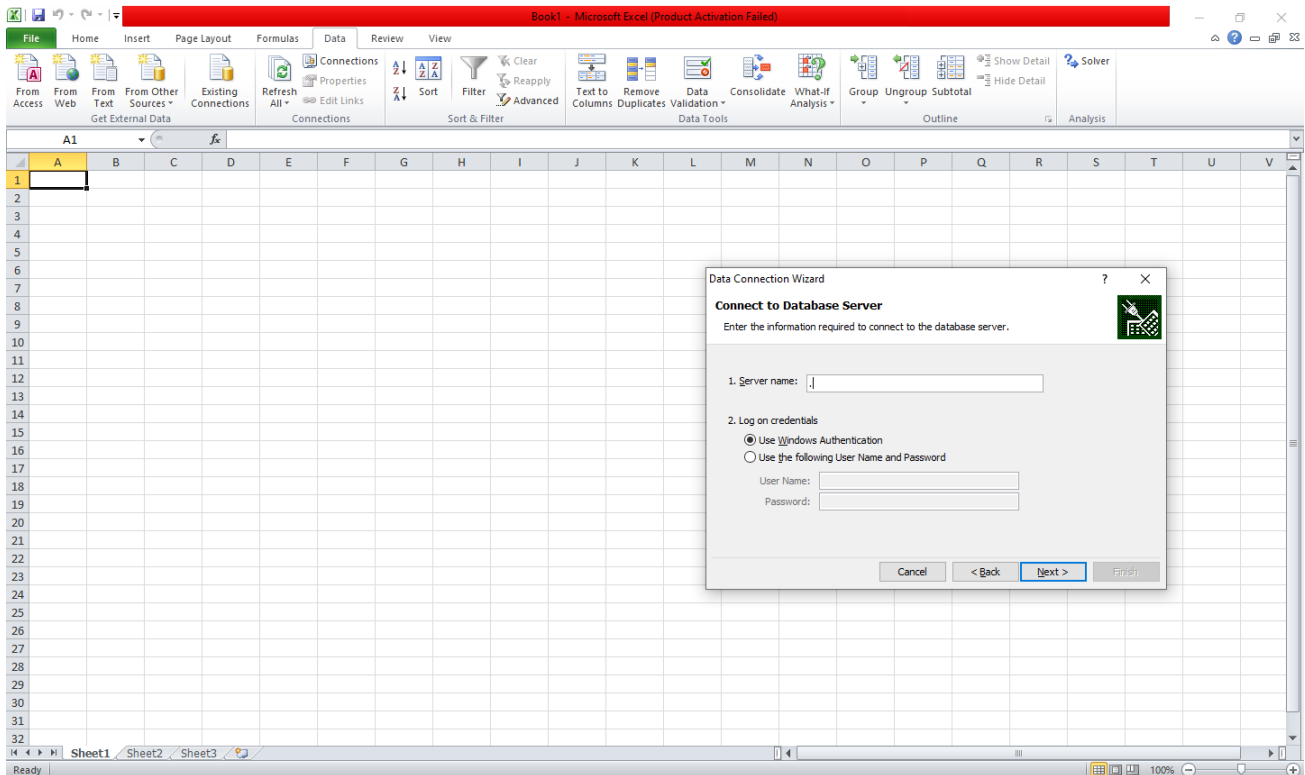
- Now, start Excel. Select the 'Data' section from the menu to display the Data ribbon. Select the "From Other Sources" button.



