

Using Alteryx

ETL software is used to automate the redundant manipulation of data. In this exercise you will use Alteryx to:

Extract the Data file(s) from Excel

Transform the data

Load the transformed data into Excel

The sales data for *Cuddly Stuffed Animals* are stored in an Excel sheet titled January Sales Data. The column headings are in the ninth row, some rows have partial duplicate data and some rows are blank.

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2												
3												
4												
5												
6												
7												
8												
9												
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36												
37												
38												

Sample Reports

Product	Units	Sales	Profit Margin	Salesperson	Units	Sales	Profit Margin
Stuffed Elephant	4,392	\$ 109,800.00	\$ 64,782.00	1301 - Thomas Jefferson	9,528	\$ 210,000.00	\$ 119,466.00
Stuffed Giraffe	8,052	\$ 169,092.00	\$ 90,585.00	1302 - Grover Cleveland	7,128	\$ 162,276.00	\$ 92,601.00
Stuffed Horse	12,120	\$ 266,640.00	\$ 160,590.00	1303 - Ulysses Grant	4,116	\$ 90,168.00	\$ 51,294.00
Stuffed Panda	7,488	\$ 172,224.00	\$ 97,344.00	1304 - Martin Van Buren	4,476	\$ 98,388.00	\$ 56,247.00
Stuffed Penguin	5,016	\$ 100,320.00	\$ 55,176.00	1305 - George Washington	10,452	\$ 232,536.00	\$ 133,557.00
Stuffed Unicorn	3,060	\$ 73,440.00	\$ 40,545.00	1306 - John Tyler	4,428	\$ 98,148.00	\$ 55,857.00
Total	40,128	\$ 891,516.00	\$ 509,022.00	Total	40,128	\$ 891,516.00	\$ 509,022.00

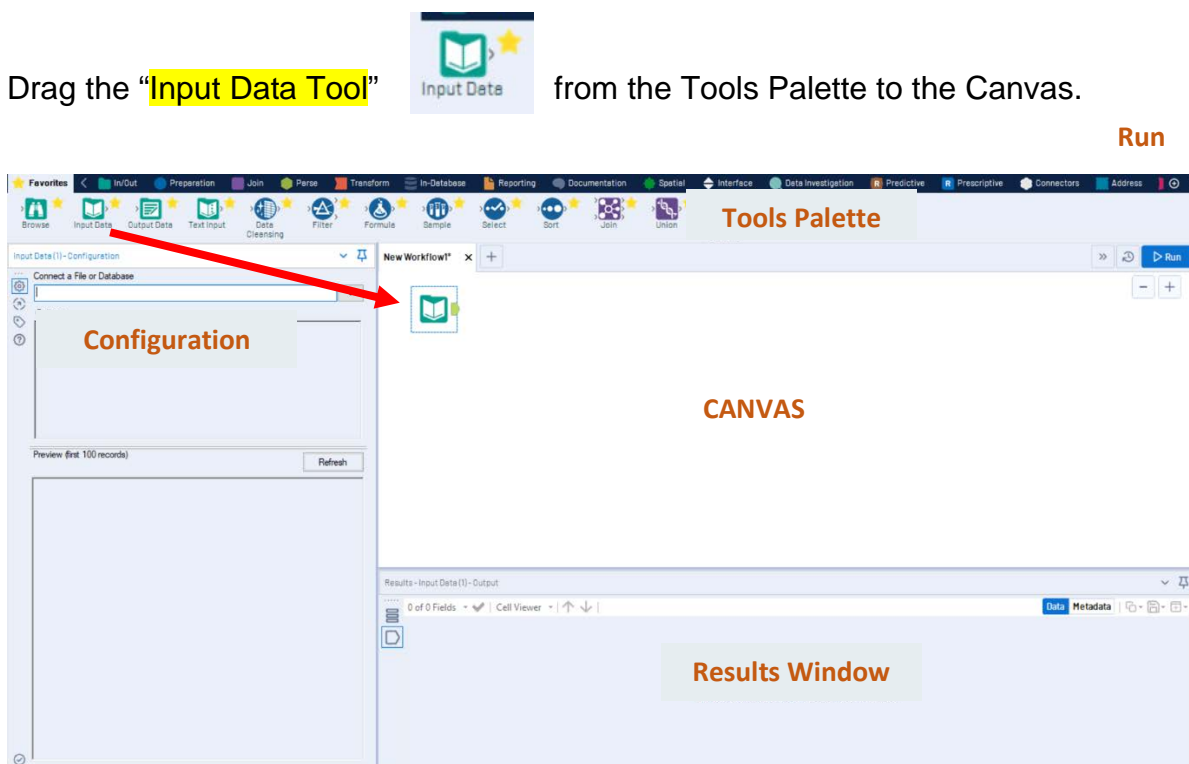
Start Alteryx

Note: You cannot extract data from an open Excel file so make sure that the Excel file is closed before starting to input the data.

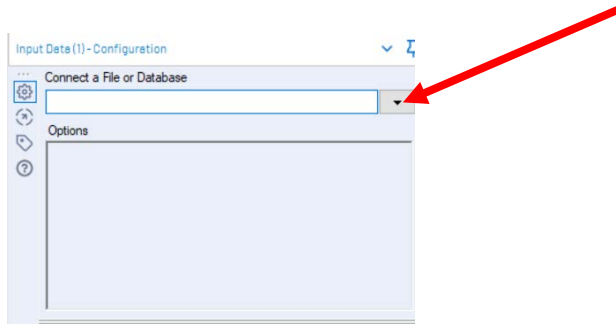
There are four major parts of the Alteryx window. The first is the Canvas, and that's where we're going to create the workflow. Second, the Tools Palette is where all the tools are stored. Third, the Configuration area is where the tool settings are modified. Lastly, the Results window shows us the result after we select "Run" to apply the changes.

Tool 1: **Input Data Tool** – Input Excel file

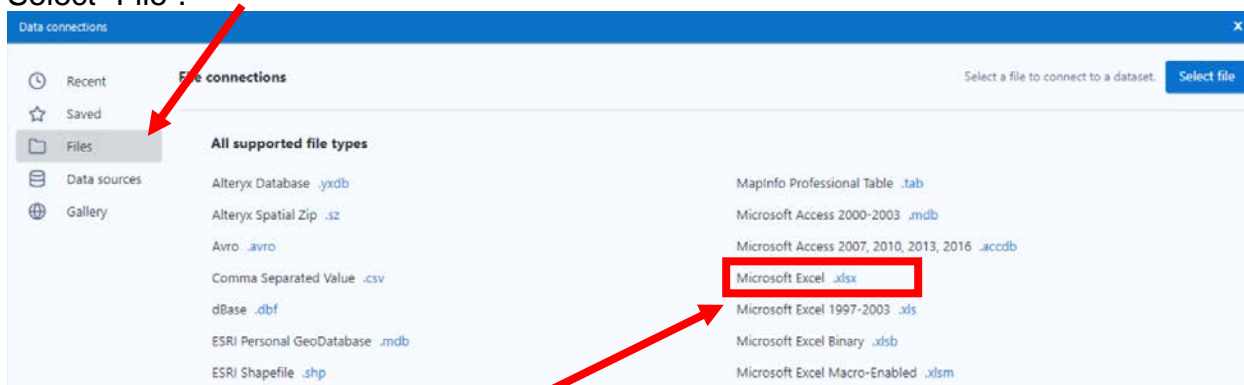
Drag the "**Input Data Tool**" from the Tools Palette to the Canvas.



In the Configuration area, select the “Connect a File or Database” drop-down arrow.



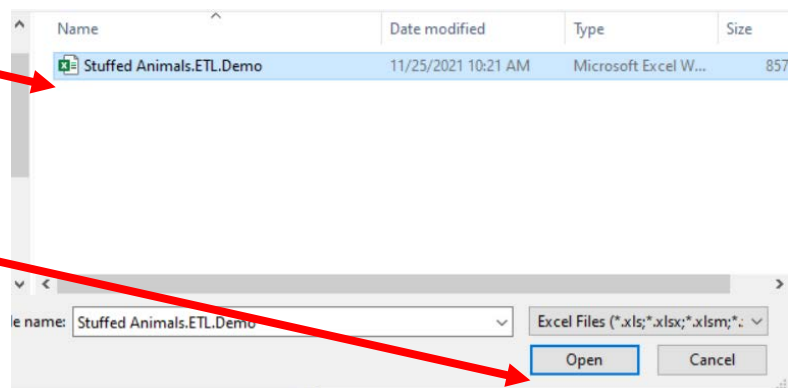
Select “File”.



Select “Microsoft Excel .xlsx”.

Browse for the desired file.

Select “Open”.



Select the drop-down.

The screenshot shows the 'Select Excel Input' dialog box. The 'Select a sheet' radio button is selected. The drop-down menu below it displays 'February-December Sales Data'. A red arrow points to the drop-down arrow on the right side of this menu. Below this, there is an unchecked checkbox for 'Select a range (cells, rows or columns)' with input fields for 'ex. A1' and 'ex. G7'. There is also an unchecked radio button for 'Select a named range' with a 'Select option...' drop-down, and an unchecked radio button for 'Import only the list of sheet names'. At the bottom right are buttons for 'Refresh', 'Help', 'Cancel', and 'OK'.

Select "January Sales Data".

This screenshot shows the same 'Select Excel Input' dialog box, but the drop-down menu now displays 'January Sales Data'. A red arrow points to this menu. The other options and buttons remain the same as in the previous screenshot.

Select "OK".

Remember that the field names are in the ninth row.

In the Configuration area, scroll down to option 7.

Change the number in “Start Data Import on Line” to “9”.

Select “Run”.

The Results window will display the field headings and the data.

Input Data (1) - Configuration

Connect a File or Database

C:\Sample\Stuffed Animals.ETL.Demo.xlsx

Options

Name	Value
1 Record Limit	
2 File Format	Microsoft Excel (*.xlsx)
3 Table or Query	'January Sales Data\$'
4 Search SubDirs	<input type="checkbox"/>
5 Output File Name as Field	No
6 First Row Contains Data	<input type="checkbox"/>
7 Start Data Import on Line	9

Preview (first 100 records)

Refresh

Start Here.yxmd x New Workflow1*

Stuffed Animals.ETL.Demo.xlsx
Query='January Sales Data\$'

Results - Input Data (1) - Output

11 of 11 Fields | Cell Viewer | 1,227 records displayed

Record	Sales Order #	Salesperson #	Salesperson	Title	Profit Margin	Region #	Region	State	Product	# of units	Sales
1	35005	1304	Martin Van Buren	Sales Associate I	1908	3	South	TN	Stuffed Horse	144	3168
2	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	Stuffed Horse	[Null]	3168
3	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]
4	35006	1302	Grover Cleveland	Senior Sales Associate	936	1	Midwest	NE	Stuffed Panda	72	1656
5	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	Stuffed Panda	[Null]	1656
6	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]
7	35009	1301	Thomas Jefferson	Sales Associate I	2028	2	Northeast	PA	Stuffed Panda	156	3508
8	[Null]	[Null]	[Null]	[Null]	2028	[Null]	[Null]	[Null]	Stuffed Panda	[Null]	[Null]

