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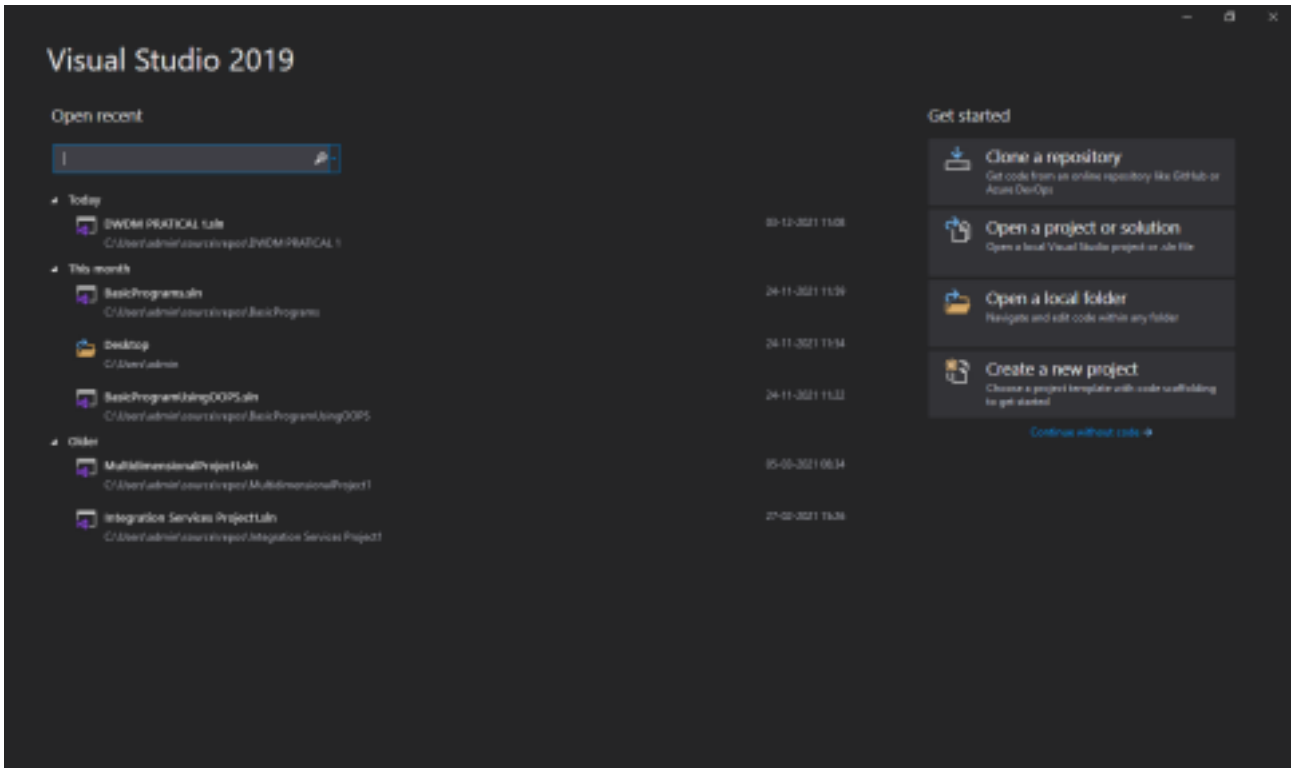
Subject: DWDM Academic Year: 2021-2022

Practical 1

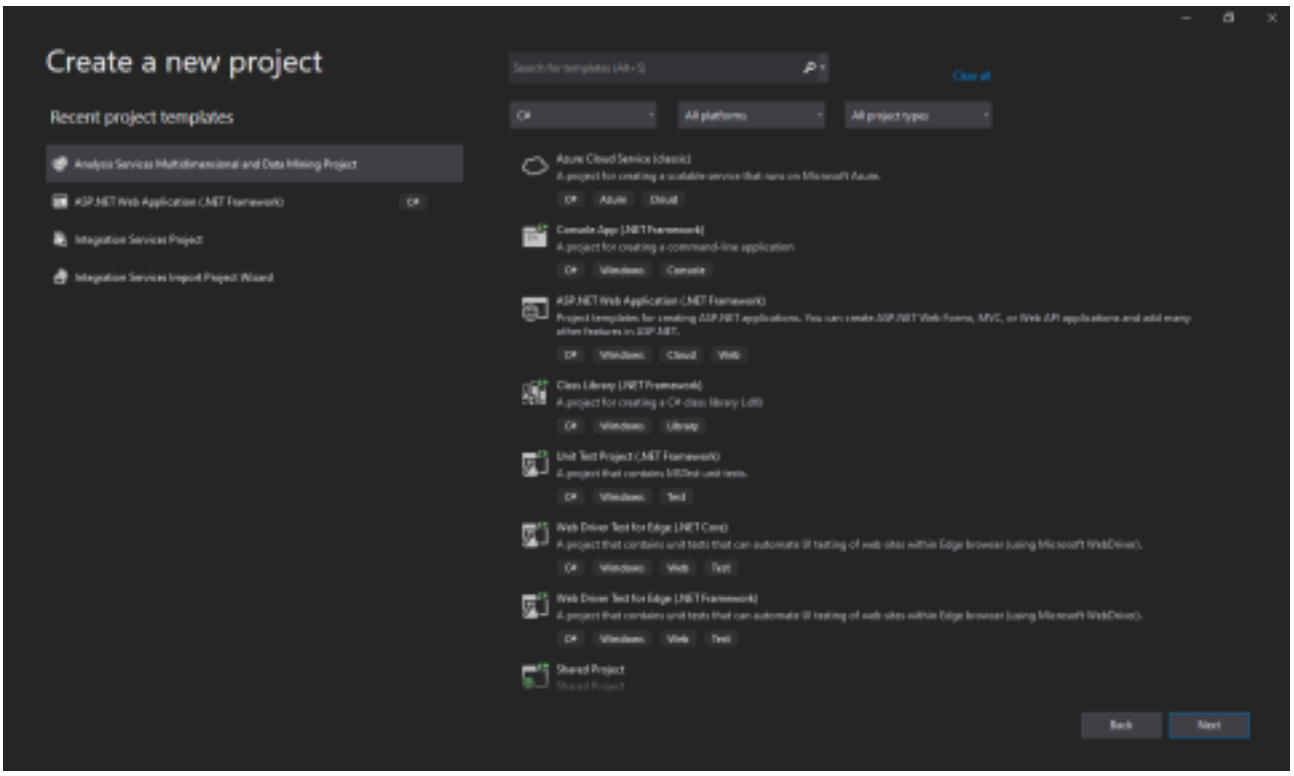
Aim: Perform analysis on AdventureWorks dataset using Microsoft Excel and Visual Studio 2019.

Procedure:

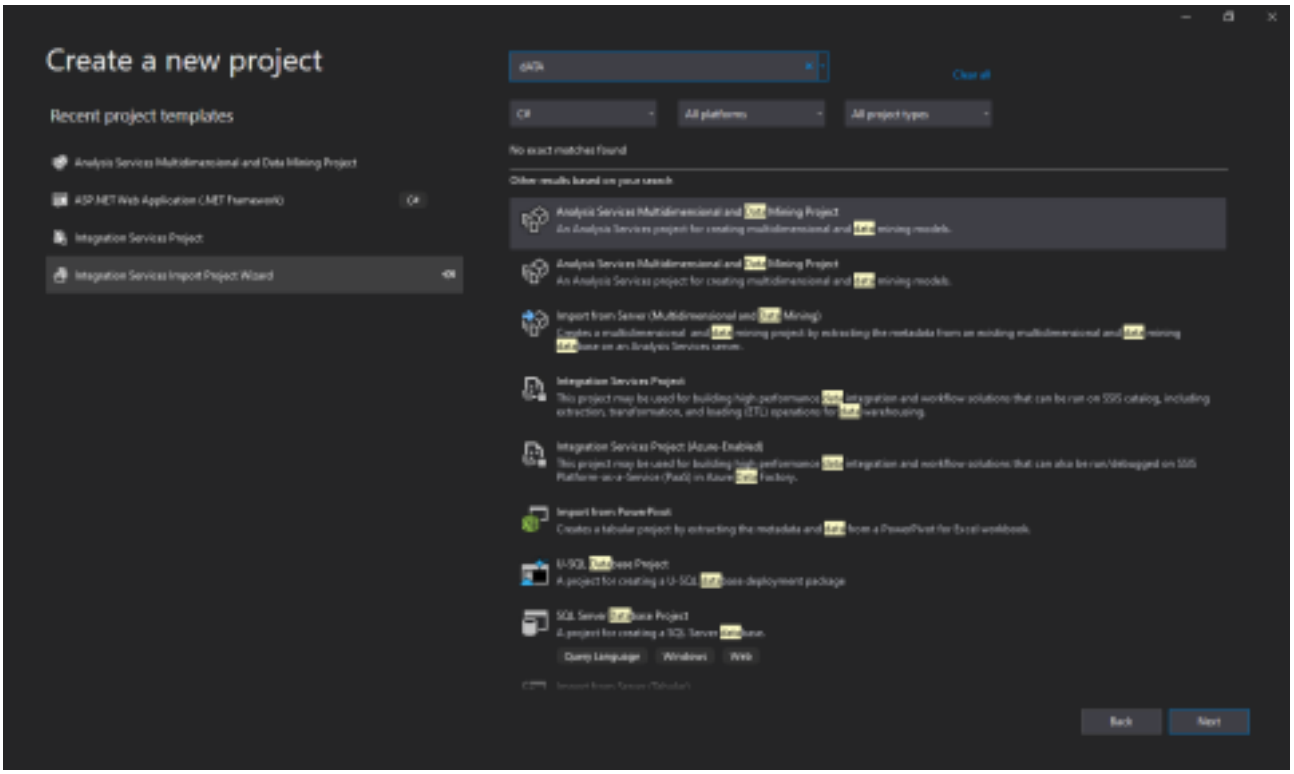
- Open Visual Studio 2019. You should be greeted with this screen.



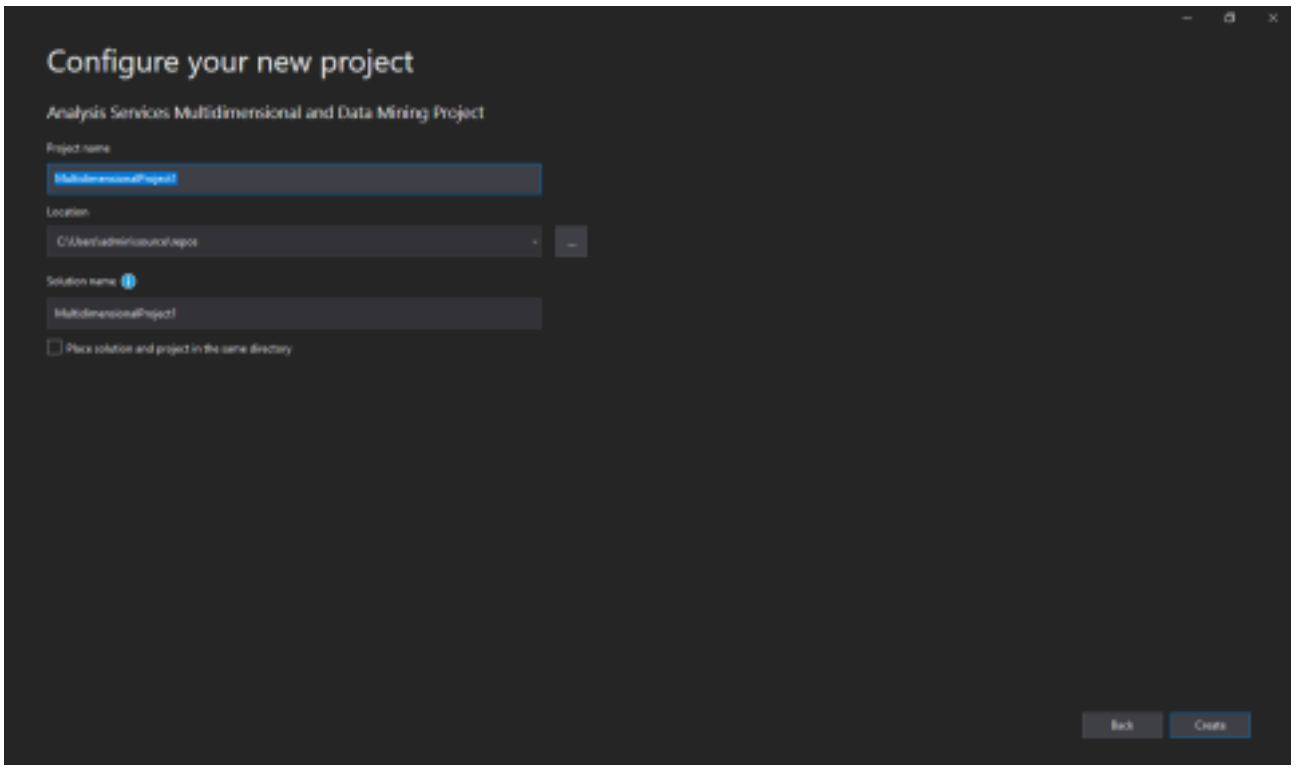
- Click on the “Create a new project” button present on the right hand side of the screen. The application will now transition to this screen.