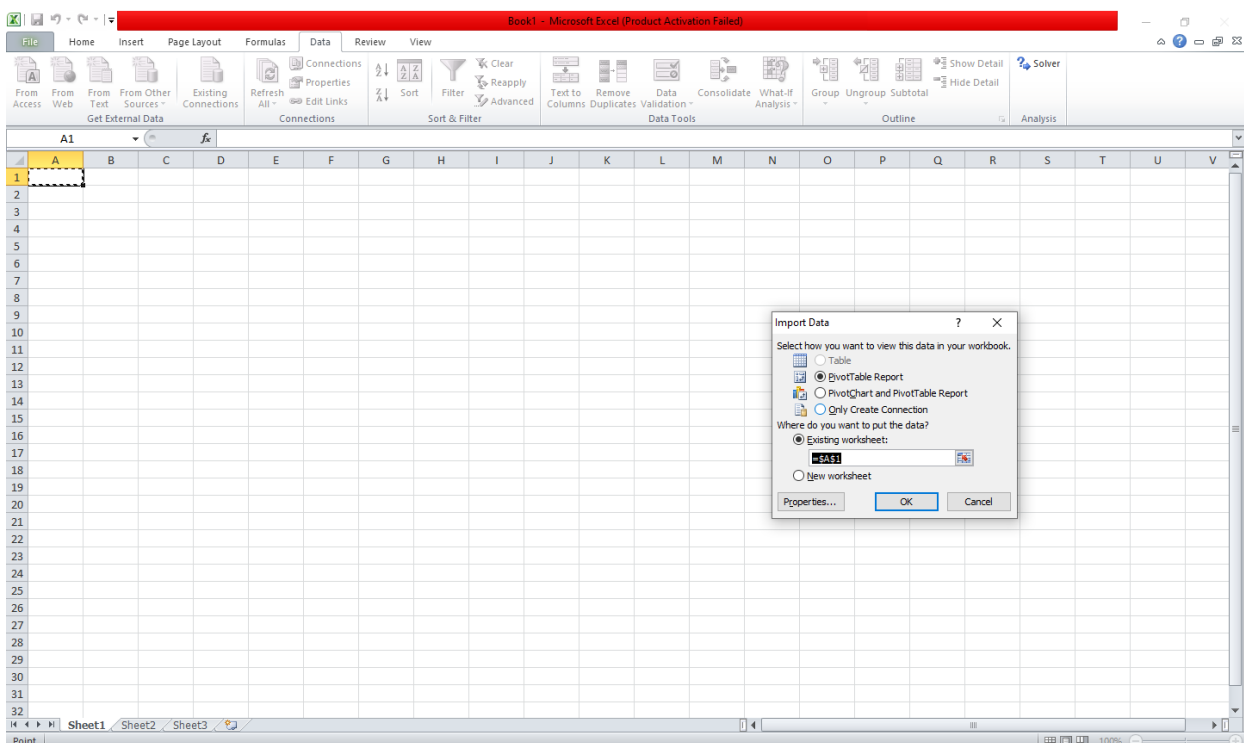
- This reveals a drop down list. Select the "From Analysis Service" option.



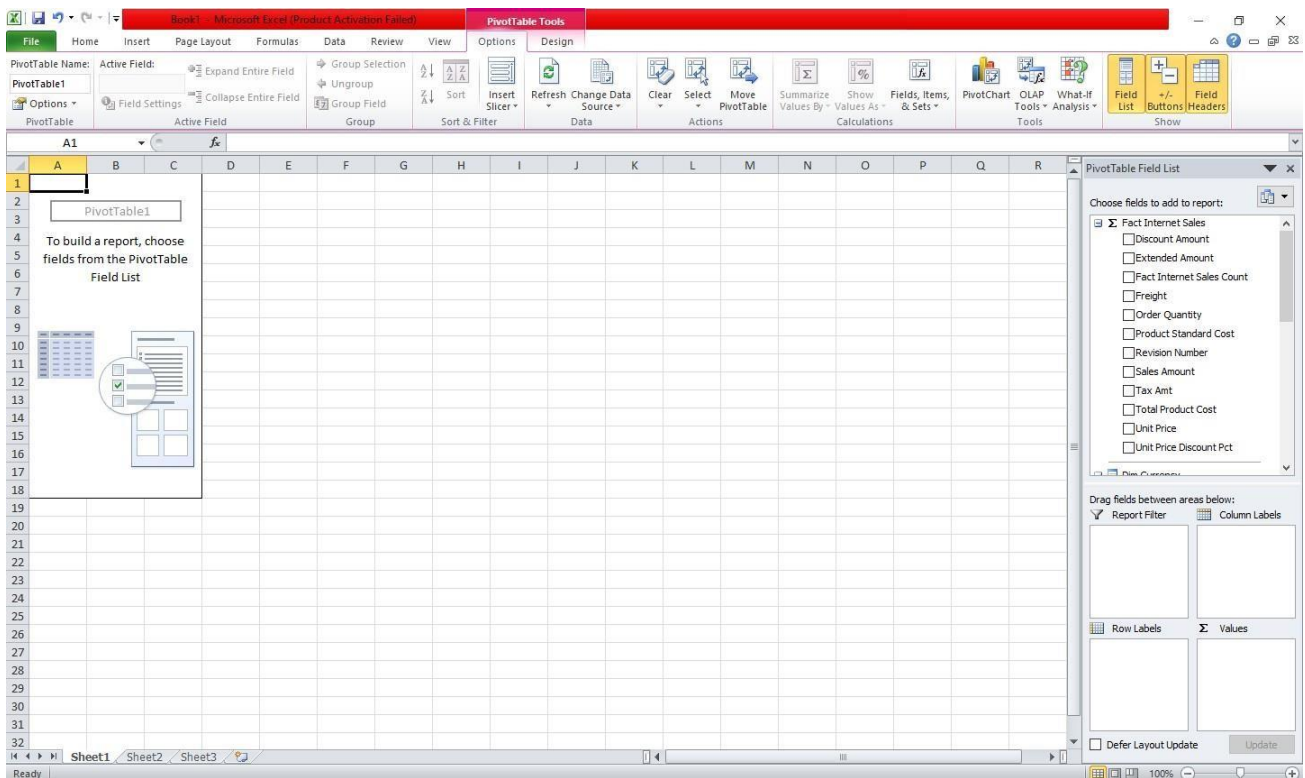
- Now, a popup window titled 'Data Connection Wizard' should appear. Enter '.' or 'localhost' in the 'Server Name' text box.