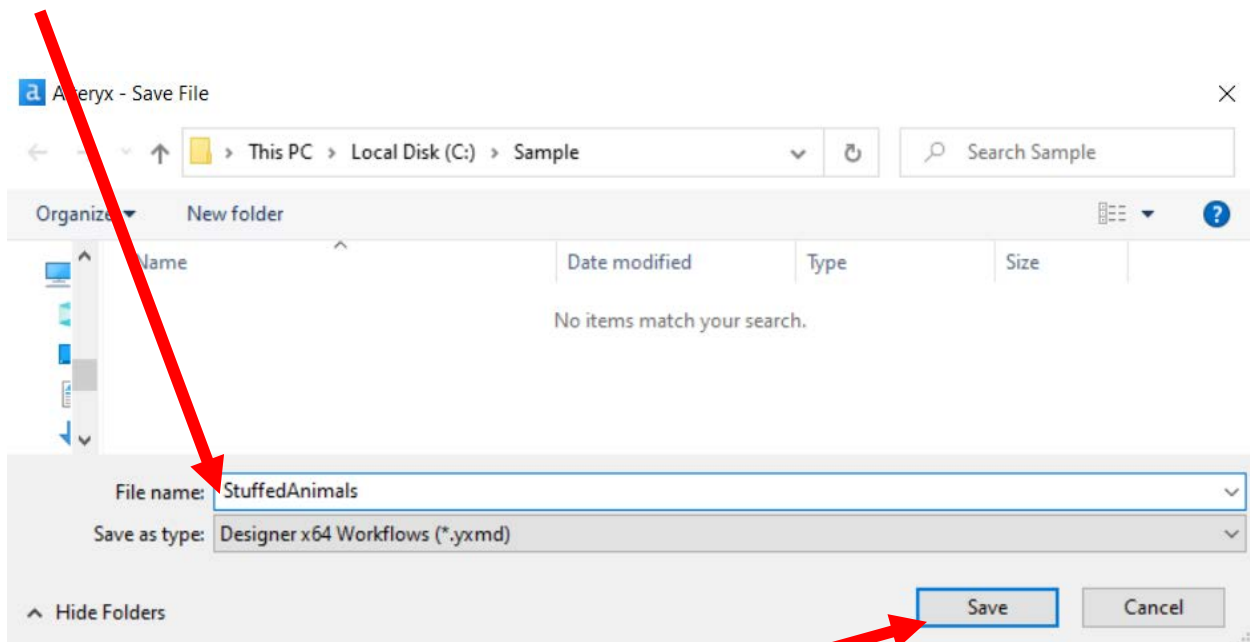
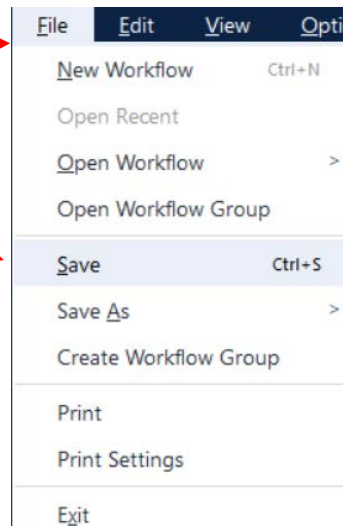
The workflow must be saved.

Select "File".

Select "Save".

Browse to the required directory.

Type in the name of the file that will be uploaded.

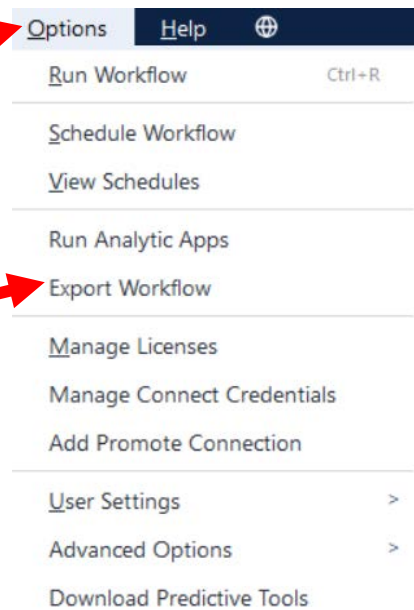


Select "Save".

Export the workflow and the related input files so that the project can be completed on another computer or uploaded to the web.

Select "Options".

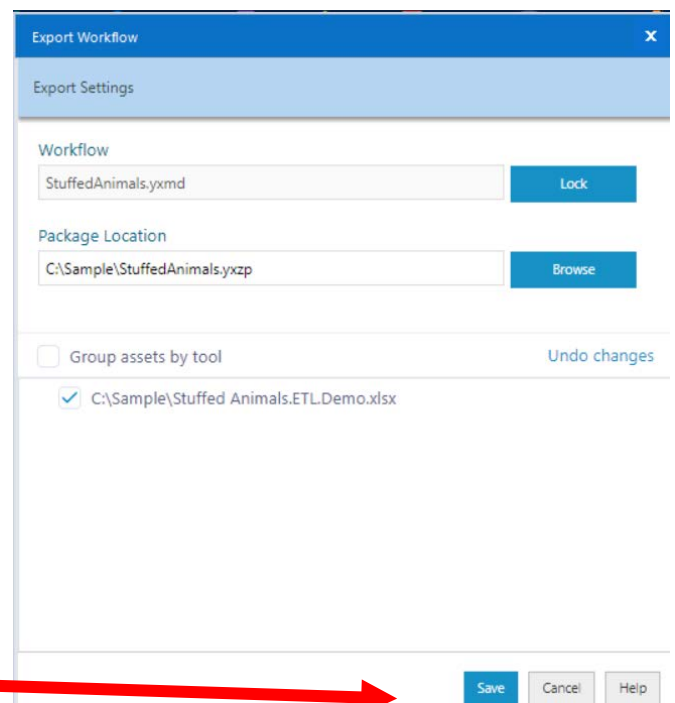
Select "Export Workflow".



Verify the "Workflow".


Verify the "Package Location".

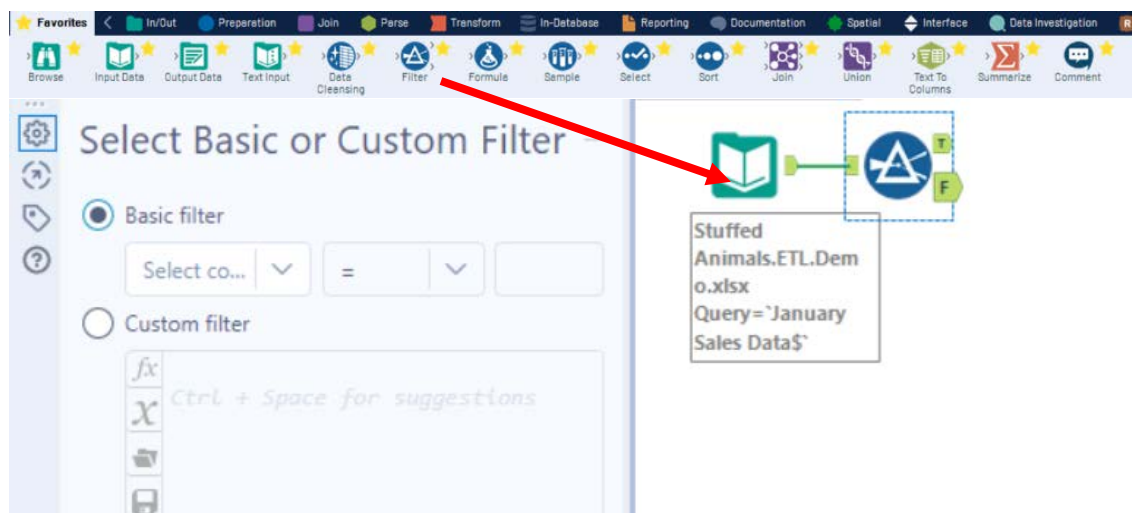
Select "Save".



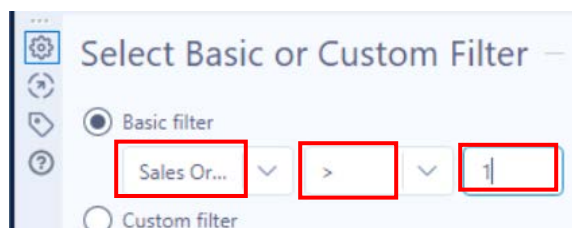
Tool 2: **Filter Tool** – Exclude all rows that do not contain data

There are several rows that do not contain an sales order number. We can modify the working dataset so that it includes only those rows that contain account numbers greater than one. Note that we are not deleting anything from the source data file. The working dataset will be split into two subsets. The first subset, “True”, will include all rows with account numbers greater than one. The second subset, “False”, will contain all rows with account numbers less than one.

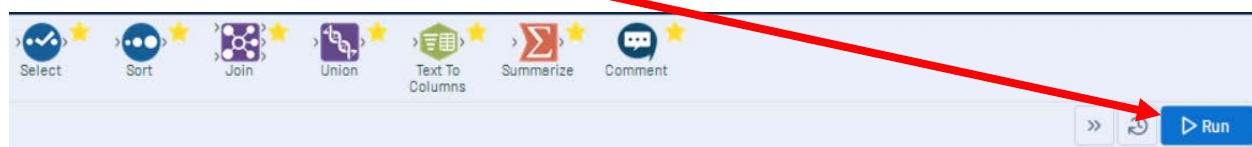
Drag the “**Filter Tool**”  from the Tools Palette to the right of the “**Input Data Tool**” on the Canvas. The two will be connected automatically. The outflow from the tool on the left is the inflow to the one on the right.



With the “**Filter Tool**” selected, the “Basic” filter in the Configuration area can be modified to filter the field “Sales Order” for those accounts greater than “1”.



To apply the latest change, select “Run”.



We can view three different datasets in the Results window.

The records that meet the filtered conditions, “Sales Order > 1”, are displayed as T (True).

Results - Filter (3) - Out - True

11 of 11 Fields | Cell Viewer | 409 records displayed | Search | Data | Meta

Record	Sales Order #	Salesperson #	Salesperson	Title	Profit Margin	Region #	Region	State	Product	# of units	Sales
1	35005	1304	Martin Van Buren	Sales Associate I	1908	3	South	TN	Stuffed Horse	144	3168
2	35006	1302	Grover Cleveland	Senior Sales Associate	936	1	Midwest	NE	Stuffed Panda	72	1656
3	35009	1301	Thomas Jefferson	Sales Associate I	2028	2	Northeast	PA	Stuffed Panda	156	3588
4	35011	1305	George Washington	Sales Associate I	1560	1	Midwest	MN	Stuffed Panda	120	2760
5	35014	1303	Ulysses Grant	Senior Sales Associate	1215	1	Midwest	MN	Stuffed Giraffe	108	2268
6	35017	1305	George Washington	Sales Associate I	708	2	Northeast	RI	Stuffed Elephant	48	1200
7	35025	1303	Ulysses Grant	Senior Sales Associate	1272	2	Northeast	ME	Stuffed Horse	96	2112
8	35026	1301	Thomas Jefferson	Sales Associate I	1716	4	West	WY	Stuffed Penguin	156	3120
9	35027	1301	Thomas Jefferson	Sales Associate I	1215	4	West	CA	Stuffed Giraffe	108	2268
10	35032	1303	Ulysses Grant	Senior Sales Associate	1584	1	Midwest	NE	Stuffed Penguin	144	2880

The records that do not meet the filtered conditions are displayed as F (False).

Results - Filter (3) - Out - False

11 of 11 Fields | Cell Viewer | 818 records displayed | Search

Record	Sales Order #	Salesperson #	Salesperson	Title	Profit Margin	Region #	Region	State	Product	# of units	Sales
1	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	Stuffed Horse	[Null]	3168
2	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]
3	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	Stuffed Panda	[Null]	1656
4	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]
5	[Null]	[Null]	[Null]	[Null]	2028	[Null]	[Null]	[Null]	Stuffed Panda	[Null]	[Null]
6	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]
7	[Null]	[Null]	[Null]	[Null]	1560	[Null]	[Null]	[Null]	Stuffed Panda	[Null]	[Null]
8	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]
9	[Null]	[Null]	[Null]	[Null]	1215	[Null]	[Null]	[Null]	Stuffed Giraffe	[Null]	[Null]
10	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]

The data being filtered can also be displayed.