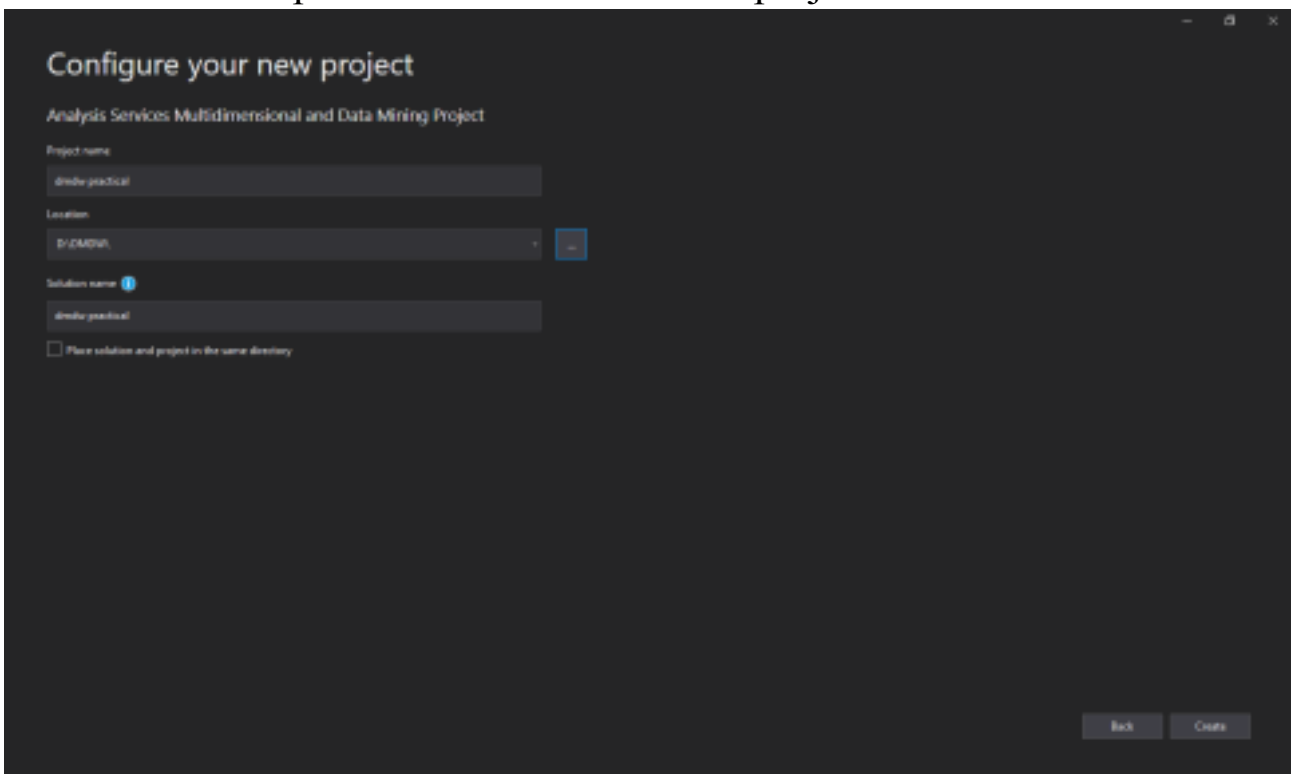
- Now, select “Analysis Services Multidimensional and Data Mining Project” button from the ‘Recent Project Templates’ list if present else search for the same using the search bar. You may be prompted to install this package if it is not available locally. Searching for the above template yields this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



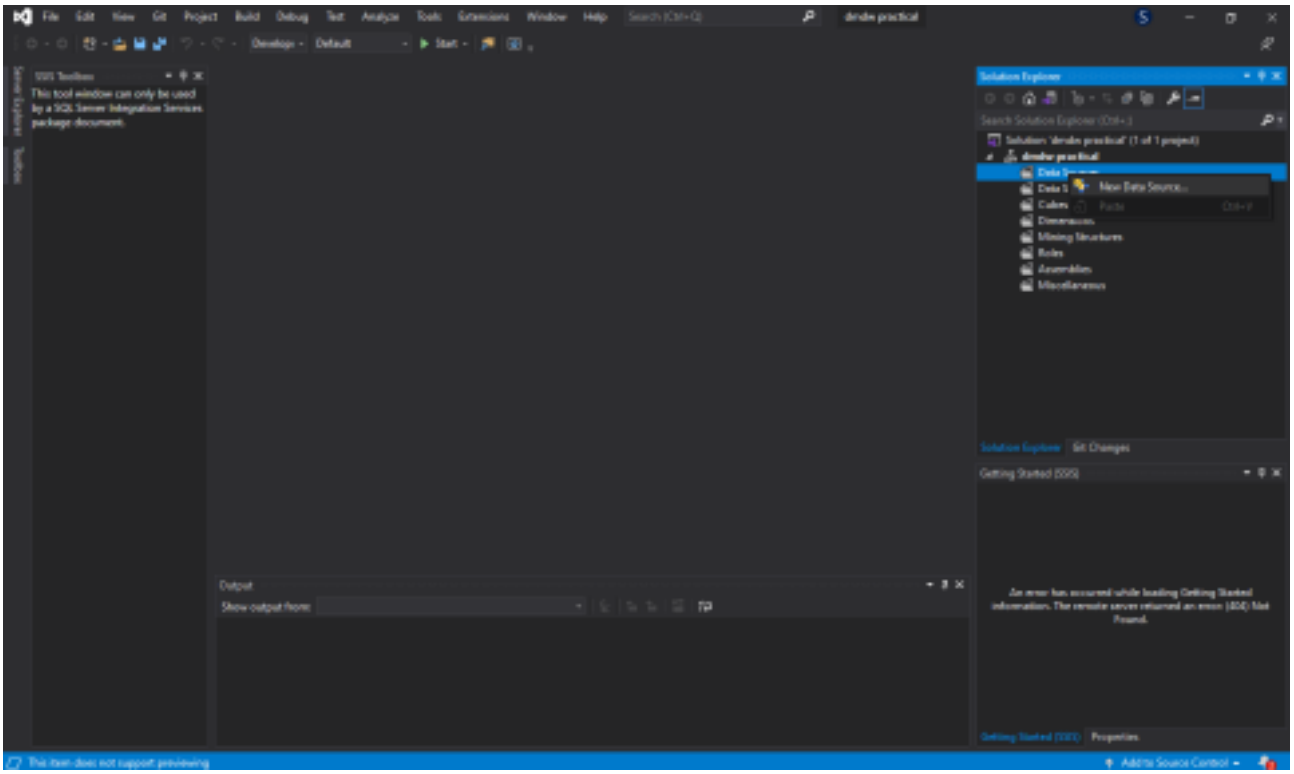
- Click on “Next”. The screen will now transition to this screen:



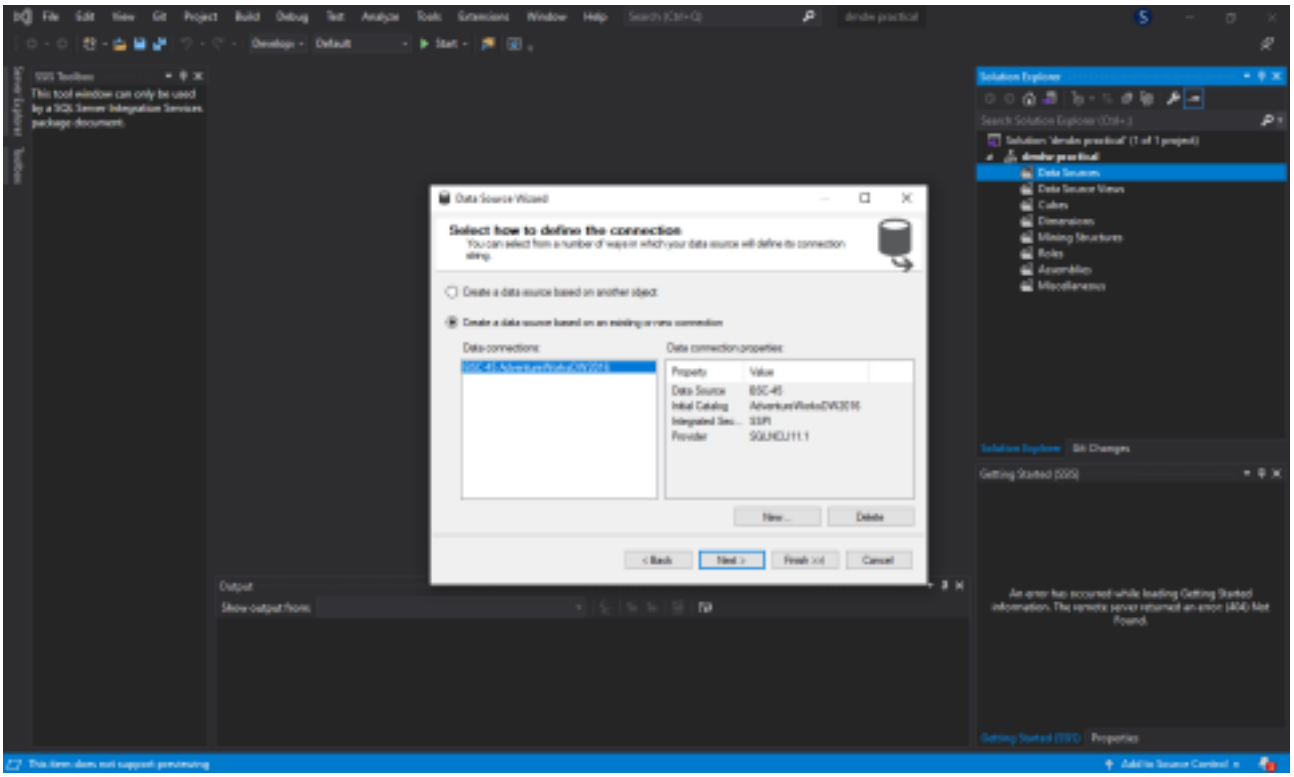
- You can provide the location of the project as well its name.



- 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”.