- Click on "Next". The 'Data Connection Wizard' should now close and a new popup window called 'Import Data' should appear.



- Keep the default settings and click on “OK”. The current sheet should look like this:



- Choose the items you want from the right pane. The spreadsheet will be updated automatically.

PivotTable Name: PivotTable1
Active Field: Product Key
Field Settings: Expand Entire Field, Collapse Entire Field, Group Field, Ungroup, Sort, Insert Slicer, Refresh, Change Data Source, Clear, Select, Move, Summarize Values By, Show Values As, Fields, Items, & Sets, PivotChart, OLAP Tools, What-If Analysis, Field List, Buttons, Field Headers

PivotTable Field List

Choose fields to add to report:

- ☐ Dim Customer
- ☐ Customer Key
- ☒ Dim Product
- ☒ Product Key
- ☐ Dim Promotion
- ☐ Promotion Key
- ☐ Dim Sales Territory
- ☐ Sales Territory Key
- ☐ Due Date
- ☐ Due Date.Date Key
- ☒ Fact Internet Sales
- ☐ Sales Order Number

Drag fields between areas below:

Report Filter:
Column Labels:
Row Labels: Product Key
Values:
Defer Layout Update
Update

PivotTable Name: PivotTable1
Active Field: Product Key
Field Settings: Expand Entire Field, Collapse Entire Field, Group Field, Ungroup, Sort, Insert Slicer, Refresh, Change Data Source, Clear, Select, Move, Summarize Values By, Show Values As, Fields, Items, & Sets, PivotChart, OLAP Tools, What-If Analysis, Field List, Buttons, Field Headers

PivotTable Field List

Choose fields to add to report:

- ☒ Fact Internet Sales
- ☒ Discount Amount
- ☒ Extended Amount
- ☒ Fact Internet Sales Count
- ☐ Freight
- ☒ Order Quantity
- ☒ Product Standard Cost
- ☐ Revision Number
- ☒ Sales Amount
- ☒ Tax Amt
- ☒ Total Product Cost
- ☐ Unit Price
- ☐ Unit Price Discount Pct

Drag fields between areas below:

Report Filter:
Column Labels: Discount Amount, Extended Amount, Fact Internet Sales Count, Order Quantity, Product Standard Cost, Sales Amount, Tax Amt, Total Product Cost
Row Labels: Product Key
Values:
Defer Layout Update
Update

- Optionally, the data from the spreadsheet can also be plotted.

The screenshot shows an Excel spreadsheet with a PivotTable and a corresponding PivotChart.

PivotTable Data

	E	F	G	H	I	J	K	L	M	N	O	P
Customer Key	Date Key	Mended Order Date Key	Quantity	Product Key	Standard Cost	Sales Amount	Ship Date Key	Tax Amt	Total Product Cost			
2	175270983	644369976	3649866.551	642037573	8993	3959260	2130235.255	3649966.551	642843860	291989.3303	2130235.255	
3	432128	543524452	4532.4682	543523431	27	11454	3629.7059	6532.4682	543524179	522.5975	3629.7059	
4	387868	402607696	3000.8296	402606410	20	9440	1649.9092	3000.8296	402607177	240.0664	1649.9092	
5	240864748	2083291292	5718150.912	2C78858758	12265	5399266	3346387.415	5718150.812	2081293398	457452.0745	3346387.415	
6	703765	7B5120668	12238.8496	705101701	39	16559	6906.4234	22238.8496	7B5120473	979.108	6906.4234	
7	126724204	-1221474518	2977844.862	-1224004416	7620	3393715	1147923.361	1977844.862	-1222473563	158227.5915	1147923.361	
8	105581445	214453172	2644017.714	212459560	8588	2414176	1557752.993	2644017.714	223304026	211521422	1557752.993	
9	108B35347	1562B43581	2894312.339	1560481563	5625	2424891	1706941.573	2894312.338	1562929058	231544.9914	1706941573	
10	250536372	-1957717977	9061000.5B4	-19627868B5	13345	5811937	5375145.508	90610005B4	-1960208540	724880.0666	5375145.508	
11	128763056	15B0235609	3391712.211	1577675325	6906	2986726	2001221433	3391722.211	1579204018	271336.9819	2001221.433	
12												
13	1138000116	342286655	2935867122	3190BS724	60398	26427624	17277793.58	2935-8677.22	332276780	248694.23	17277793.58	

PivotChart Data

Product Key	Total Product Cost
1	~1.7M
2	~1.7M
3	~1.7M
4	~4.5M
5	~1.7M
6	~-1.7M
7	~0.2M
8	~3.0M
9	~-1.7M
10	~3.0M
11	~3.0M