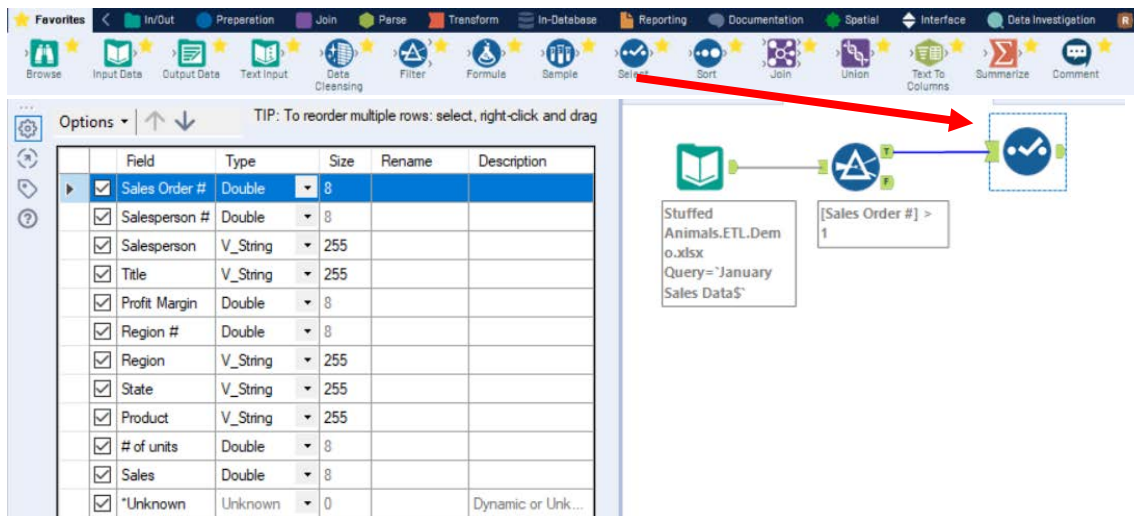
Results - Filter (3) - Input

11 of 11 Fields | Cell Viewer | 1,227 records displayed | Search | Data | Meta

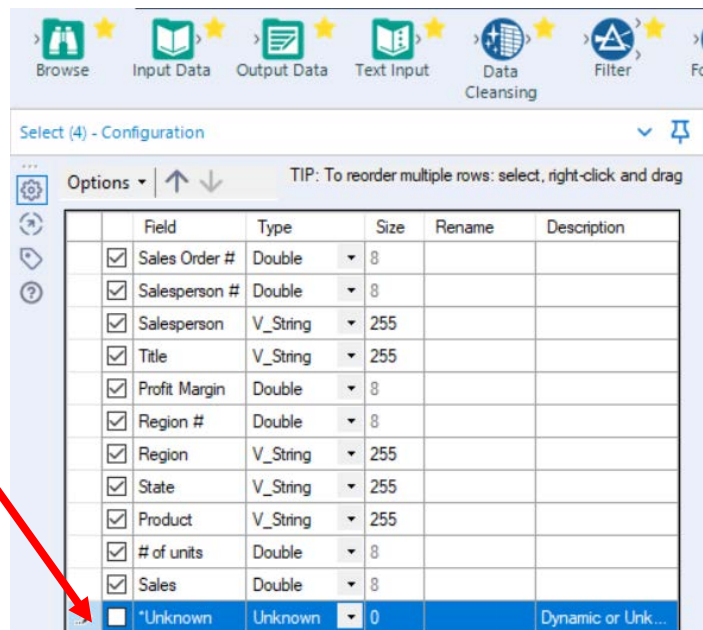
Record	Sales Order #	Salesperson #	Salesperson	Title	Profit Margin	Region #	Region	State	Product	# of units	Sales
1	35005	1304	Martin Van Buren	Sales Associate I	1908	3	South	TN	Stuffed Horse	144	3168
2	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	Stuffed Horse	[Null]	3168
3	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]
4	35006	1302	Grover Cleveland	Senior Sales Associate	936	1	Midwest	NE	Stuffed Panda	72	1656
5	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	Stuffed Panda	[Null]	1656
6	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]
7	35009	1301	Thomas Jefferson	Sales Associate I	2028	2	Northeast	PA	Stuffed Panda	156	3588
8	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	Stuffed Panda	[Null]	[Null]
9	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	[Null]	Stuffed Panda	[Null]	[Null]
10	35011	1305	George Washington	Sales Associate I	1560	1	Midwest	MN	Stuffed Panda	120	2760

Tool 3: **Select Tool** – Remove fields that contain no data, from “*Unknown”

Drag the “**Select Tool**” from the Tools Palette to the True output of the “**Filter Tool**” on the Canvas. The two will be connected automatically.



Remove any extra fields by unchecking them.



Change the type of all numeric fields that will be used in calculations to "FixedDecimal". The "# of units" should have zero decimal places and dollar values should have two decimal places.

Select (5) - Configuration

Options | TIP: To reorder multiple

Field	Type	Size
<input checked="" type="checkbox"/> Sales Order #	Double	8
<input checked="" type="checkbox"/> Salesperson #	Double	8
<input checked="" type="checkbox"/> Salesperson	V_String	255
<input checked="" type="checkbox"/> Title	V_String	255
<input checked="" type="checkbox"/> Profit Margin	FixedDecimal	19.2
<input checked="" type="checkbox"/> Region #	Double	8
<input checked="" type="checkbox"/> Region	V_String	255
<input checked="" type="checkbox"/> State	V_String	255
<input checked="" type="checkbox"/> Product	V_String	255
<input checked="" type="checkbox"/> # of units	FixedDecimal	19.0
<input checked="" type="checkbox"/> Sales	FixedDecimal	19.2
<input checked="" type="checkbox"/> *Unknown	Unknown	0

Before making changes:

Results - Select (5) - Input

11 of 11 Fields | Cell Viewer | 409 records displayed | Search | Data | Metadata | Actions | 000

Record	Order #	Salesperson #	Salesperson	Title	Profit Margin	Region #	Region	State	Product	# of units	Sales
1	1304	1304	Martin Van Buren	Sales Associate I	1908	3	South	TN	Stuffed Horse	144	3168
2	1302	1302	Grover Cleveland	Senior Sales Associate	936	1	Midwest	NE	Stuffed Panda	72	1656
3	1301	1301	Thomas Jefferson	Sales Associate I	2028	2	Northeast	PA	Stuffed Panda	156	3588
4	1305	1305	George Washington	Sales Associate I	1560	1	Midwest	MN	Stuffed Panda	120	2760
5	1303	1303	Ulysses Grant	Senior Sales Associate	1215	1	Midwest	MN	Stuffed Giraffe	108	2268
6	1305	1305	George Washington	Sales Associate I	708	2	Northeast	RI	Stuffed Elephant	48	1200
7	1303	1303	Ulysses Grant	Senior Sales Associate	1272	2	Northeast	ME	Stuffed Horse	96	2112
8	1301	1301	Thomas Jefferson	Sales Associate I	1716	4	West	WY	Stuffed Penguin	156	3120

Select Run.

Select the output area of the Select tool.

Start Here.yxmd x StuffedAnimals.yxmd x +

Stuffed Animals.ETL.Demo.o.xlsx Query="January Sales Data"

[Sales Order #] > 1

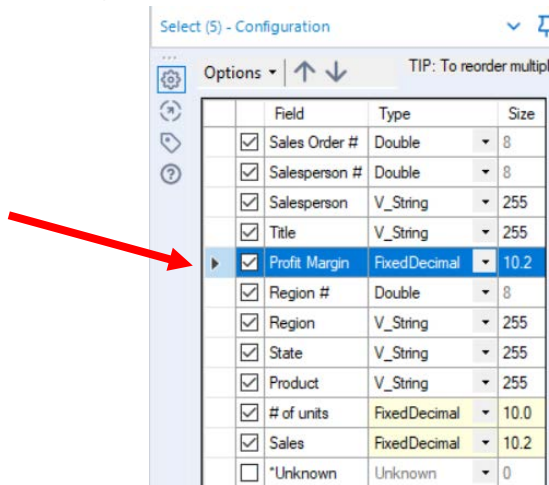
Results - Select (5) - Output

11 of 11 Fields | Cell Viewer | 409 records displayed | Search | Data | Metadata | Actions | 000

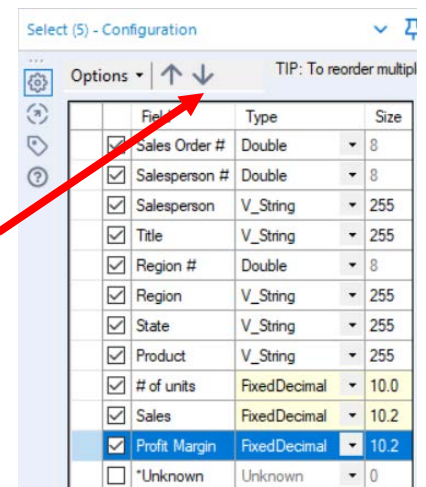
Record	Order #	Salesperson #	Salesperson	Title	Profit Margin	Region #	Region	State	Product	# of units	Sales
1	1304	1304	Martin Van Buren	Sales Associate I	1908.00	3	South	TN	Stuffed Horse	144	3168.00
2	1302	1302	Grover Cleveland	Senior Sales Associate	936.00	1	Midwest	NE	Stuffed Panda	72	1656.00
3	1301	1301	Thomas Jefferson	Sales Associate I	2028.00	2	Northeast	PA	Stuffed Panda	156	3588.00
4	1305	1305	George Washington	Sales Associate I	1560.00	1	Midwest	MN	Stuffed Panda	120	2760.00
5	1303	1303	Ulysses Grant	Senior Sales Associate	1215.00	1	Midwest	MN	Stuffed Giraffe	108	2268.00
6	1305	1305	George Washington	Sales Associate I	708.00	2	Northeast	RI	Stuffed Elephant	48	1200.00
7	1303	1303	Ulysses Grant	Senior Sales Associate	1272.00	2	Northeast	ME	Stuffed Horse	96	2112.00
8	1301	1301	Thomas Jefferson	Sales Associate I	1716.00	4	West	WY	Stuffed Penguin	156	3120.00

Change the order of the fields by moving “Profit Margin” to the end.

In the Configuration section select “Profit Margin”.



Use the down arrow to move “Profit Margin” to the end of the list.



Select Run.

Results - Select (5) - Output

11 of 11 Fields | Cell Viewer | 409 records displayed

Record	Sales Order #	Salesperson #	Salesperson	Title	Region #	Region	State	Product	# of units	Sales	Profit Margin
1	35005	1304	Martin Van Buren	Sales Associate I	3	South	TN	Stuffed Horse	144	3168.00	1908.00
2	35006	1302	Grover Cleveland	Senior Sales Associate	1	Midwest	NE	Stuffed Panda	72	1656.00	936.00
3	35009	1301	Thomas Jefferson	Sales Associate I	2	Northeast	PA	Stuffed Panda	156	3588.00	2028.00
4	35011	1305	George Washington	Sales Associate I	1	Midwest	MN	Stuffed Panda	120	2760.00	1560.00
5	35014	1303	Ulysses Grant	Senior Sales Associate	1	Midwest	MN	Stuffed Giraffe	108	2268.00	1215.00
6	35017	1305	George Washington	Sales Associate I	2	Northeast	RI	Stuffed Elephant	48	1200.00	708.00
7	35025	1303	Ulysses Grant	Senior Sales Associate	2	Northeast	ME	Stuffed Horse	96	2112.00	1272.00
8	35026	1301	Thomas Jefferson	Sales Associate I	4	West	WY	Stuffed Penguin	156	3120.00	1716.00

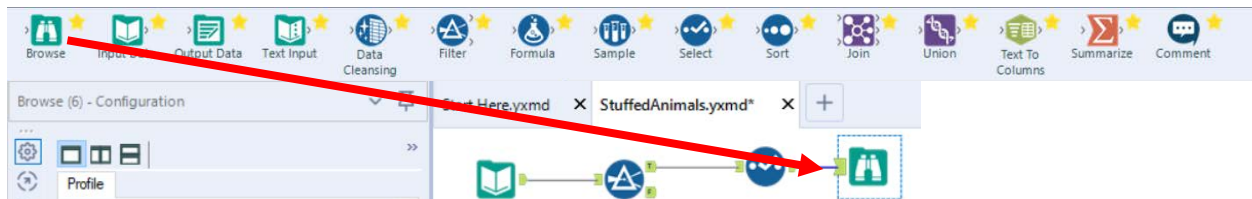
Temporary Tool 4: **Browse Tool** – The Data in the Fields Must Conform to Predefined Rules.

In the original Excel file, The Cuddly Stuffed Animals company provided the only acceptable values for “Product”, “Salesperson” and “Region”. Sometime data is entered incorrectly into the data.