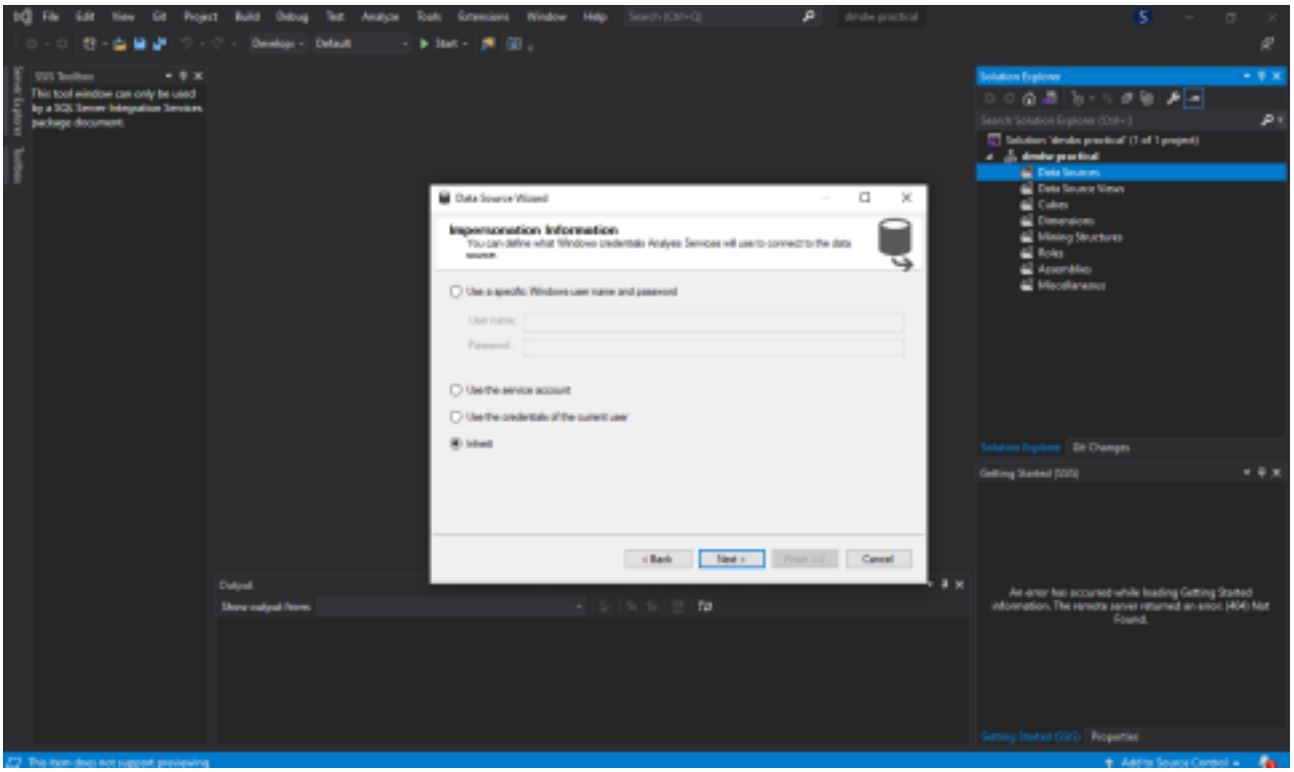


- Click on the “New Data Source” option. A new window named ‘Data Source Wizard’ will appear. Click on “Next”. Now, the window should transition to the ‘Select how to define the connection’ window. Select the “Create a data source based on new or existing connection”. An entry should now appear in the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

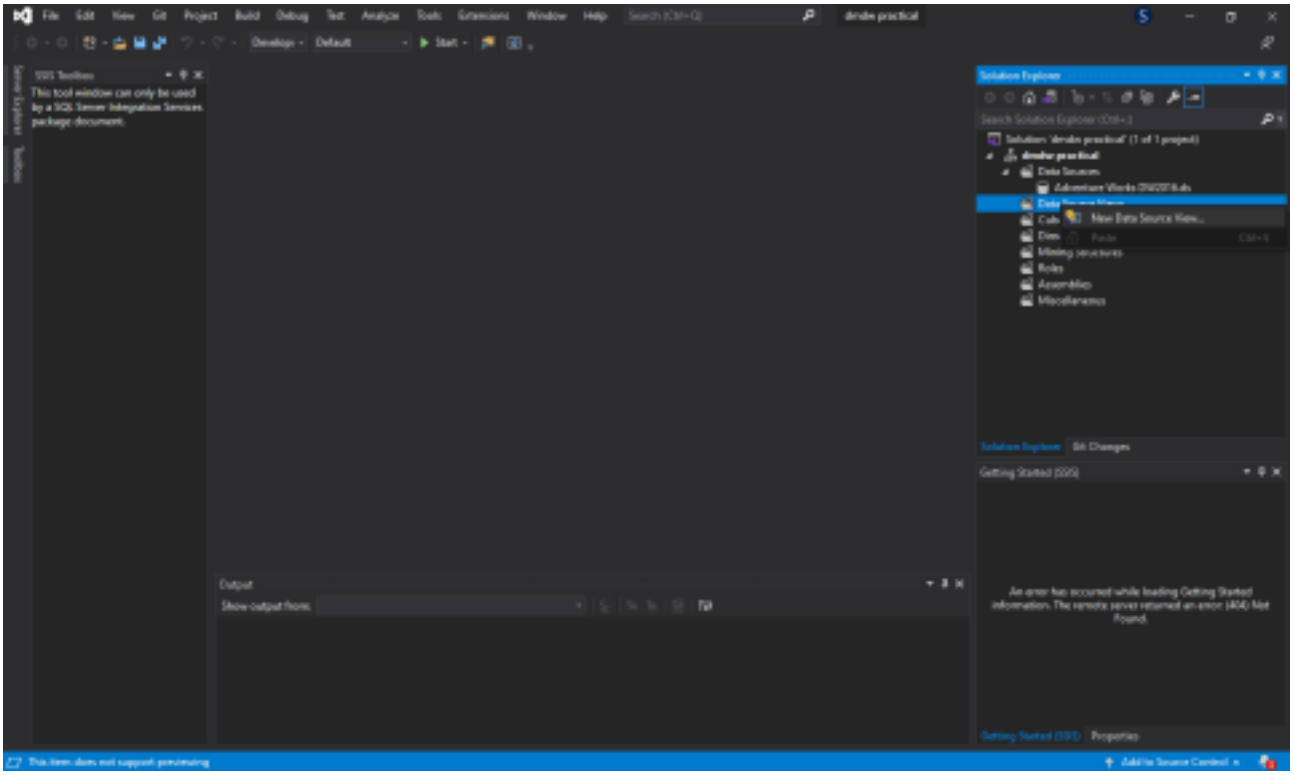


- Click on “Next”. The window will further transition to the ‘Impersonation Information’ window. Select the “Inherit”

option.

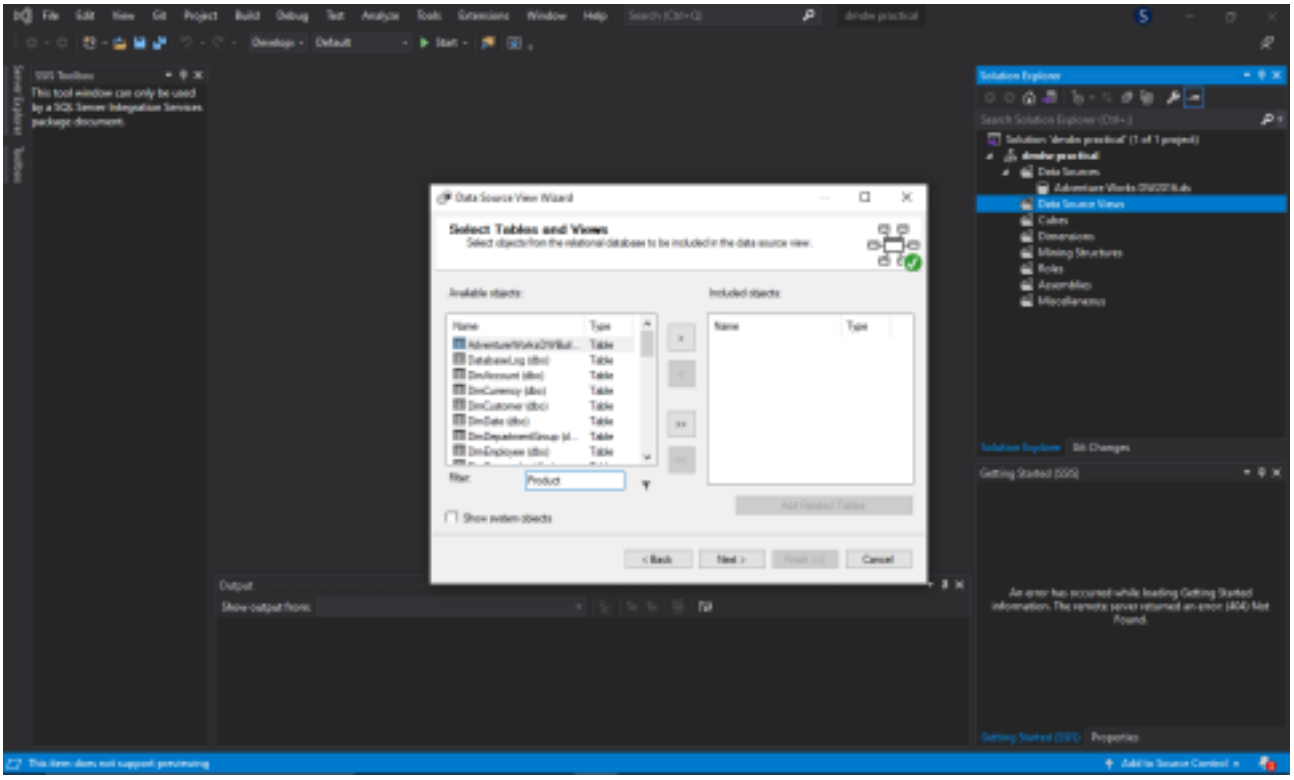


- Click on “Next”. The window will now transition to the last window. Click on “Finish”. The window will now close to reveal a child element in the ‘Data Sources’ tree item. Right click on the ‘Data Source Views’ tree item present directly below the ‘Data Sources’ parent node to generate a popup menu with the “New Data Source View” menu item.

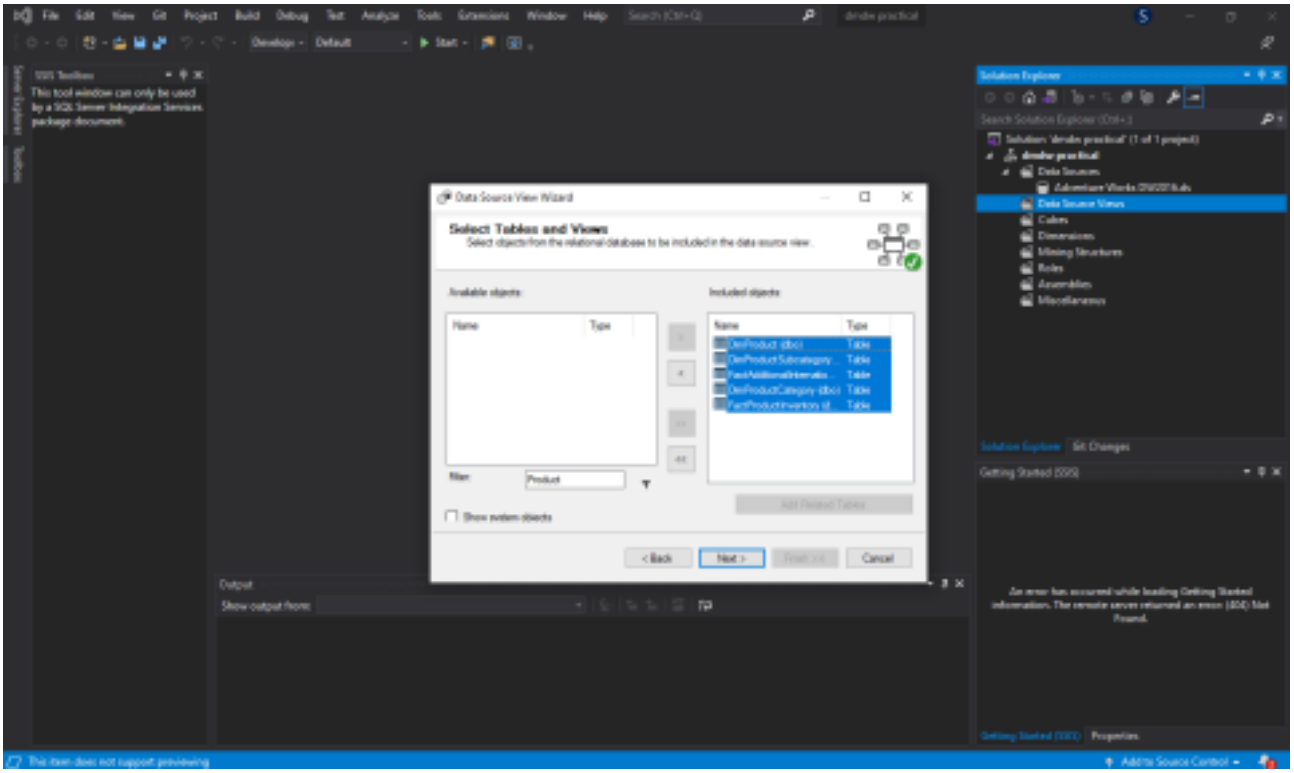


- Click “New Data Source View” to create a new window titled ‘Data

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.

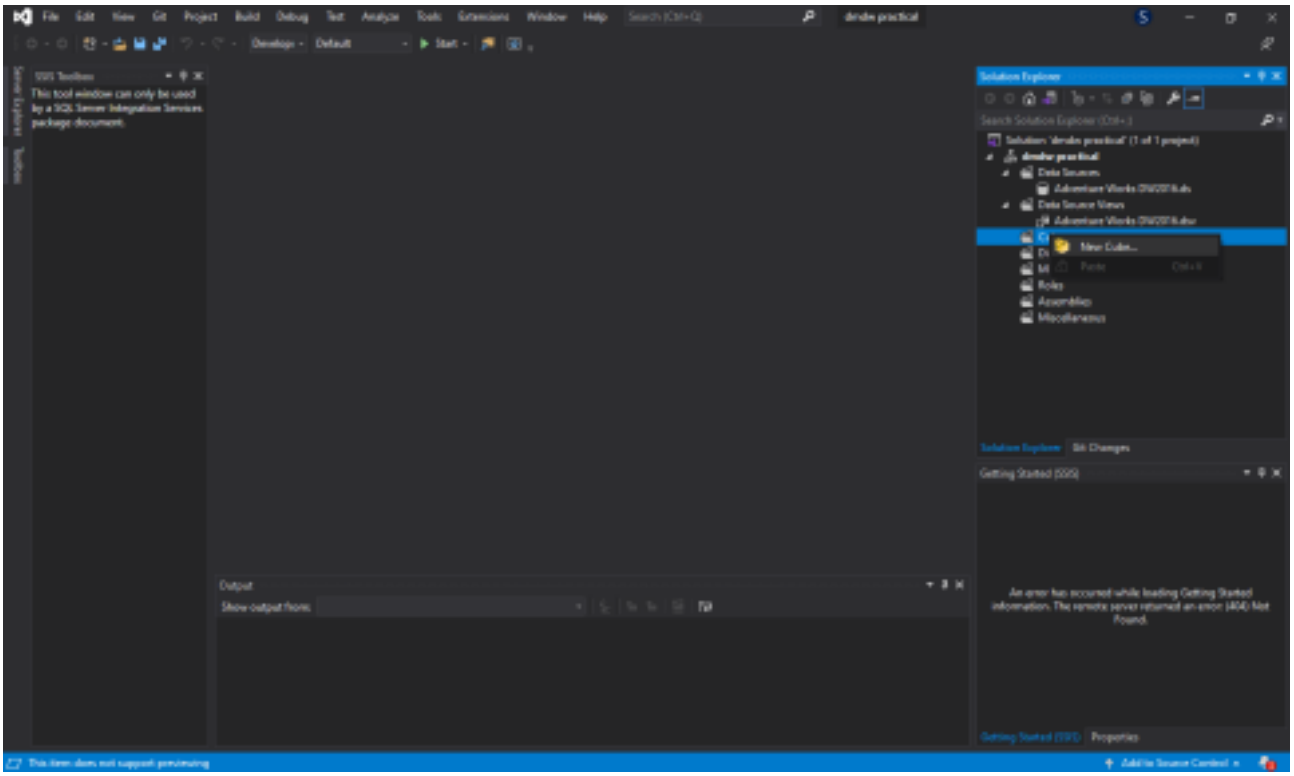


- Now, click on the ">>" button to select all the filtered entries from the 'Available Objects' into the 'Included Objects' list.

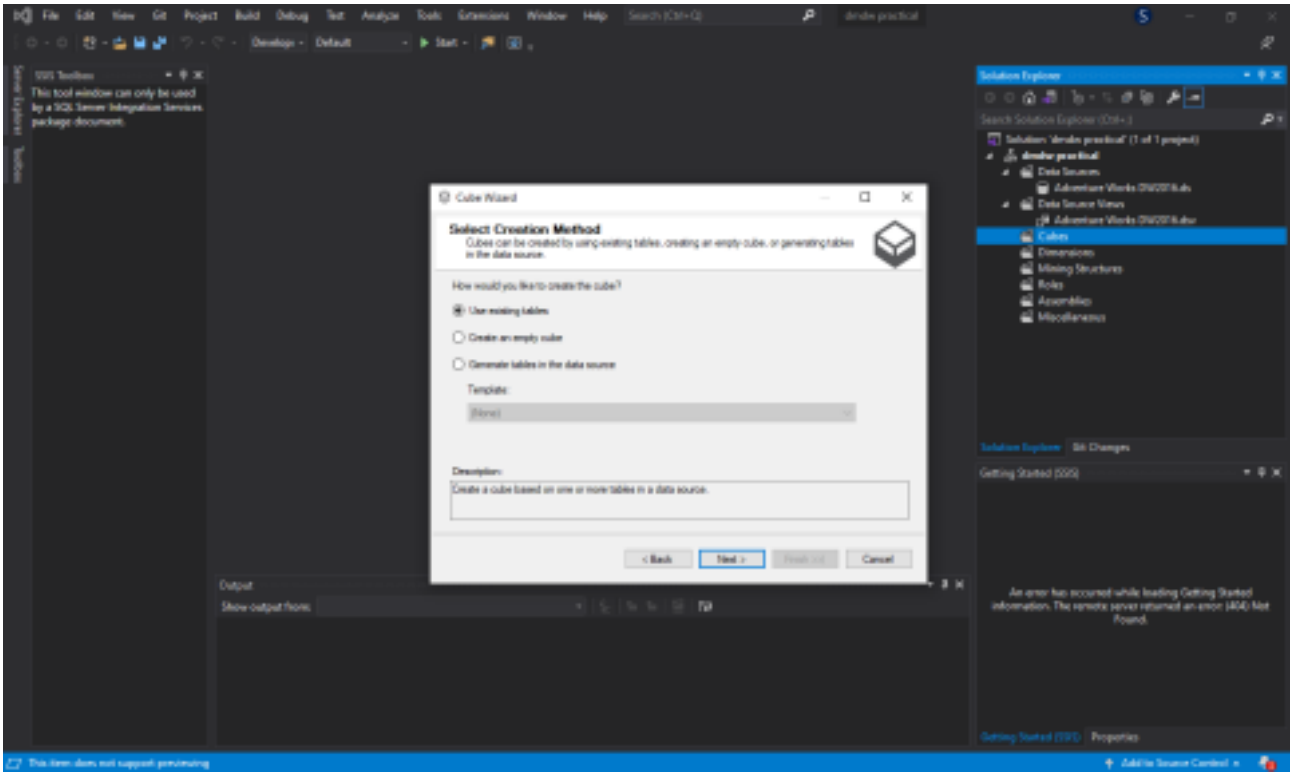


- Click on "Next". The window will further transition to a new state. Click on "Finish" to close the window. The window will now close to reveal a child node in the 'Data Source Views' tree item. Right click on the 'Cubes tree item present directly below the 'Data

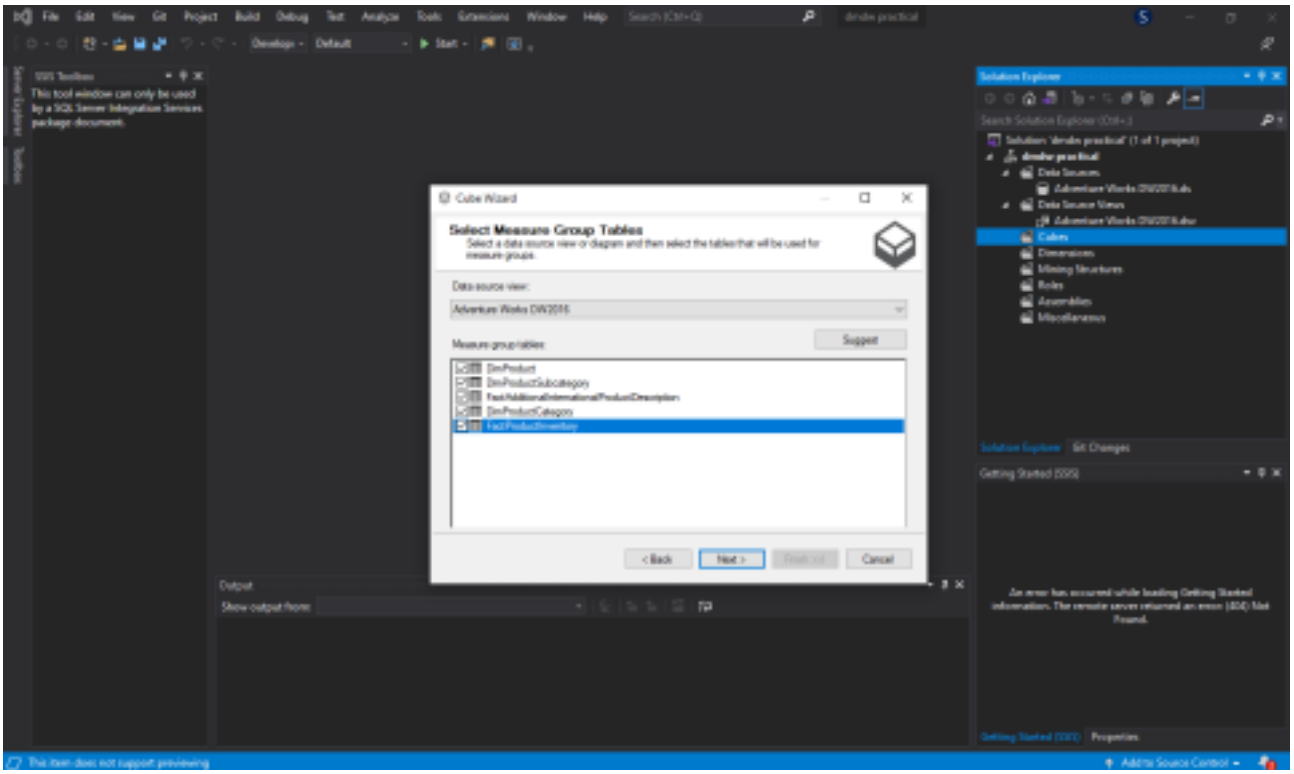
Source Views' parent node to generate a popup menu with the "New Cube" menu item.



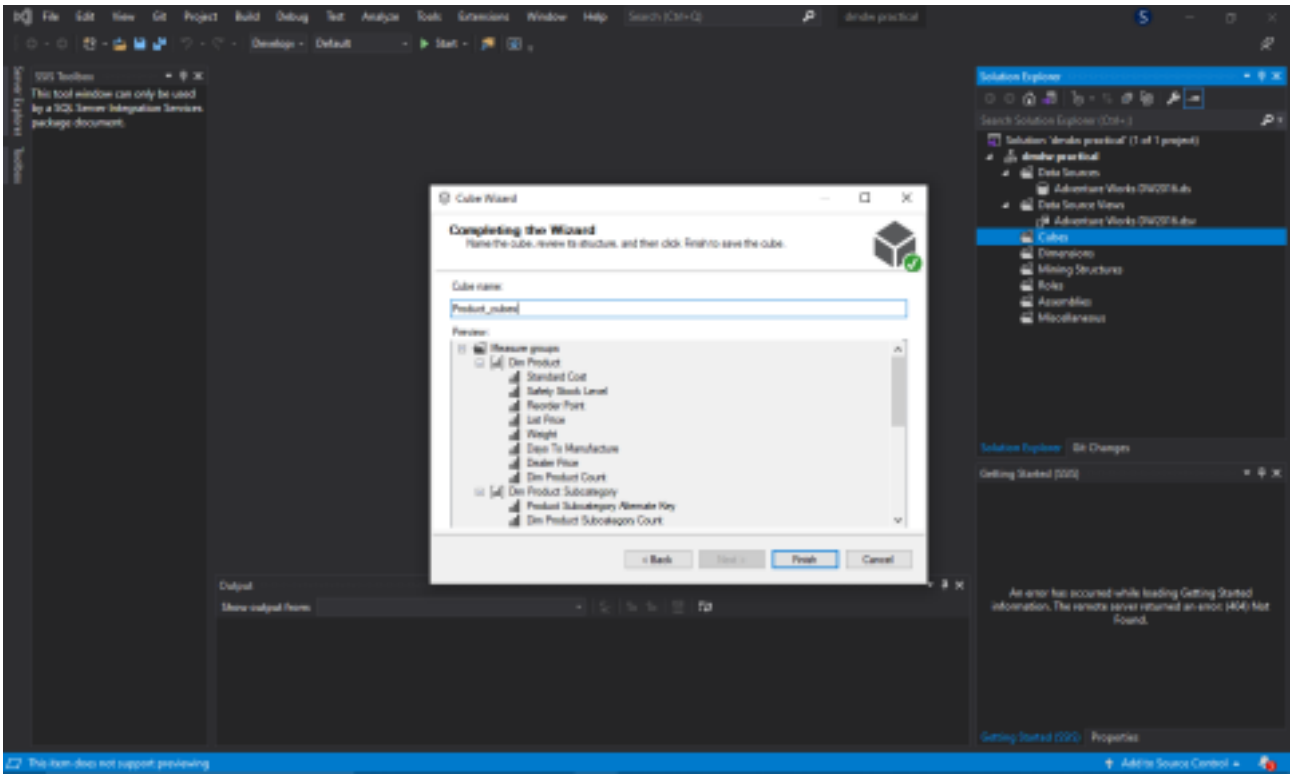
- Click "New Cube..." to create a new window titled 'Cube Wizard'. Click on "Next" to transition the window to 'Select Creation Method' state. Select the "Use existing tables" option.