Product ID	Product	Code	Salesperson	Code	Region
101	Stuffed Penguin	1301	Thomas Jefferson	1	Midwest
102	Stuffed Horse	1302	Grover Cleveland	2	Northeast
103	Stuffed Unicorn	1303	Ulysses Grant	3	South
104	Stuffed Giraffe	1304	Martin Van Buren	4	West
105	Stuffed Panda	1305	George Washington		
106	Stuffed Elephant	1306	John Tyler		

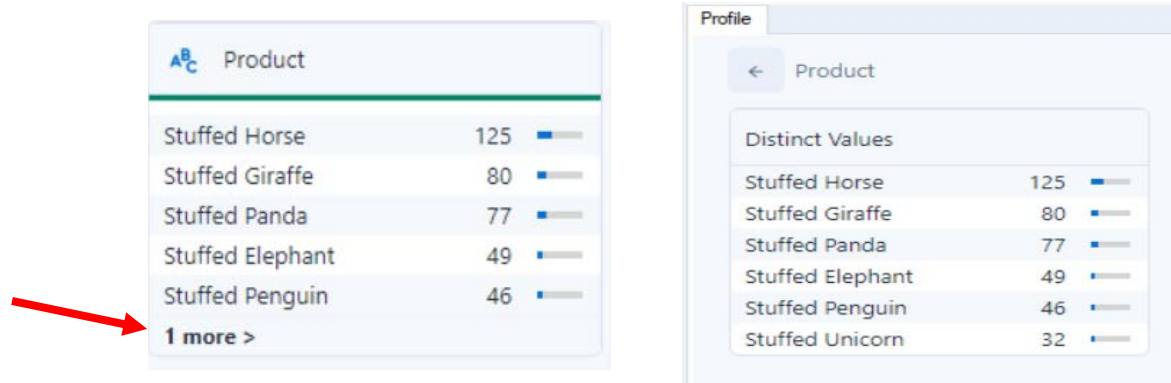
The “Product” field can only contain one of the six products. Browse the data in the “Product” field to verify that all the data is correct. Make any changes that are required.

Drag the “**Browse Tool**” from the Tools Palette to the True output of the “**Select Tool**” on the Canvas. The two will be connected automatically.



Select Run.

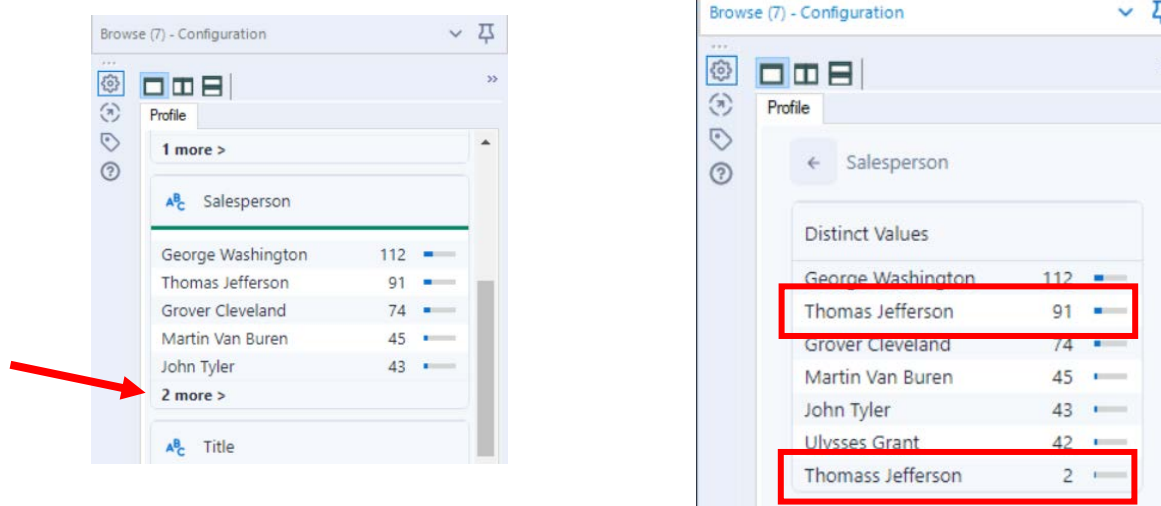
In the Configuration section scroll down to “Product” and select “1 more”.



The data is clean, there are only six products listed.

The “Salesperson” field can only contain one of the six names. Browse the data in the “Salesperson” field to verify that all the data is correct. Make any changes that are required.

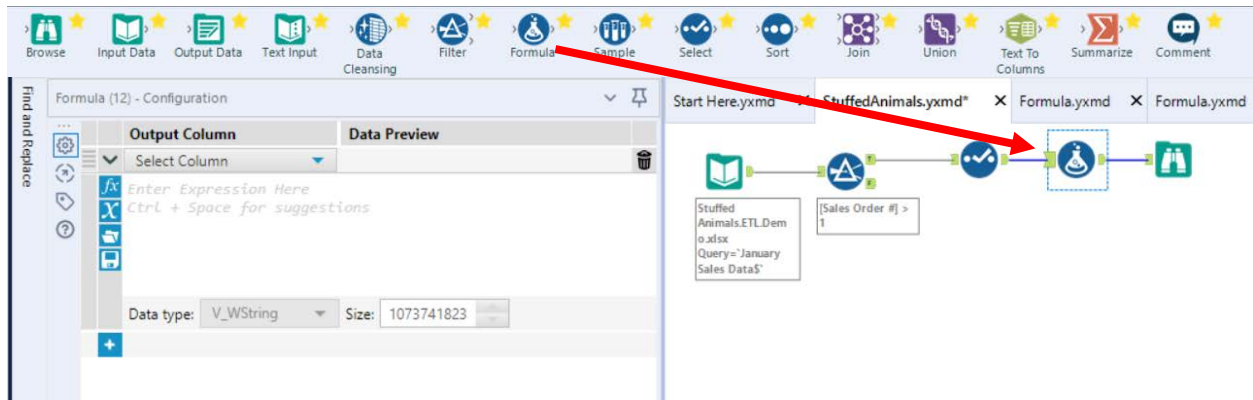
In the Configuration section scroll down to “Salesperson” and select “2 more”.



“Thomass Jefferson” must be replaced with “Thomas Jefferson” for a total of 93 distinct values.

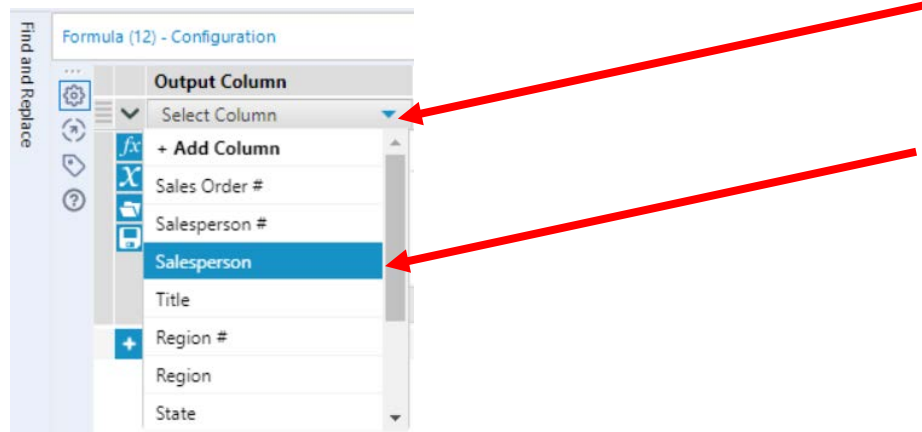
Tool 4: **Formula Tool** – The Data in the Fields Must Conform to Predefined Rules.

Drag the “**Formula Tool**” from the Tools Palette between the output of the “**Select Tool**” and the “**Browse Tool**” on the Canvas. The three will be connected automatically.

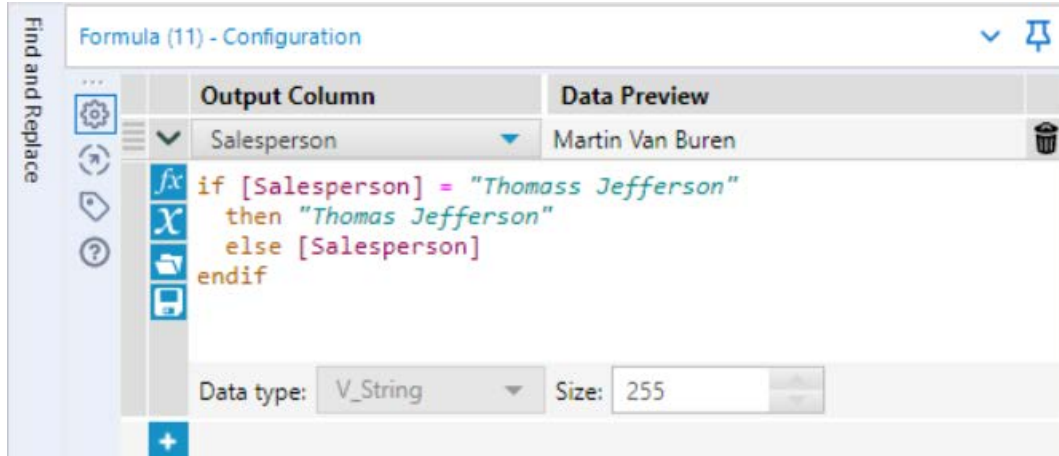


If the salesperson's name is “Thomass Jefferson” replace it with “Thomas Jefferson” otherwise leave the existing name in the field. Do not create a new field, put the output back into the “Salesperson” field.

In the configuration section select the field Salesperson from the pull-down list.



Type in the formula.



Select the Browse step.

Select Run.

Profile

← Salesperson

Distinct Values		
George Washington	112	
Thomas Jefferson	93	
Grover Cleveland	74	
Martin Van Buren	45	
John Tyler	43	
Ulysses Grant	42	

In the Configuration section scroll down to “Salesperson”. There are only six salespersons and Thomas Jefferson has 93 distinct values.

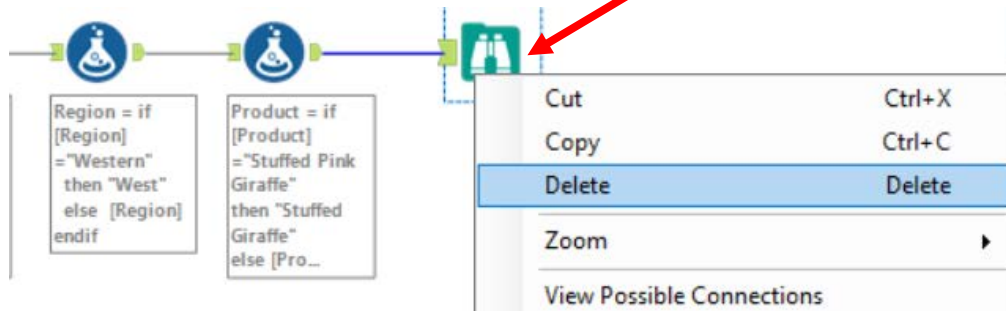
While in the Browse step, verify the field “Region”

Region

South	126	
Northeast	110	
West	104	
Midwest	69	


The data is clean, only the four regions are listed.

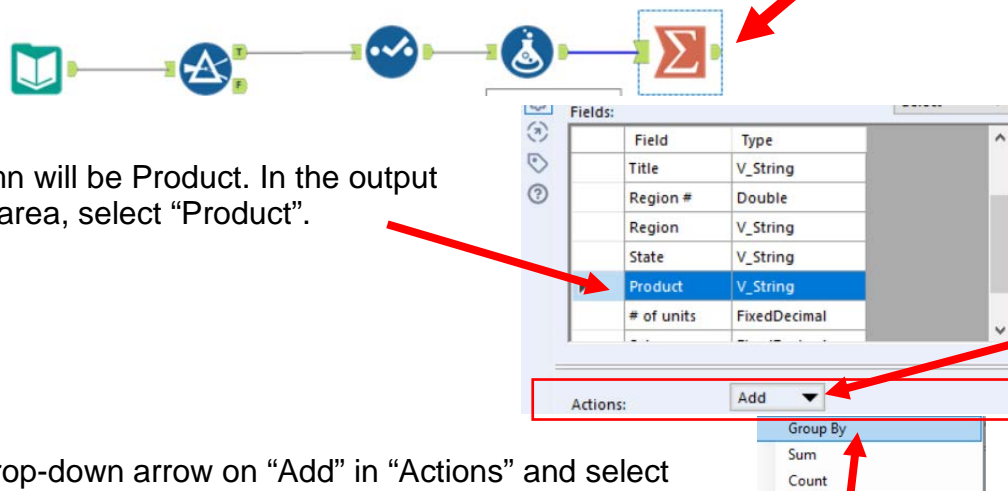
Right click on the Browse step and select delete.



Tool 5: Select Tool Summary: We now want to create a report by product by first summarizing on “# of units” by product.