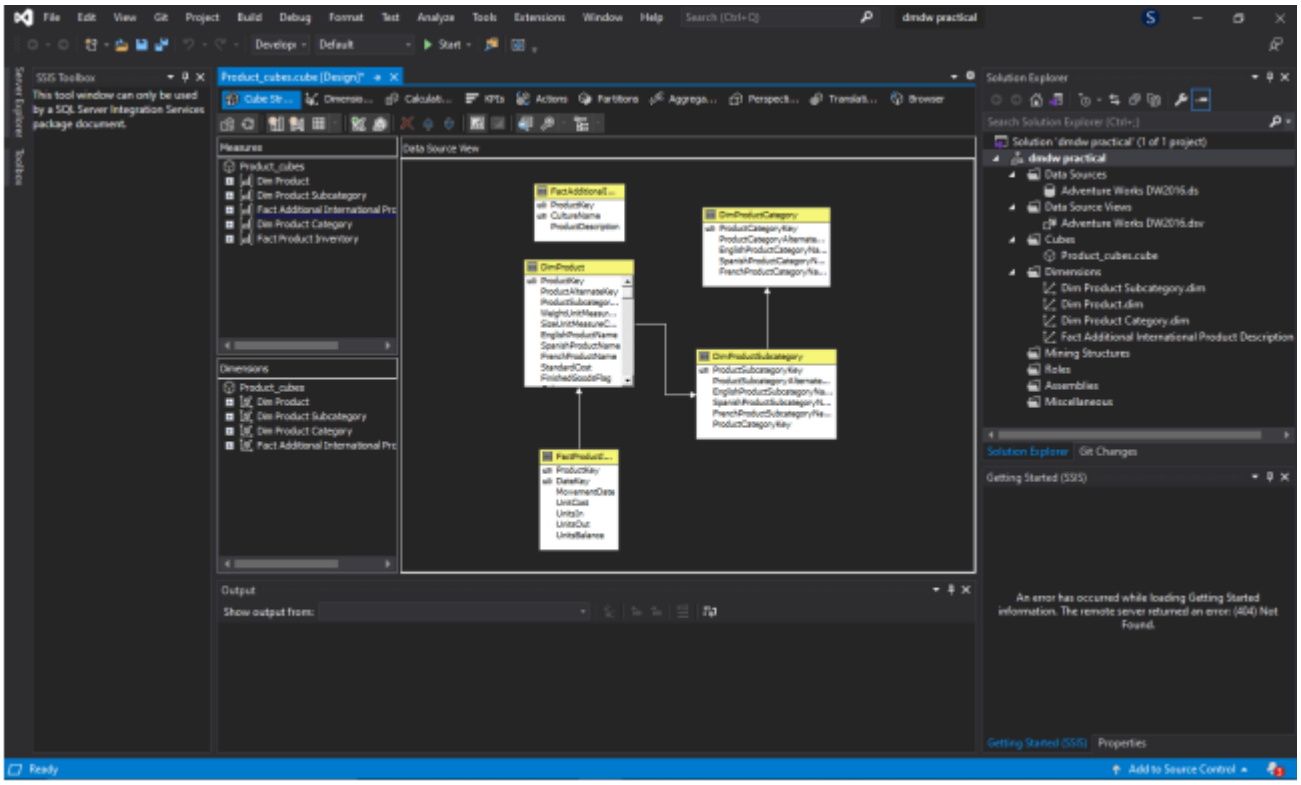
- Click on "Next".The window will now transition to the 'Select Measure Group Tables' state. Select the tables from the 'Measure Group Tables' list.



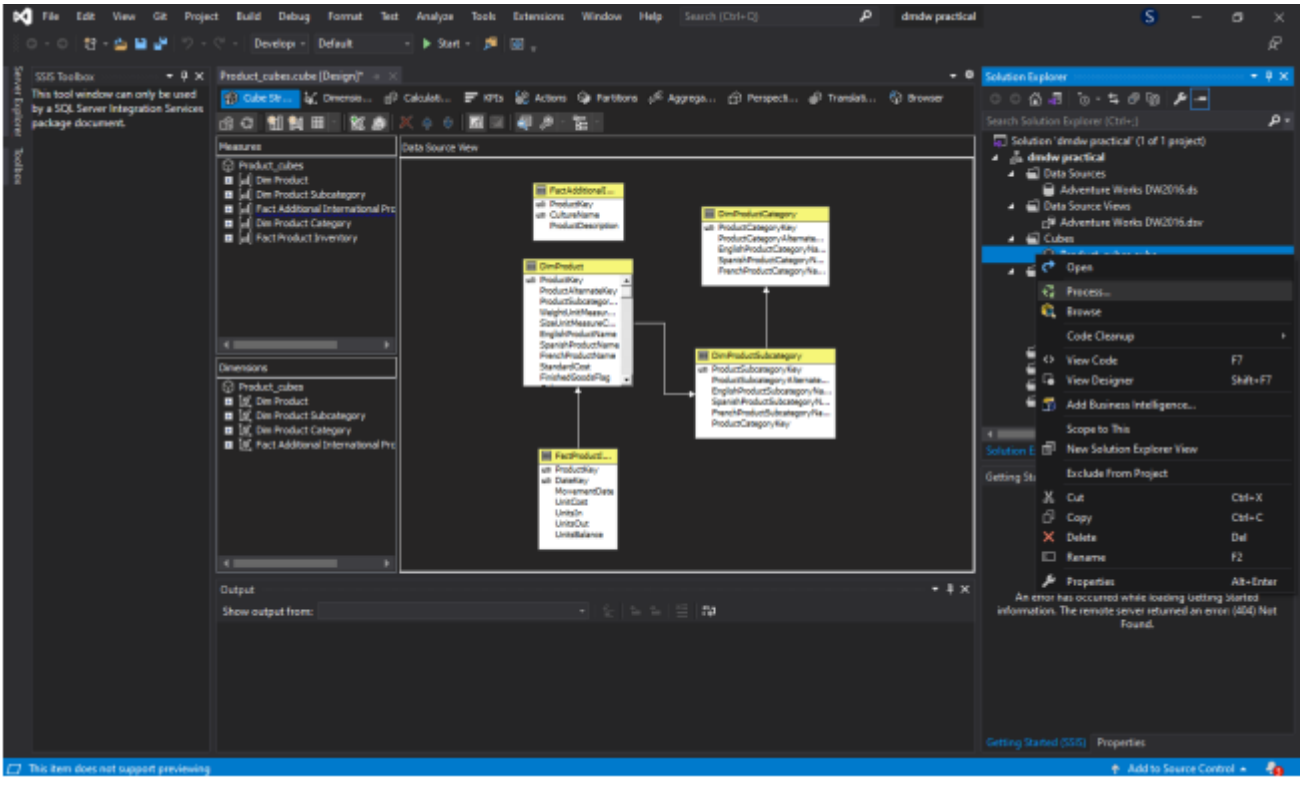
• Click on “Next”. The window will now transition to its final state named ‘Completing the Wizard’. Check the ‘Preview’ section and if everything is okay, click on “Finish”.



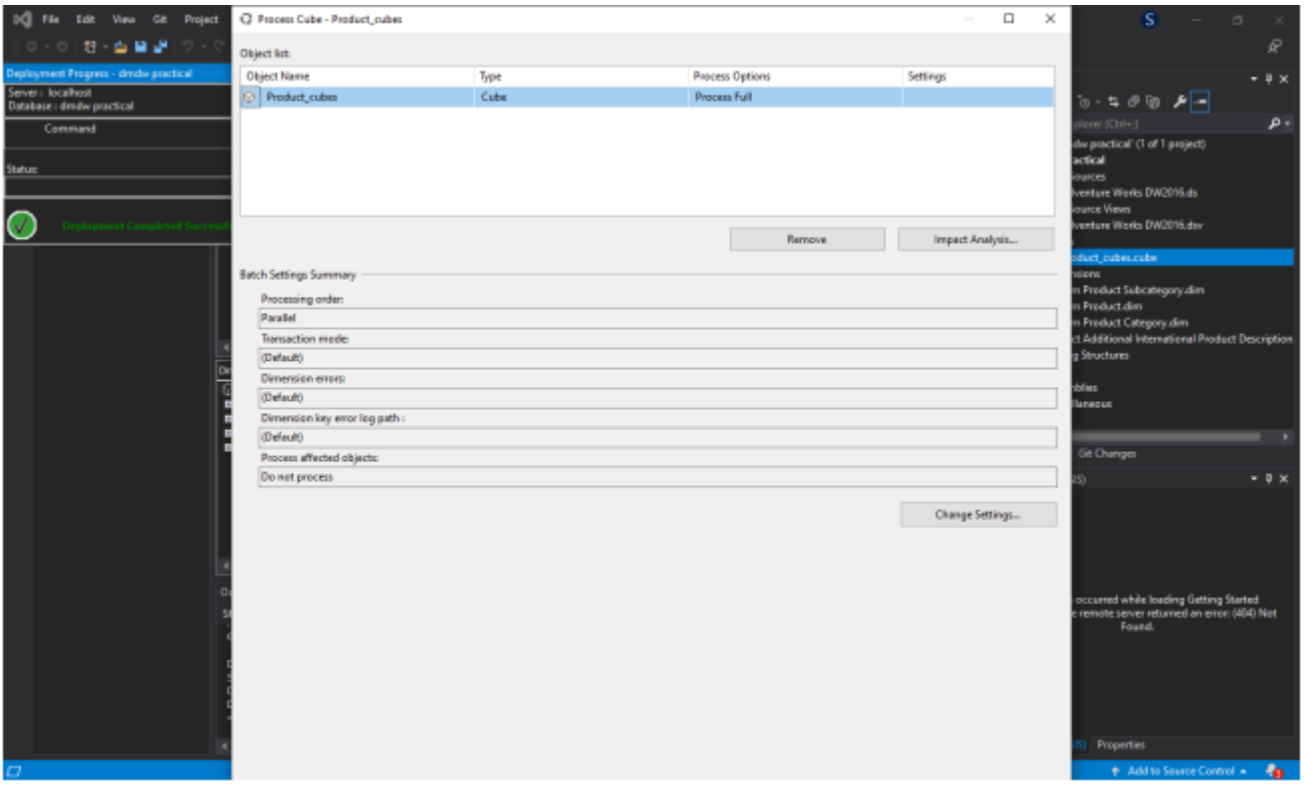
• A diagram should now appear on the screen displaying the logical star schema of the selected tables.