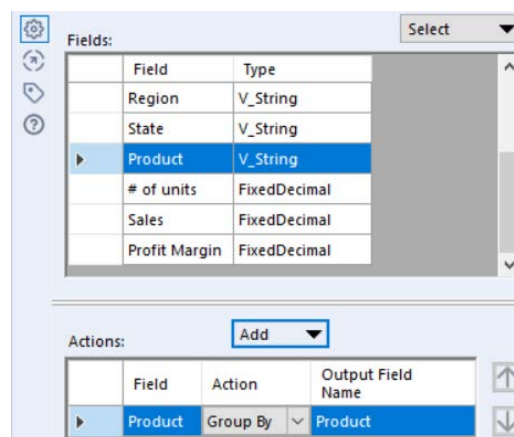
Product	# of units	Sales	Profit Margin
Stuffed Frog	1,524	\$ 33,528	\$20,574
Stuffed Unicorn	408	8,160	4,692
Stuffed Panda	1,140	26,220	15,675
Stuffed Koala	624	14,976	8,112
Stuffed Elephant	4,044	84,924	49,539
Stuffed Bear	2,376	59,400	35,046
Total	10,116	\$227,208	\$133,638

Drag a “**Summary Tool**”  to the right of the “**Formula tool**” on the Canvas. The two will be connected automatically. The outflow from the tool on the left is the inflow to the one on the right.

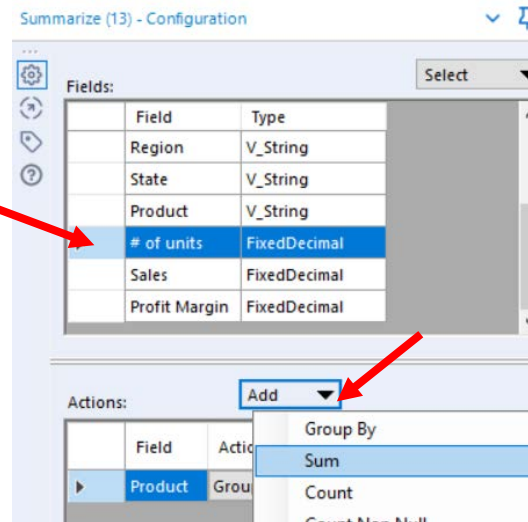


The first column will be Product. In the output Configuration area, select “Product”.

Click on the drop-down arrow on “Add” in “Actions” and select “Group By”.

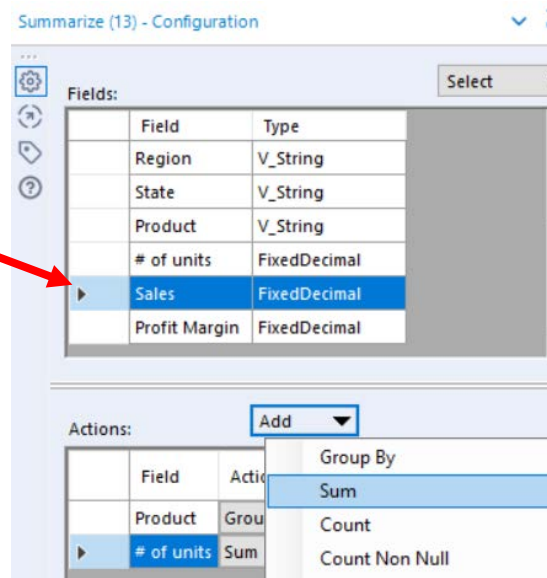


The second column will be “# of units”.



Click on the drop-down arrow on "Add" in the "Actions" and select "Sum".

The third column will be "Sales".



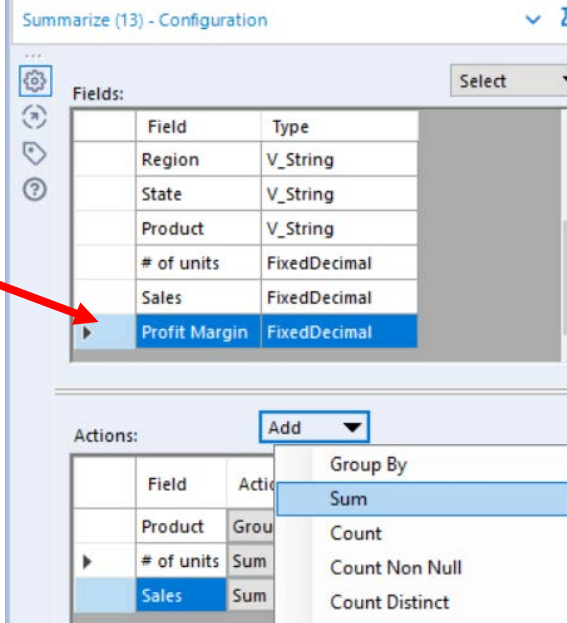
Click on the drop-down arrow on "Add" in the "Actions" and select "Sum".

The fourth column will be "Profit Margin".

Click on the drop-down arrow on "Add" in the "Actions" and select "Sum".

Select "Run".

The report is created.



Summarize (13) - Configuration

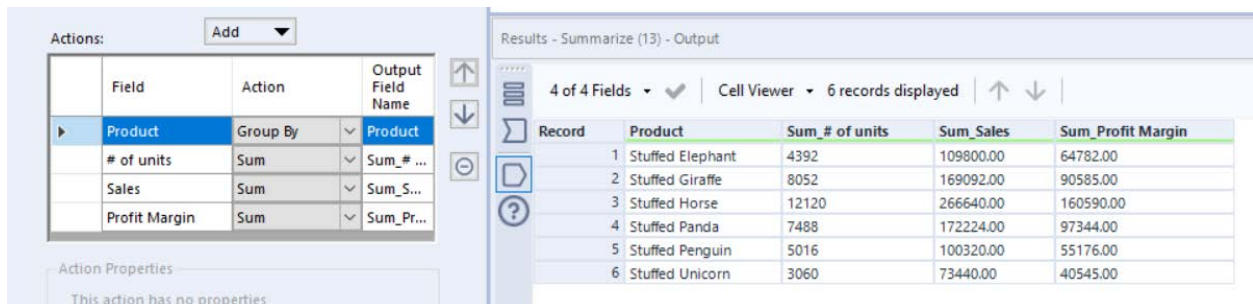
Fields:

Field	Type
Region	V_String
State	V_String
Product	V_String
# of units	FixedDecimal
Sales	FixedDecimal
Profit Margin	FixedDecimal

Actions:

Field	Action
Product	Group By
# of units	Sum
Sales	Sum

Dropdown menu options: Group By, Sum, Count, Count Non Null, Count Distinct.

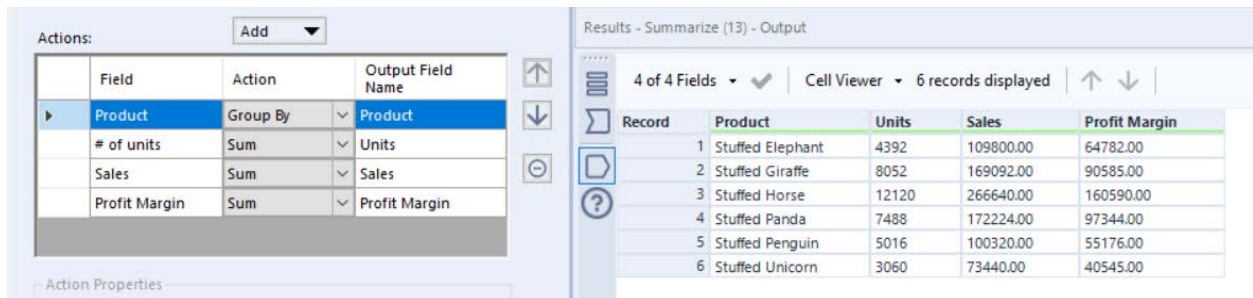


Results - Summarize (13) - Output

4 of 4 Fields | Cell Viewer | 6 records displayed

Record	Product	Sum # of units	Sum Sales	Sum Profit Margin
1	Stuffed Elephant	4392	109800.00	64782.00
2	Stuffed Giraffe	8052	169092.00	90585.00
3	Stuffed Horse	12120	266640.00	160590.00
4	Stuffed Panda	7488	172224.00	97344.00
5	Stuffed Penguin	5016	100320.00	55176.00
6	Stuffed Unicorn	3060	73440.00	40545.00

Change the "Output Field Names" and select "Run"



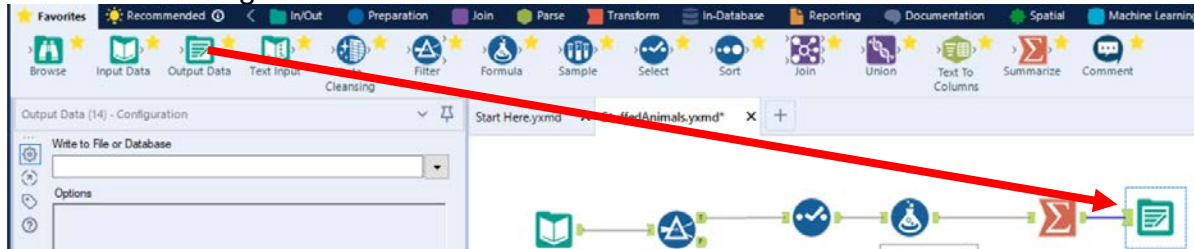
Results - Summarize (13) - Output

4 of 4 Fields | Cell Viewer | 6 records displayed

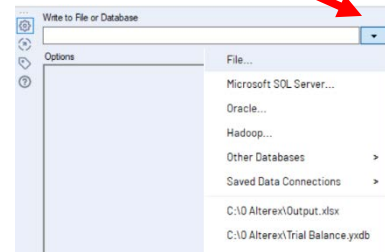
Record	Product	Units	Sales	Profit Margin
1	Stuffed Elephant	4392	109800.00	64782.00
2	Stuffed Giraffe	8052	169092.00	90585.00
3	Stuffed Horse	12120	266640.00	160590.00
4	Stuffed Panda	7488	172224.00	97344.00
5	Stuffed Penguin	5016	100320.00	55176.00
6	Stuffed Unicorn	3060	73440.00	40545.00

Tool 6: Select Tool Output Data Tool: We now want to export the cleaned and assembled Product Report to Excel.

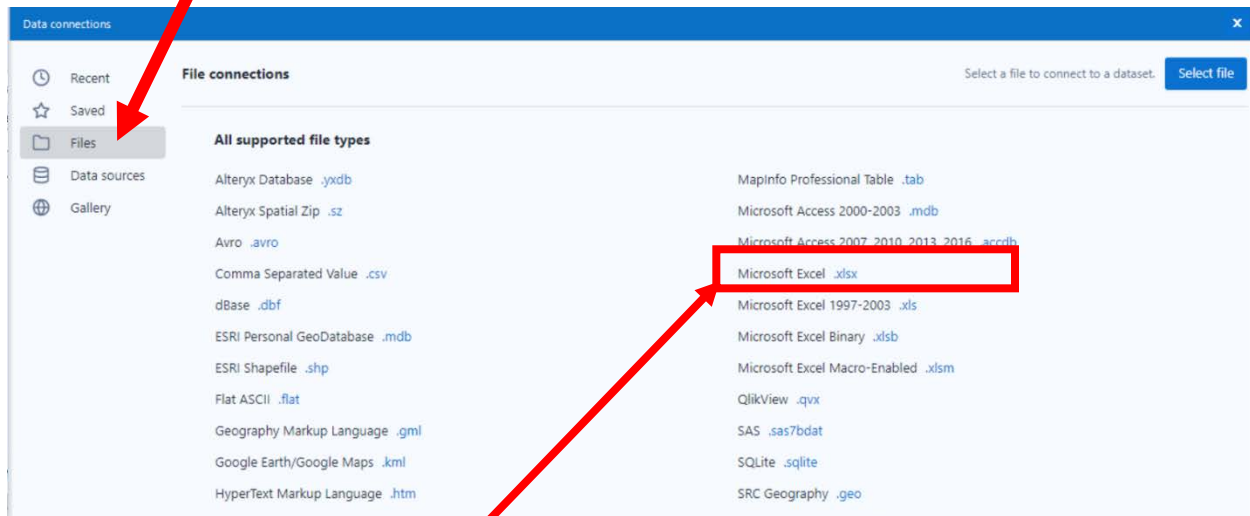
Drag an “**Output Data Tool**” to the right of the “**Summary Tool**” on the Canvas. The two will be connected automatically. The outflow from the tool on the left is the inflow to the one on the right.



In the output Configuration area, select the drop-down arrow.



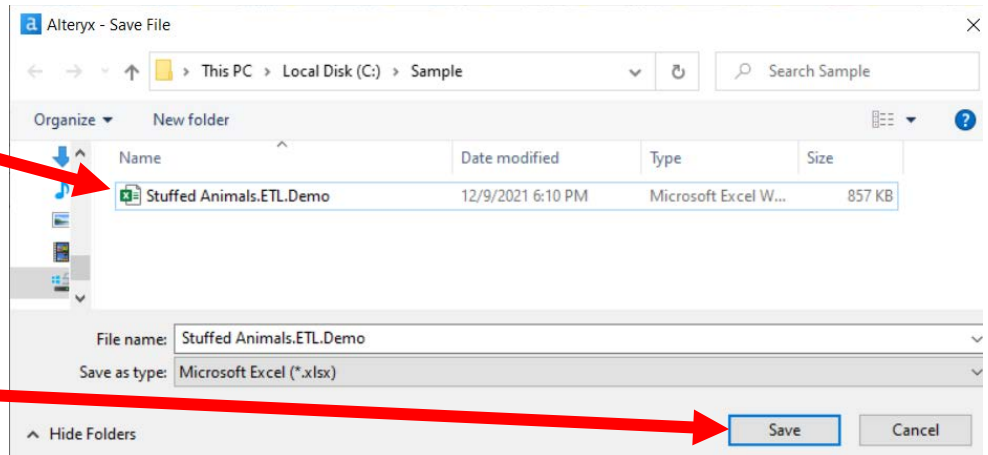
Select “File”.



Select “Microsoft Excel .xlsx”

Select the required file name.

Select "Save".



Click on "Yes" to confirm "Save".

Confirm Save As



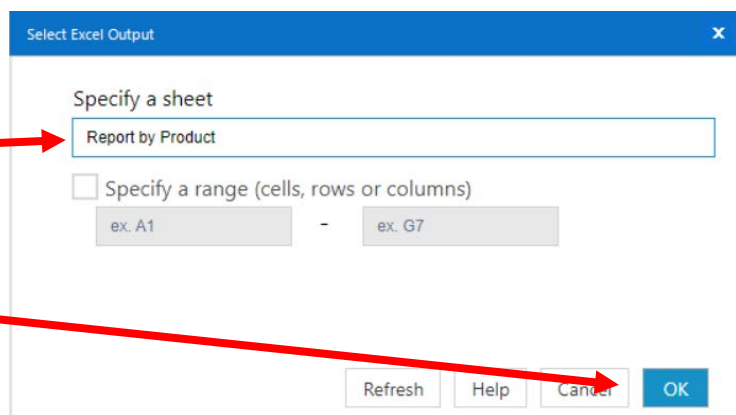
Stuffed Animals.ETL.Demo.xlsx already exists.
Do you want to replace it?

Yes

No

Enter the sheet name.

Select "OK".



Select "Run".

Open the file in Excel.

	A	B	C	D	E	F	G	H	I	J
1	Product	Units	Sales	Profit Margin						
2	Stuffed Ele	4392	#####	64782.00						
3	Stuffed Gir	8052	#####	90585.00						
4	Stuffed Ho	12120	#####	#####						
5	Stuffed Pa	7488	#####	97344.00						
6	Stuffed Pe	5016	#####	55176.00						
7	Stuffed Un	3060	73440.00	40545.00						
8										
9										
	February-December Sales Data	Products	Salesperson	Region	Report by Product					

Change the columns' widths and formats.

	A	B	C	D	E	F	G	H	I
1	Product	Units	Sales	Profit Margin					
2	Stuffed Elephant	4,392	\$ 109,800.00	\$ 64,782.00					
3	Stuffed Giraffe	8,052	\$ 169,092.00	\$ 90,585.00					
4	Stuffed Horse	12,120	\$ 266,640.00	\$ 160,590.00					
5	Stuffed Panda	7,488	\$ 172,224.00	\$ 97,344.00					
6	Stuffed Penguin	5,016	\$ 100,320.00	\$ 55,176.00					
7	Stuffed Unicorn	3,060	\$ 73,440.00	\$ 40,545.00					
8	Total	40,128	\$ 891,516.00	\$ 509,022.00					
9									
	February-December Sales Data	Products	Salesperson	Region	Report by Product				

“Save” and “Close” the Excel file.

Return to Alteryx and select “Run” for the second time.

But, there is an error! The sheet already exists.

The image shows an Alteryx Designer workflow and its Results pane. The workflow consists of several tools: a Data Input tool (Stuffed Animals.ETL.Demo.xlsx), a Filter tool ([Sales Order #] > 1), a Join tool, a Summarize tool (Salesperson = [Salesperson], then "Thomas Jefferson"), and an Output tool (Stuffed Animals.ETL.Demo.xlsx, Query=Report by Product). A red arrow points from the text "But, there is an error! The sheet already exists." to the Output tool. The Results pane shows a message: "The sheet 'Report by Product' already exists in file 'C:\Sample\Stuffed Animals.ETL.Demo.xlsx'. Select a new sheet or file for output, or select an overwrite output option for the current file." Below this message, it says "0 records were written to 'C:\Sample\Stuffed Animals.ETL.Demo.xlsx' (Report by Product)".

In the output Configuration area, select "Output Options" number 3.

Select "Overwrite Sheet".

The image shows the configuration window for the Output tool. The "Write to File or Database" dropdown is set to "C:\Sample\Stuffed Animals.ETL.Demo.xlsx\Report by Product". Under the "Options" section, the "Output Options" dropdown is set to "Overwrite Sheet or Range". Other options include "Max Records Per File", "File Format" (Microsoft Excel (*.xlsx)), "Append Field Map", "Skip Field Names", and "Preserve Formatting on Overwrite (Range Required)".

Select "Run".

Open the Excel file.

	A	B	C	D	E	F	G	H	I	J
1	Product	Units	Sales	Profit Margin						
2	Stuffed Ele	4392	#####	64782.00						
3	Stuffed Gir	8052	#####	90585.00						
4	Stuffed Ho	12120	#####	#####						
5	Stuffed Pa	7488	#####	97344.00						
6	Stuffed Pe	5016	#####	55176.00						
7	Stuffed Un	3060	73440.00	40545.00						
8										
9										
	February-December Sales Data				Products	Salesperson	Region	Report by Product		

Alteryx CSA Single Stream

	A	B	C	D	E	F	G	H	I
1	Product	Units	Sales	Profit Margin					
2	Stuffed Elephant	4,392	\$ 109,800.00	\$ 64,782.00					
3	Stuffed Giraffe	8,052	\$ 169,092.00	\$ 90,585.00					
4	Stuffed Horse	12,120	\$ 266,640.00	\$ 160,590.00					
5	Stuffed Panda	7,488	\$ 172,224.00	\$ 97,344.00					
6	Stuffed Penguin	5,016	\$ 100,320.00	\$ 55,176.00					
7	Stuffed Unicorn	3,060	\$ 73,440.00	\$ 40,545.00					
8	Total	40,128	\$ 891,516.00	\$ 509,022.00					
9									
10									
<div> ◀ ▶ ... February-December Sales Data Products Salesperson Region Jan Report by Product </div>									

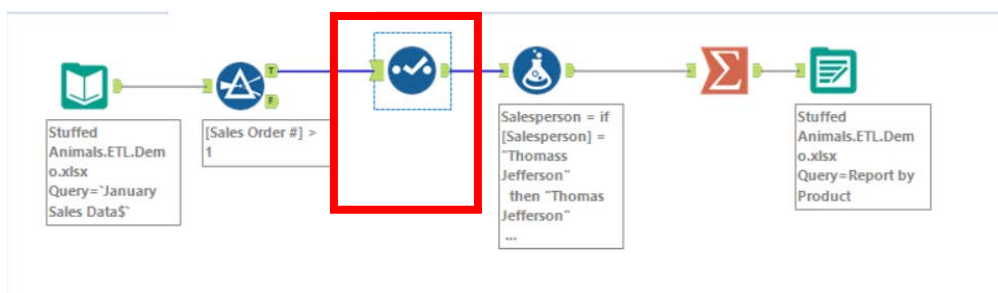
Reformat the Excel sheet and rename the formatted sheet “Jan Report by Product”.
When the Alteryx flow runs it will create a new unformatted sheet “Report by Product”.

The “Salesperson” report will summarize the data by “Salesperson #” with the salesperson’s name attached for clarity. We now want to combine the fields with a space, a dash and another space between the two fields.

Salesperson	# of units	Sales	Profit Margin
1405 - James Polk	1,812	\$41,568	\$24,438
1425 - John Tyler	2,172	48,336	28,110
1541 - Ulysses Grant	756	17,112	10,062
1576 - James Madison	1,776	39,216	23,160
1588 - George Washington	1,584	35,784	21,168
1776 - James Monroe	2,016	45,192	26,700
Total	10,116	\$227,208	\$133,638

One field, “Salesperson #” is a numeric field, while the other field, “Salesperson” is a string. It is easier to combine fields if they are both strings.

Select the third tool, the Select Tool from the flow.



In the configuration section select the pull down in the “Type” column for the “Salesperson #” field and select “String”.

Options | TIP: To reorder multiple rows:

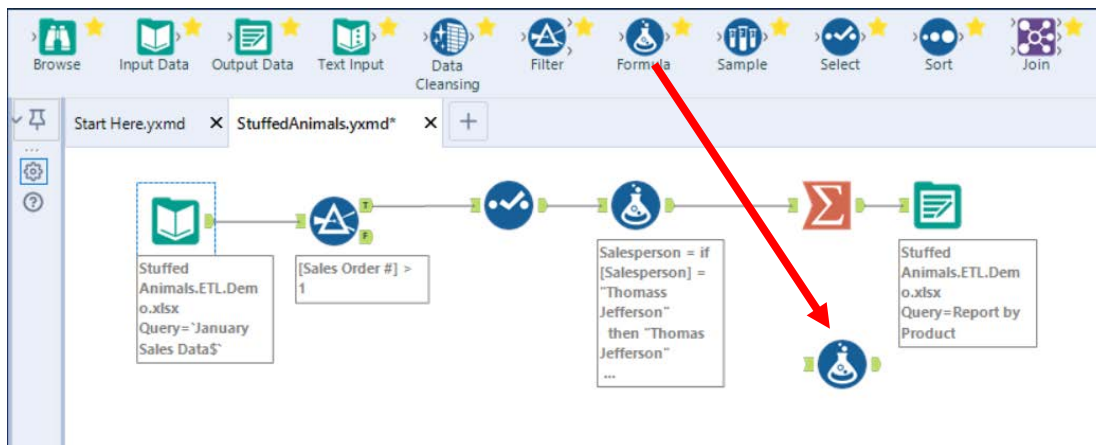
Field	Type	Size
<input checked="" type="checkbox"/> Sales Order #	Double	8
<input checked="" type="checkbox"/> Salesperson #	Double	8
<input checked="" type="checkbox"/> Salesperson	Bool	
<input checked="" type="checkbox"/> Title	Byte	
<input checked="" type="checkbox"/> Region #	Int16	
<input checked="" type="checkbox"/> Region	Int32	
<input checked="" type="checkbox"/> State	Int64	
<input checked="" type="checkbox"/> Product	FixedDecimal	
<input checked="" type="checkbox"/> # of units	Float	
<input checked="" type="checkbox"/> Sales	Double	

Options | TIP: To reorder multiple rows:

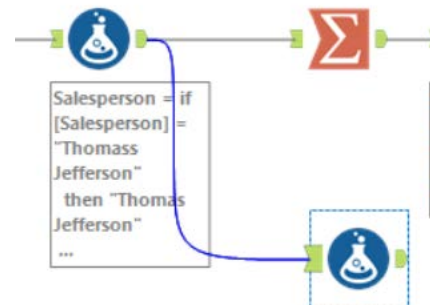
Field	Type	Size	Renam
<input checked="" type="checkbox"/> Sales Order #	Double	8	
<input checked="" type="checkbox"/> Salesperson #	String	19	
<input checked="" type="checkbox"/> Salesperson	V String	255	

Tool 7: Select Tool Formula: We can now want to combine the fields “Salesperson #” and “Salesperson”.

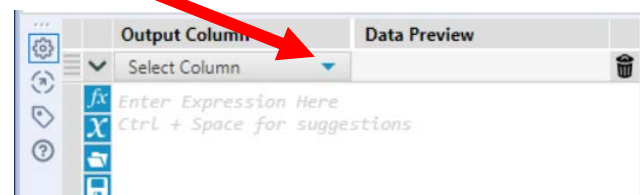
Drag a “**Formula Tool**” under the “**Running Balance Tool**” branching from the “**Formula Tool**” on the Canvas.