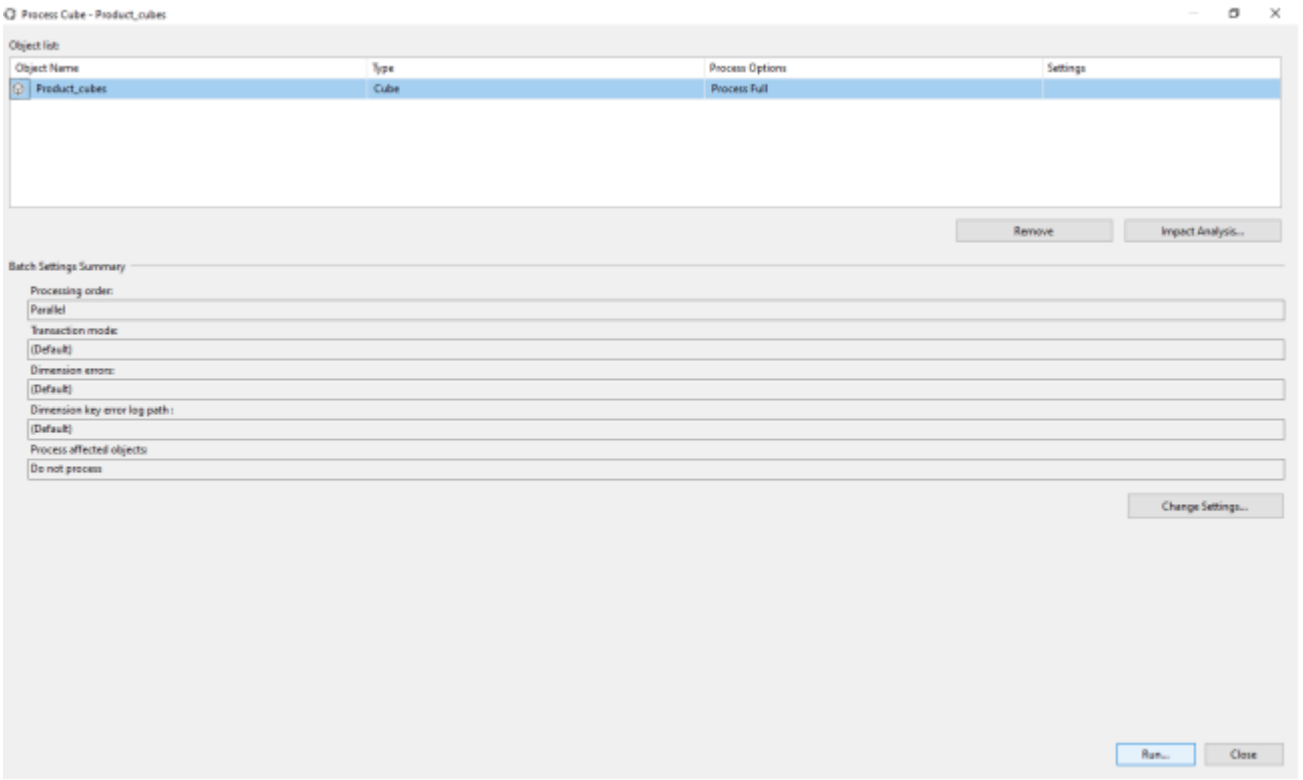
• Now right click the generated cube to reveal a popup menu.



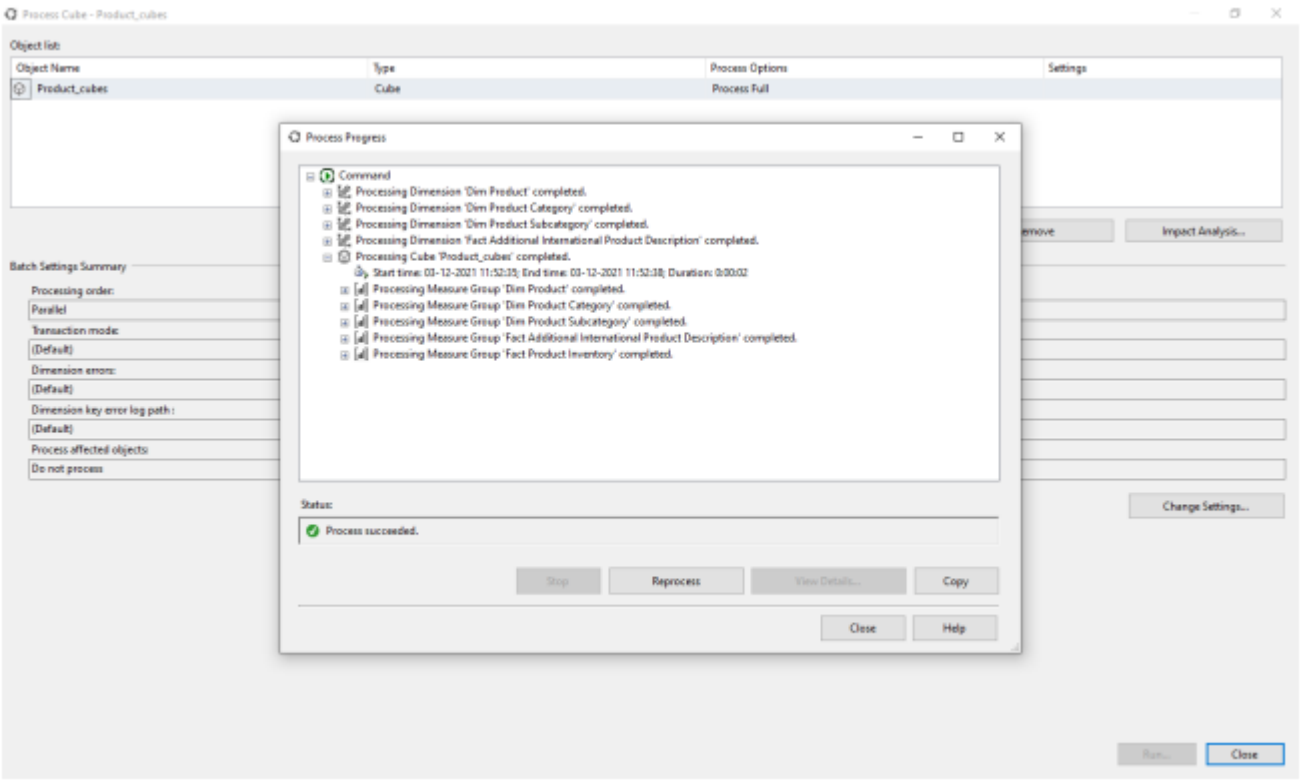
• Click on the “Process...” menu item to generate the ‘Process Cube – {Cube_Name}’ window.



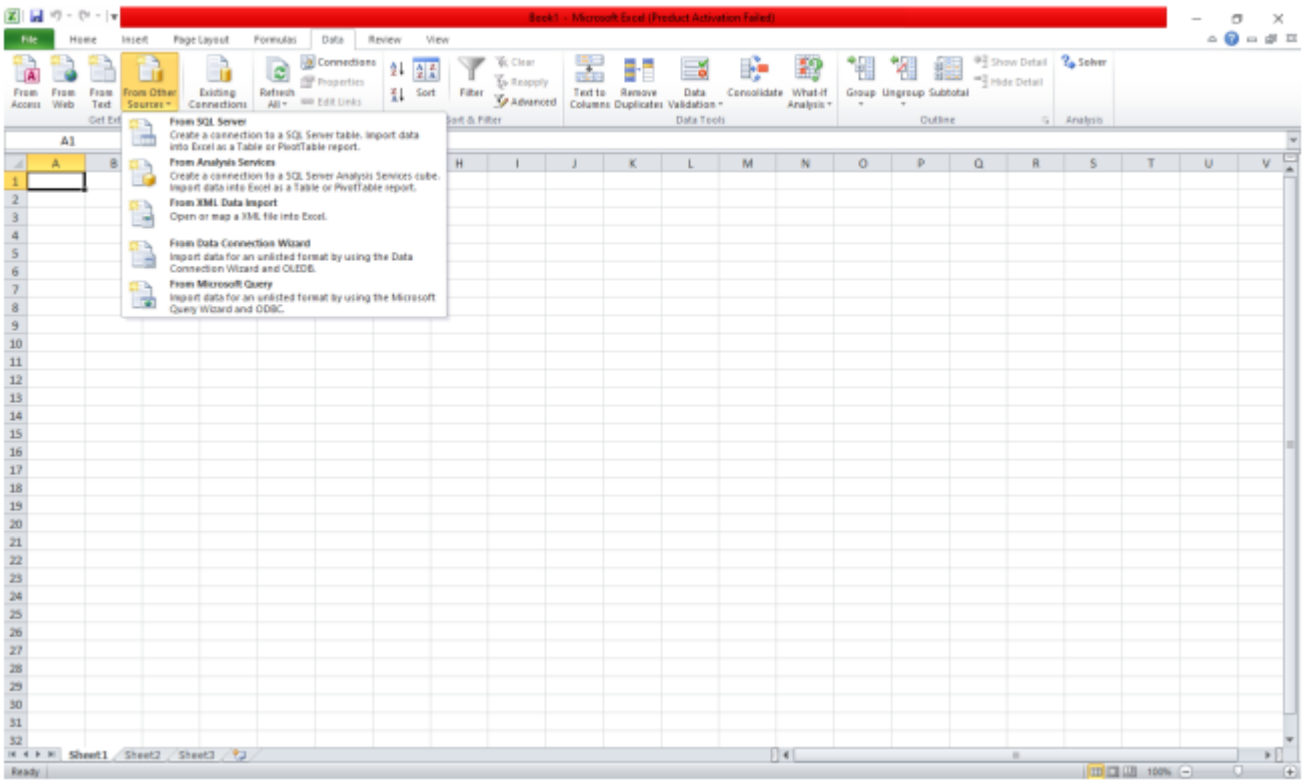
• Maximize this window to see the “Run” button.



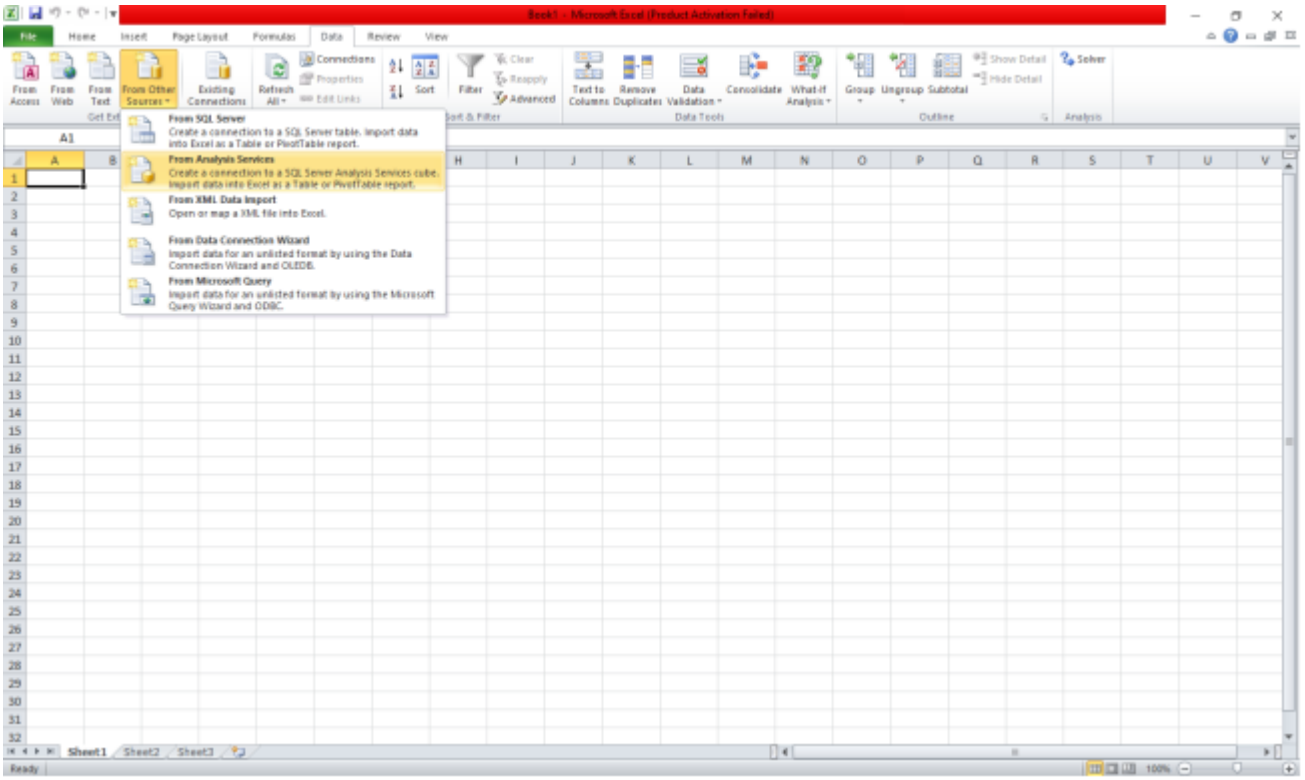
• Click the “Run” button to process the cube. If everything goes right, you should see the ‘Status’ as ‘Process succeeded’.



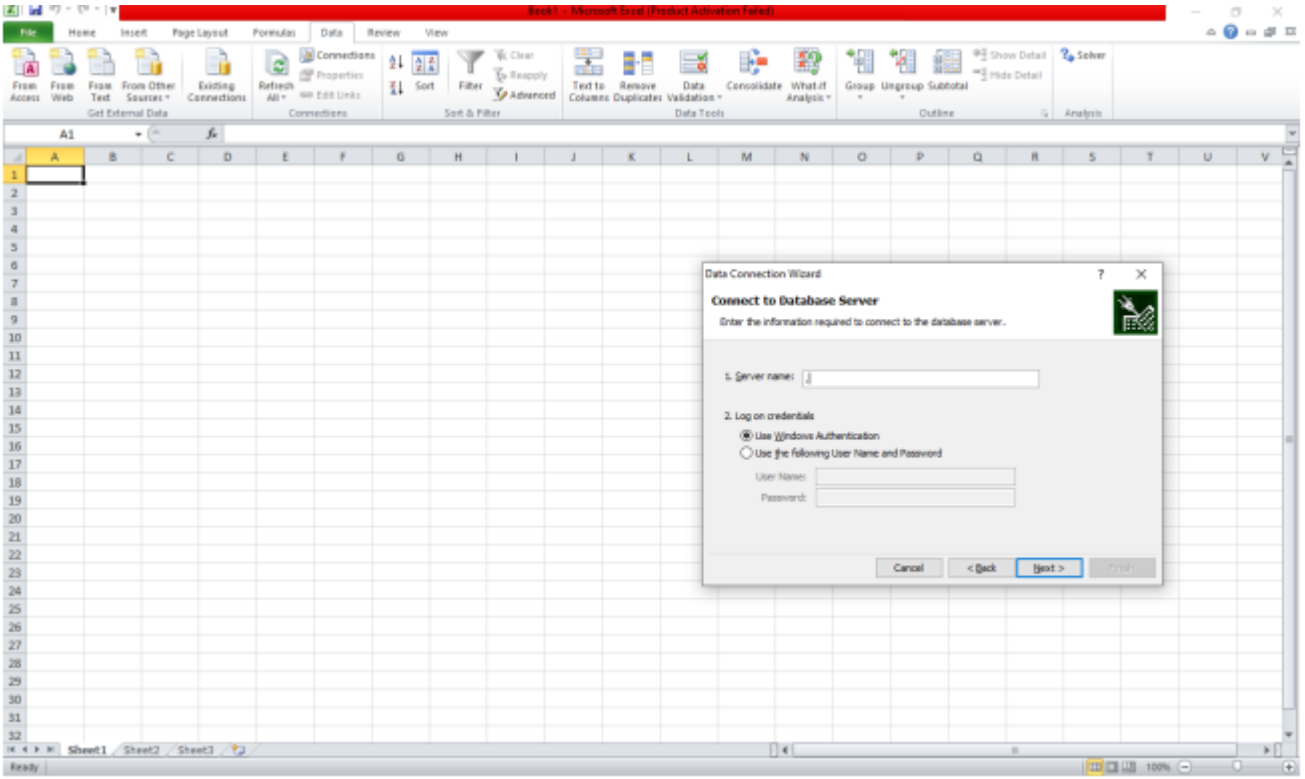
• Now, start Excel. Select the ‘Data’ section from the menu to display the Data ribbon. Select the “From Other Sources” button.



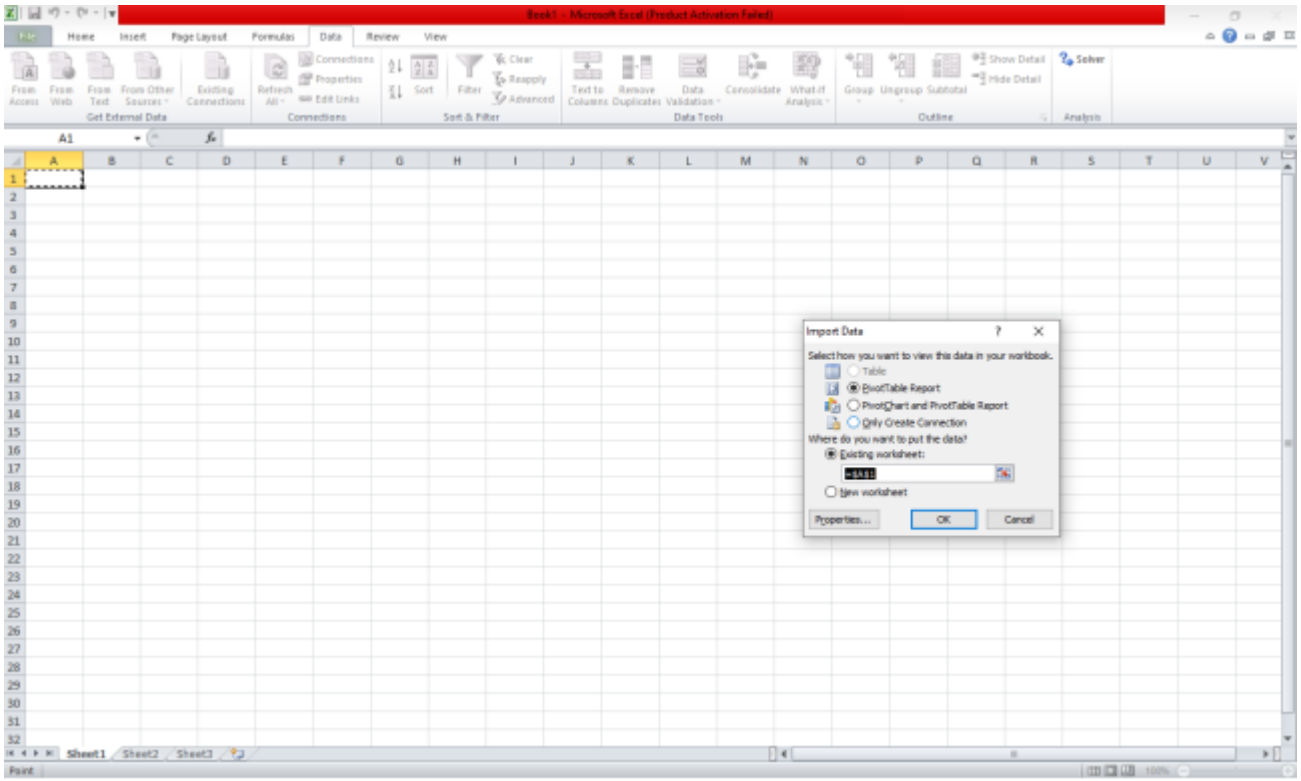
• This reveals a drop down list. Select the “From Analysis Service” option.



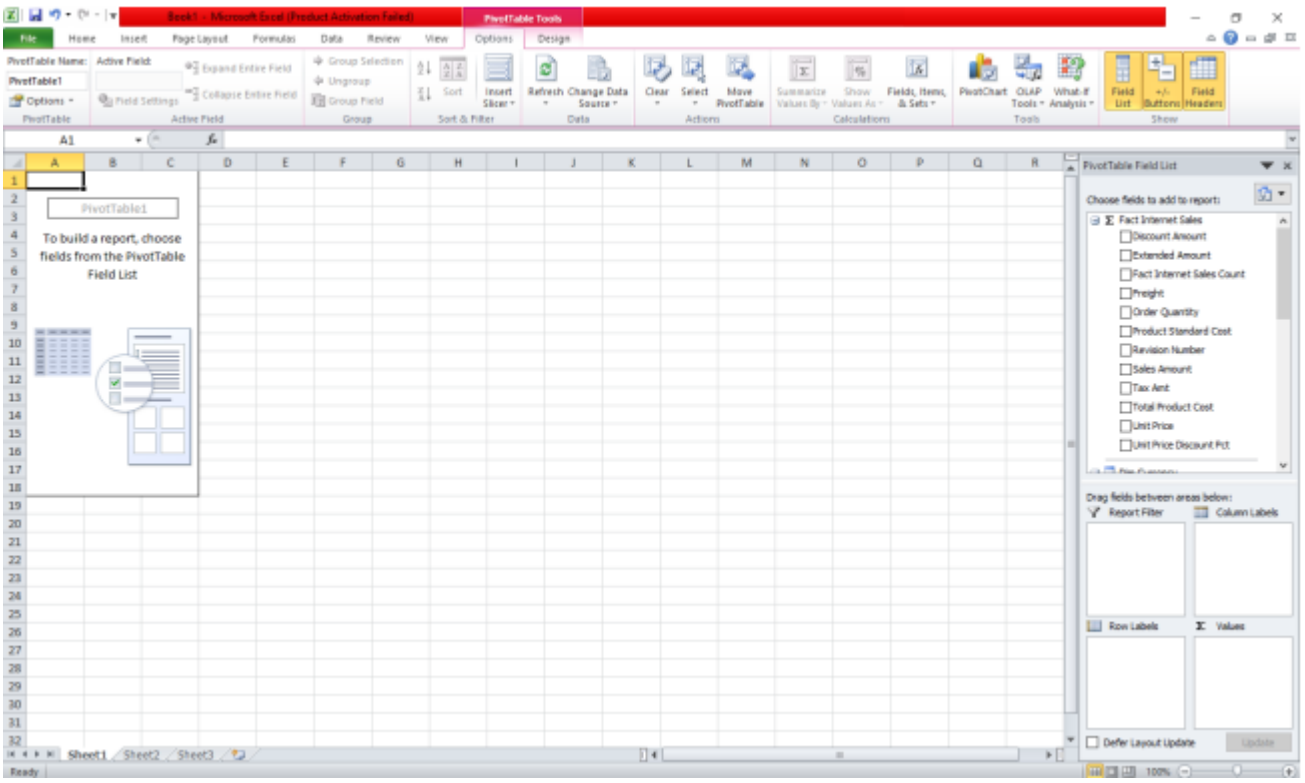
- Now, a popup window titled ‘Data Connection Wizard’ should appear. Enter ‘.’ or ‘localhost’ in the ‘Server Name’ text box.



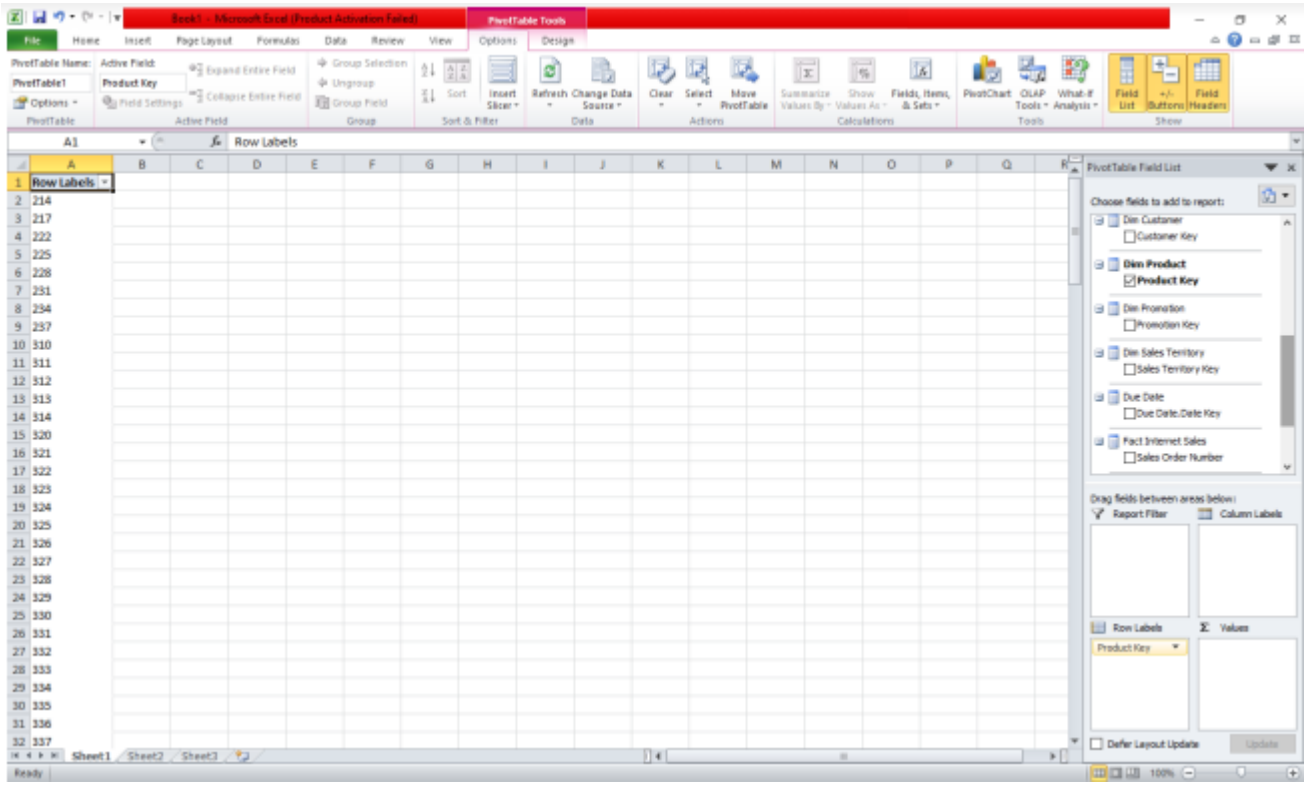
- Click on “Next”. The ‘Data Connection Wizard’ should now close and a new popup window called ‘Import Data’ should appear.