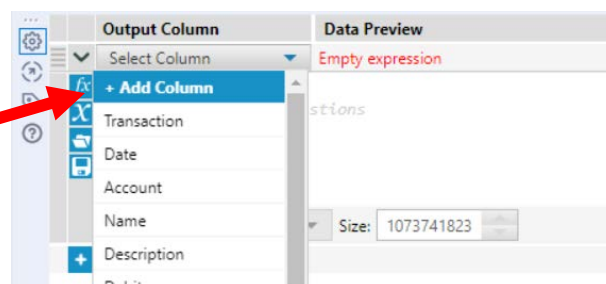
To connect the tools, drag from the outflow of the Tool 4, Formula Tool to the left inflow of the Tool 7, Formula tool.



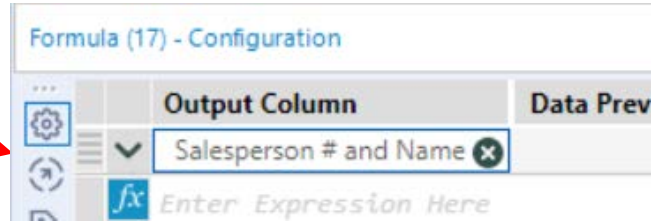
In the output Configuration area, click on the drop-down arrow of “Select Column”.



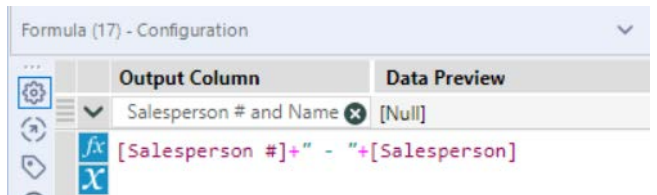
Select “Add Column”.



Type "Salesperson # And Name".




Type the following formula
[Salesperson #]+ " - " +[Salesperson]

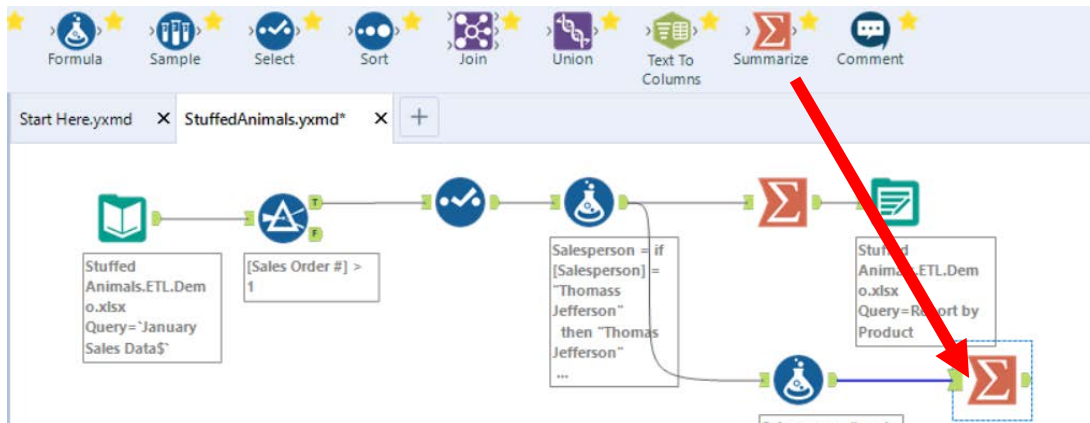


Select "Run".

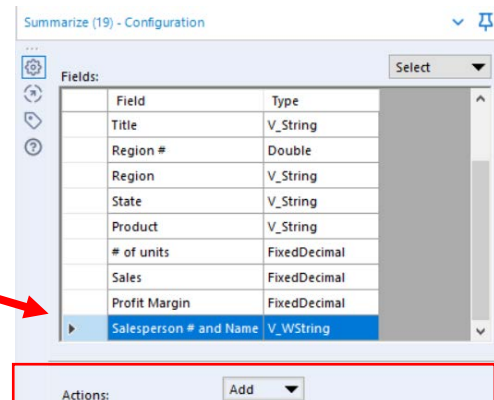
12 of 12 Fields Cell Viewer 409 records displayed Search Data Metadata Actions 000											
Record	Title	Region #	Region	State	Product	# of units	Sales	Profit Margin	Salesperson # and Name		
1	Sales Associate I	3	South	TN	Stuffed Horse	144	3168.00	1908.00	1304 - Martin Van Buren		
2	Senior Sales Associate	1	Midwest	NE	Stuffed Panda	72	1656.00	936.00	1302 - Grover Cleveland		
3	Sales Associate I	2	Northeast	PA	Stuffed Panda	156	3588.00	2028.00	1301 - Thomas Jefferson		
4	Sales Associate I	1	Midwest	MN	Stuffed Panda	120	2760.00	1560.00	1305 - George Washington		
5	Senior Sales Associate	1	Midwest	MN	Stuffed Giraffe	108	2268.00	1215.00	1303 - Ulysses Grant		
6	Sales Associate I	2	Northeast	RI	Stuffed Elephant	48	1200.00	708.00	1305 - George Washington		
7	Senior Sales Associate	2	Northeast	ME	Stuffed Horse	96	2112.00	1272.00	1303 - Ulysses Grant		
8	Sales Associate I	4	West	WY	Stuffed Penguin	156	3120.00	1716.00	1301 - Thomas Jefferson		

Tool 8: Select Tool Summary: We now want to create a “Salesperson Report”.

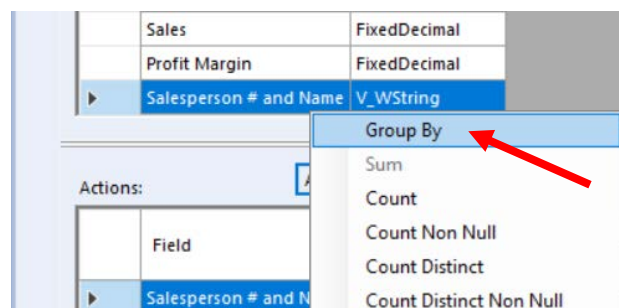
Drag a “**Summary Tool**”  to the right of the “**Formula Tool**” on the Canvas. The two will be connected automatically. The outflow from the tool on the left is the inflow to the one on the right.



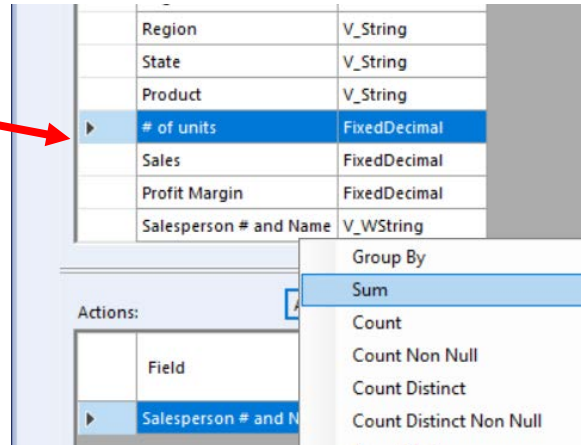
Select the first column, “Salesperson # and Name”.



Click on the drop-down arrow on “Add” in “Actions” and select “Group By”.

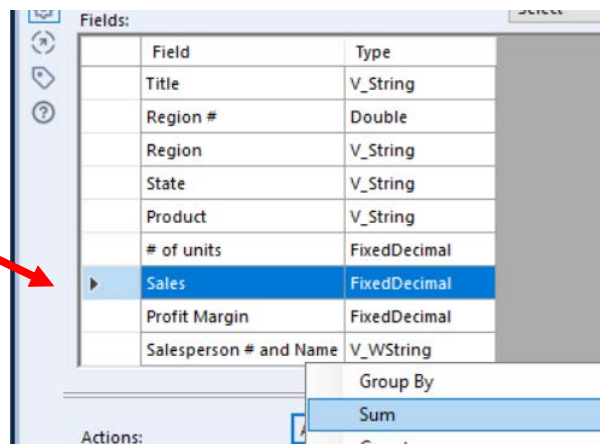


The second column will be “# of units”.



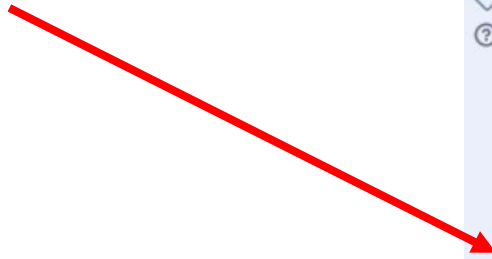
Click on the drop-down arrow on “Add” in “Actions” and select “Sum”.

The third column will be “Sales”.



Click on the drop-down arrow on “Add” in “Actions” and select “Sum”.

The fourth column will be “Profit Margin”.



Fields:

Field	Type
Title	V_String
Region #	Double
Region	V_String
State	V_String
Product	V_String
# of units	FixedDecimal
Sales	FixedDecimal
Profit Margin	FixedDecimal
Salesperson # and Name	V_WString

Actions:

Group By

Sum

Count

Count Non Null

Click on the drop-down arrow on “Add” in “Actions” and select “Sum”.

Select “Run”.

And, the report is created, right click on the output arrow if nessacary.

Actions:

Field	Action	Output Field Name
Salesperson # a...	Group By	Salesperson # a...
# of units	Sum	Sum_# of units
Sales	Sum	Sum_Sales
Profit Margin	Sum	Sum_Profit Mar...

Results - Summarize (19) - Output

4 of 4 Fields | Cell Viewer | 6 records displayed

Record	Salesperson # and Name	Sum_# of units	Sum_Sales	Sum_Profit Margin
1	1301 - Thomas Jefferson	9528	210000.00	119466.00
2	1302 - Grover Cleveland	7128	162276.00	92601.00
3	1303 - Ulysses Grant	4116	90168.00	51294.00
4	1304 - Martin Van Buren	4476	98388.00	56247.00
5	1305 - George Washington	10452	232536.00	133557.00
6	1306 - John Tyler	4428	98148.00	55857.00

Change the “Output Field Names” and select “Run”

Actions:

Field	Action	Output Field Name
Salesperson # a...	Group By	Salesperson
# of units	Sum	Units
Sales	Sum	Sales
Profit Margin	Sum	Profit Margin

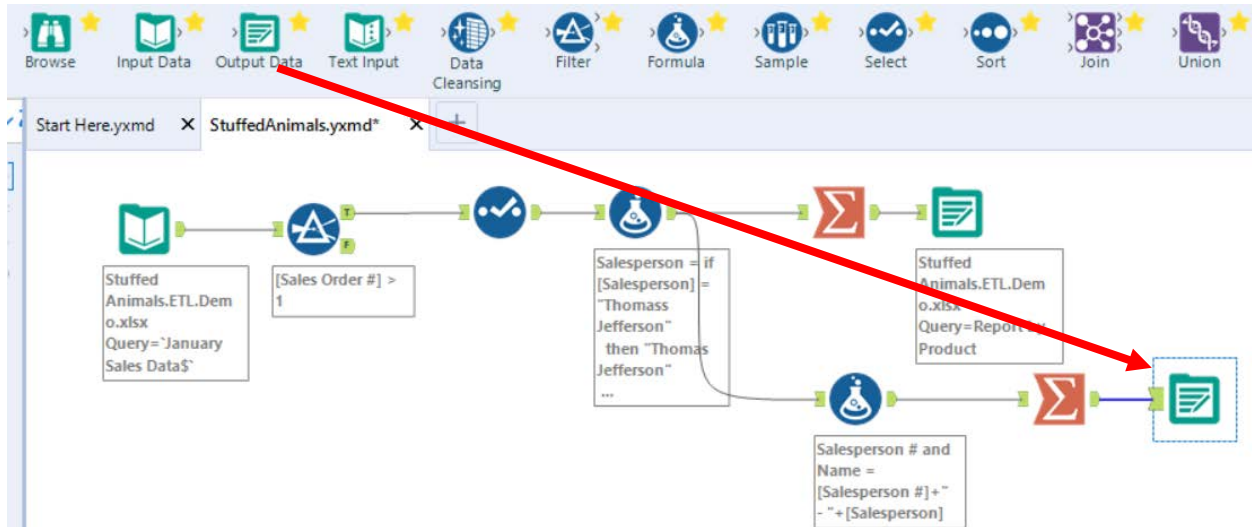
Results - Summarize (19) - Output

4 of 4 Fields | Cell Viewer | 6 records displayed

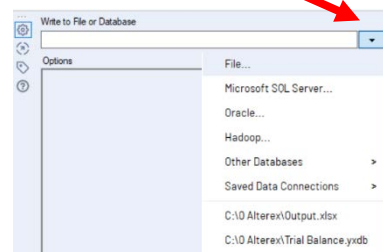
Record	Salesperson	Units	Sales	Profit Margin
1	1301 - Thomas Jefferson	9528	210000.00	119466.00
2	1302 - Grover Cleveland	7128	162276.00	92601.00
3	1303 - Ulysses Grant	4116	90168.00	51294.00
4	1304 - Martin Van Buren	4476	98388.00	56247.00
5	1305 - George Washington	10452	232536.00	133557.00
6	1306 - John Tyler	4428	98148.00	55857.00

Tool 9: Select Output Data Tool: We now want to export the cleaned and assembled Salesperson Report to Excel.