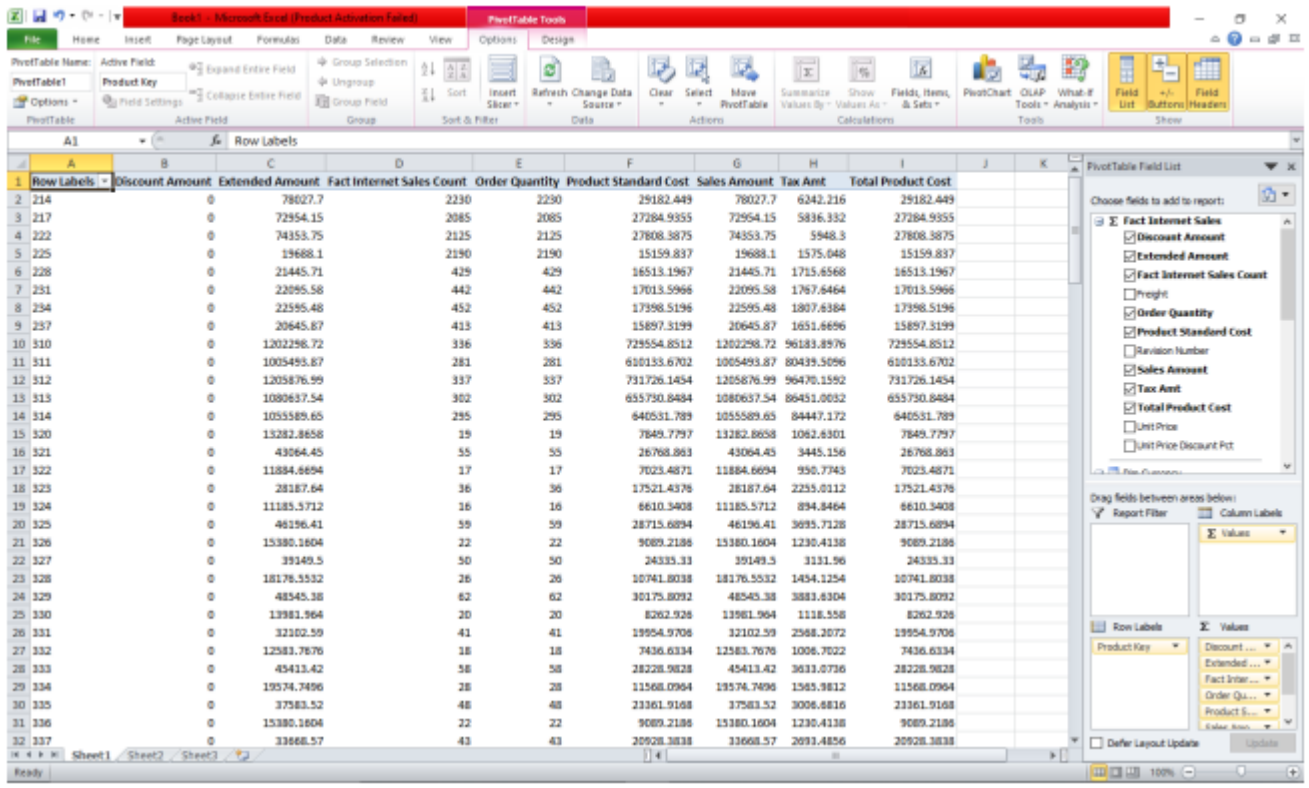


• Keep the default settings and click on “OK”. The current sheet should look like this:



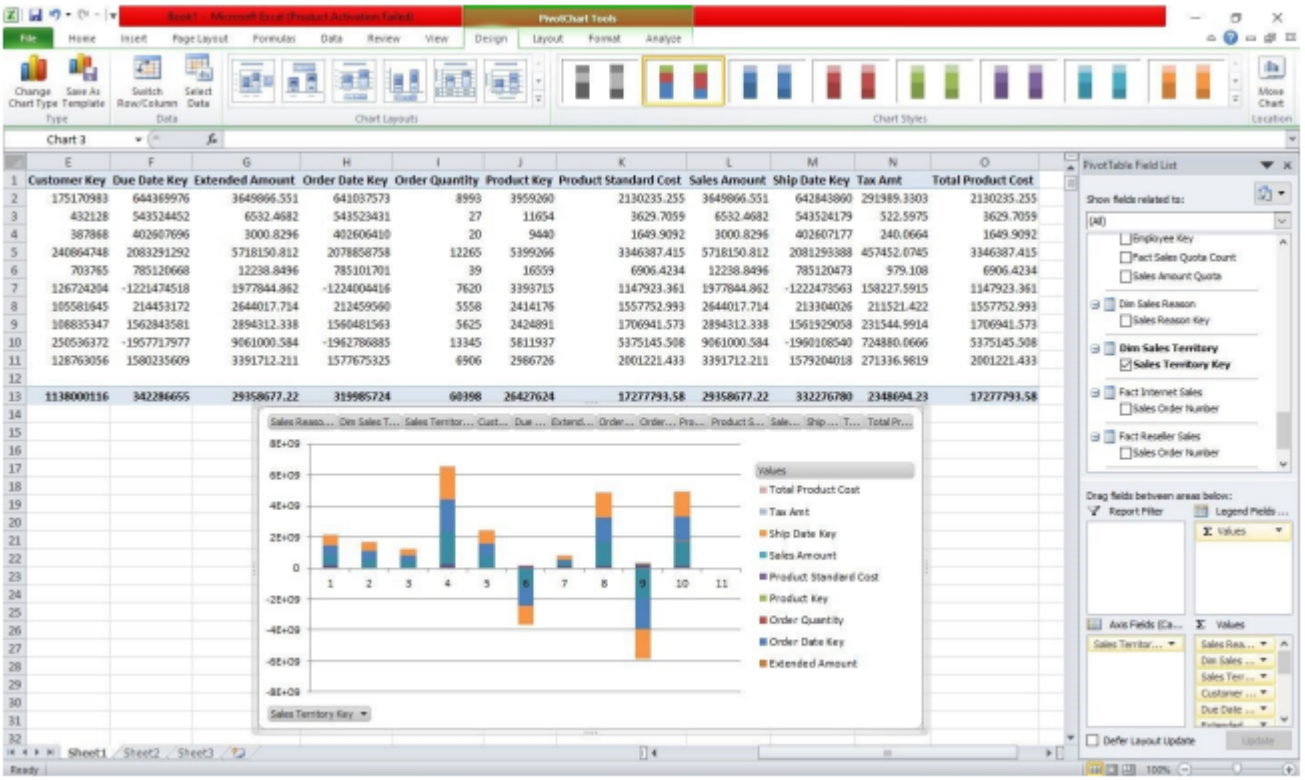
• Choose the items you want from the right pane. The spreadsheet will be updated automatically.





Row Labels	Discount Amount	Extended Amount	Fact Internet Sales Count	Order Quantity	Product Standard Cost	Sales Amount	Tax Amt	Total Product Cost
214	0	78027.7	2230	2290	29182.449	78027.7	6242.216	29182.449
217	0	72954.15	2085	2085	27284.9355	72954.15	5836.332	27284.9355
222	0	74353.75	2125	2125	27808.3875	74353.75	5948.3	27808.3875
225	0	19688.1	2190	2190	15159.837	19688.1	1575.048	15159.837
228	0	21445.71	429	429	16513.1967	21445.71	1715.6568	16513.1967
231	0	22095.58	442	442	17013.5966	22095.58	1767.6464	17013.5966
234	0	22595.48	452	452	17398.5196	22595.48	1807.6384	17398.5196
237	0	20645.87	413	413	15897.3199	20645.87	1651.6696	15897.3199
310	0	1202298.72	336	336	729554.8512	1202298.72	96183.8976	729554.8512
311	0	1005493.87	281	281	610133.6702	1005493.87	80439.5096	610133.6702
312	0	1205876.99	337	337	731726.1454	1205876.99	96470.1592	731726.1454
313	0	1080637.54	302	302	655730.8484	1080637.54	86451.0032	655730.8484
314	0	1055589.65	295	295	640531.789	1055589.65	84447.172	640531.789
320	0	13282.8658	19	19	7849.7797	13282.8658	1062.6301	7849.7797
321	0	43064.45	55	55	26768.863	43064.45	3445.156	26768.863
322	0	11884.6694	17	17	7023.4871	11884.6694	950.7743	7023.4871
323	0	28187.64	36	36	17521.4376	28187.64	2255.0112	17521.4376
324	0	11185.5712	16	16	6610.3408	11185.5712	894.8464	6610.3408
325	0	46196.41	59	59	28715.6894	46196.41	3695.7128	28715.6894
326	0	15380.1604	22	22	9089.2186	15380.1604	1230.4138	9089.2186
327	0	39149.5	50	50	24335.33	39149.5	3131.96	24335.33
328	0	18176.5532	26	26	10741.8038	18176.5532	1454.1254	10741.8038
329	0	48545.38	62	62	30175.8092	48545.38	3883.6304	30175.8092
330	0	13981.964	20	20	8262.926	13981.964	1118.558	8262.926
331	0	32102.59	41	41	19954.9706	32102.59	2568.2072	19954.9706
332	0	12583.7676	18	18	7436.6334	12583.7676	1006.7022	7436.6334
333	0	45413.42	58	58	28228.9828	45413.42	3633.0736	28228.9828
334	0	19574.7496	28	28	11568.0964	19574.7496	1565.9812	11568.0964
335	0	37583.52	48	48	23361.9168	37583.52	3006.6816	23361.9168
336	0	15380.1604	22	22	9089.2186	15380.1604	1230.4138	9089.2186
337	0	33668.57	43	43	20928.3838	33668.57	2693.4856	20928.3838

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



	Customer Key	Due Date Key	Extended Amount	Order Date Key	Order Quantity	Product Key	Product Standard Cost	Sales Amount	Ship Date Key	Tax Amt	Total Product Cost
2	175170983	644369976	3649866.551	641037573	8993	3959260	2130235.255	3649866.551	642843860	291989.3303	2130235.255
3	432128	543524452	6532.4682	543523431	27	11654	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	5718150.812	2078858758	12265	5399266	3346387.415	5718150.812	2081293388	457452.0745	3346387.415
6	703765	785120668	12238.8496	785101701	39	16559	6906.4234	12238.8496	785120473	979.108	6906.4234
7	126724204	-1221474518	1977844.862	-1224004416	7620	3393715	1147923.361	1977844.862	-1222473563	158227.5915	1147923.361
8	105581645	214453172	2644017.714	212459560	5558	2414176	1557752.993	2644017.714	213304026	211521.422	1557752.993
9	108835347	1562843581	2894312.338	1560481563	5625	2424891	1706941.573	2894312.338	1561929058	231544.9914	1706941.573
10	250536372	-1957717977	9061000.584	-1962786885	13345	5811937	5375145.508	9061000.584	-1960108540	724880.0666	5375145.508
11	128763056	1580235609	3391712.211	1577675325	6906	2986726	2001221.433	3391712.211	1579204018	271336.9819	2001221.433
12											
13	**1138000116**	**342286655**	**29358677.22**	**319985724**	**60398**	**26427624**	**17277793.58**	**29358677.22**	**332276780**	**2348694.23**	**17277793.58**