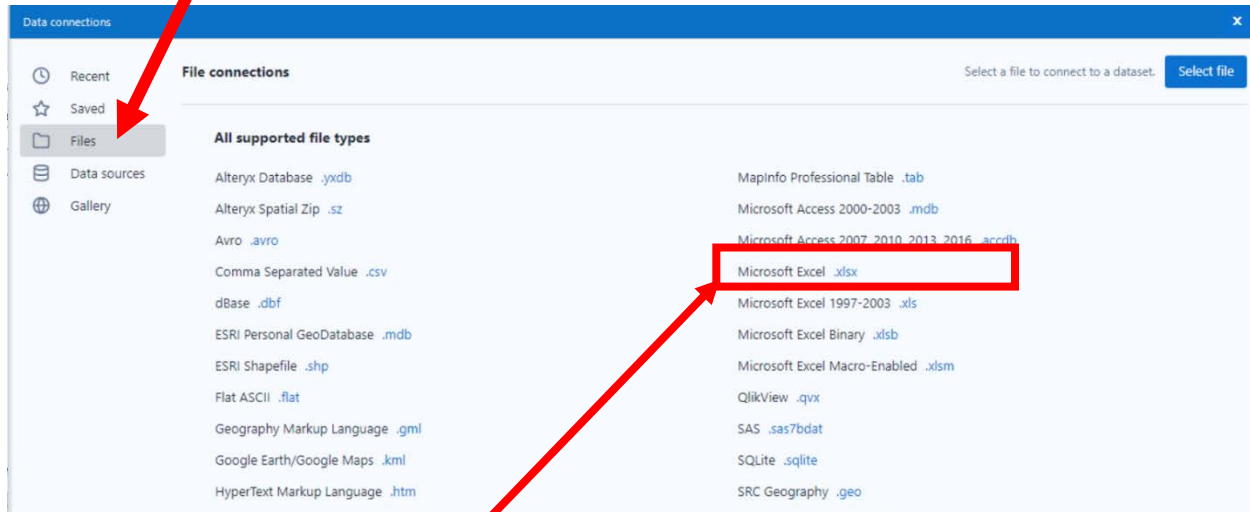
Drag an “**Output Data Tool**” to the right of the “**Summary Tool**” on the Canvas. The two will be connected automatically. The outflow from the tool on the left is the inflow to the one on the right.



In the output Configuration area, select the drop-down arrow.



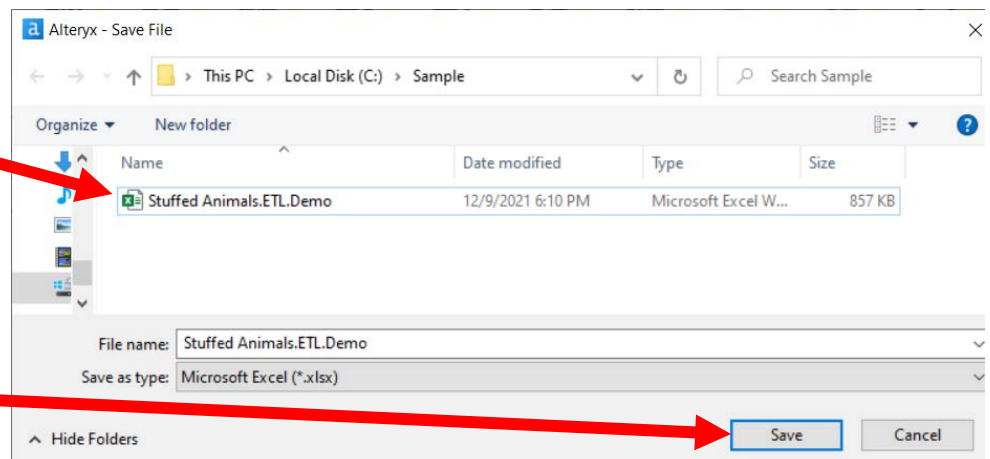
Select "File".



Select "Microsoft Excel .xlsx"

Select the required file name.

Select "Save".



Confirm Save As

Click on "Yes" to confirm "Save".

! Stuffed Animals.ETL.Demo.xlsx already exists.
Do you want to replace it?

Yes

No

Enter the sheet name.

Select "OK".

Specify a sheet

Report by Salesperson

☐ Specify a range (cells, rows or columns)

ex. A1 - ex. G7

Refresh Help Cancel OK

In the output Configuration area, select "Output Options" number 3.

Select "Overwrite Sheet" (which drops the old sheet)

Write to File or Database

C:\Sample\Stuffed Animals.ETL.Demo.xlsx|||Report by Salesperson

Options

Name	Value
1 Max Records Per File	
2 File Format	Microsoft Excel (*.xlsx)
3 Output Options	Create New Sheet
4 Append Field Map	Append To Existing Sheet
5 Skip Field Names	Overwrite Sheet or Range
6 Preserve Formatting on Overwrite (Range Required)	Overwrite File (Remove)
	Create New Sheet

Select Run
Open the Excel file

	A	B	C	D	E	F	G	H	I
1	Salesperson	Units	Sales	Profit Margin					
2	1301 - Tho	9528	#####	#####					
3	1302 - Gro	7128	#####	92601.00					
4	1303 - Uly	4116	90168.00	51294.00					
5	1304 - Ma	4476	98388.00	56247.00					
6	1305 - Gec	10452	#####	#####					
7	1306 - Joh	4428	98148.00	55857.00					
8									
9									
10									

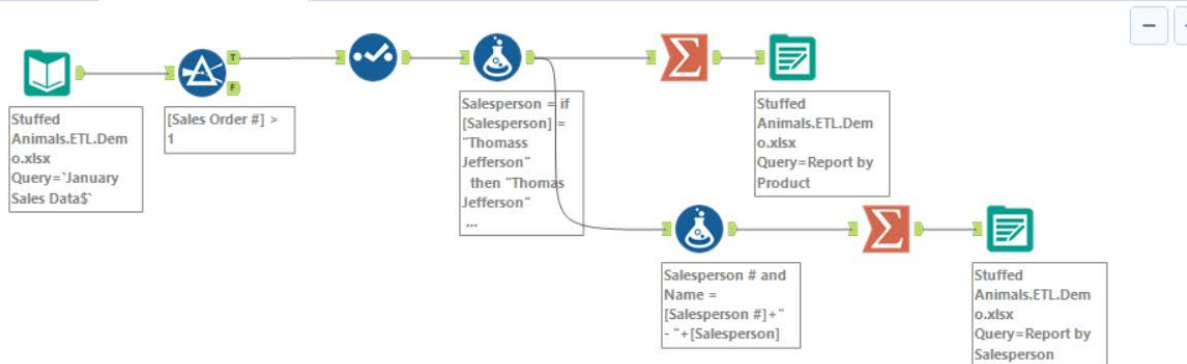
Ready Scroll Lock

Change the format and rename the sheet so the format changes are not lost, save, close Excel and return to Alteryx.

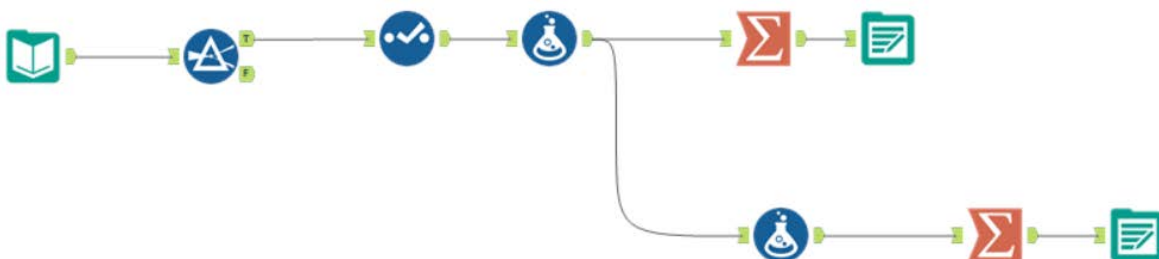
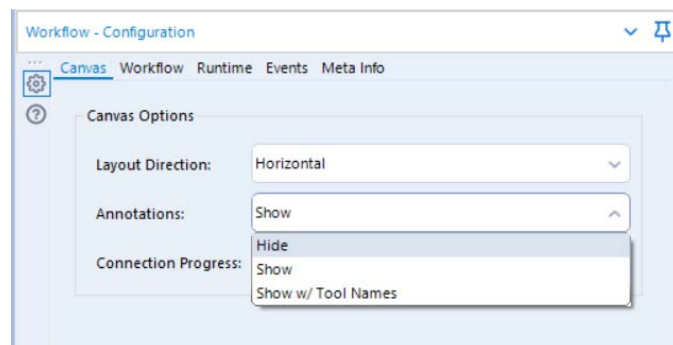
	A	B	C	D	E	F	G
1	Salesperson	Units	Sales	Profit Margin			
2	1301 - Thomas Jefferson	9,528	\$ 210,000.00	\$ 119,466.00			
3	1302 - Grover Cleveland	7,128	\$ 162,276.00	\$ 92,601.00			
4	1303 - Ulysses Grant	4,116	\$ 90,168.00	\$ 51,294.00			
5	1304 - Martin Van Buren	4,476	\$ 98,388.00	\$ 56,247.00			
6	1305 - George Washington	10,452	\$ 232,536.00	\$ 133,557.00			
7	1306 - John Tyler	4,428	\$ 98,148.00	\$ 55,857.00			
8	Total	40,128	\$ 891,516.00	\$ 509,022.00			
9							
10							

Ready Scroll Lock

The canvas is very busy looking because of the annotations.



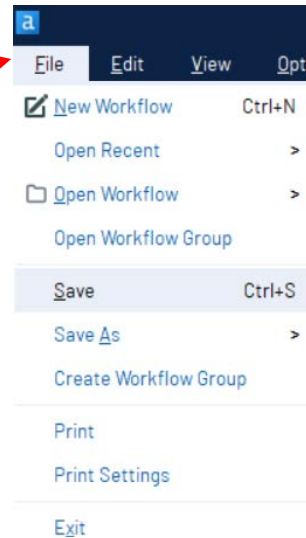
Select any blank area on the canvas and in the Configuration section change “Annotations” to “Hide”.



The workflow must be saved.

Select “File”.

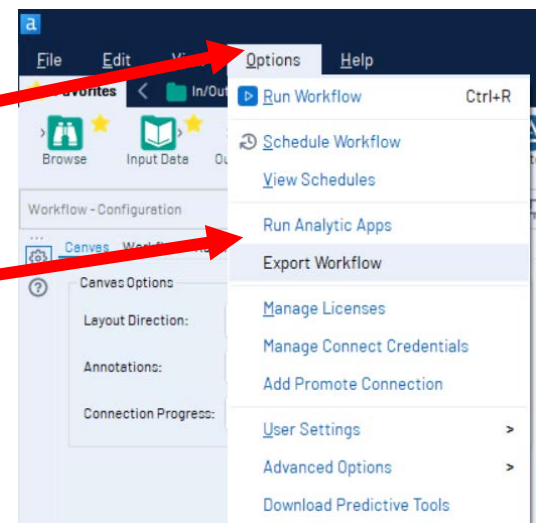
Select “Save”.



Export the workflow and the related input files so that the project can be completed on another computer or uploaded to the web.

Select “Options”.

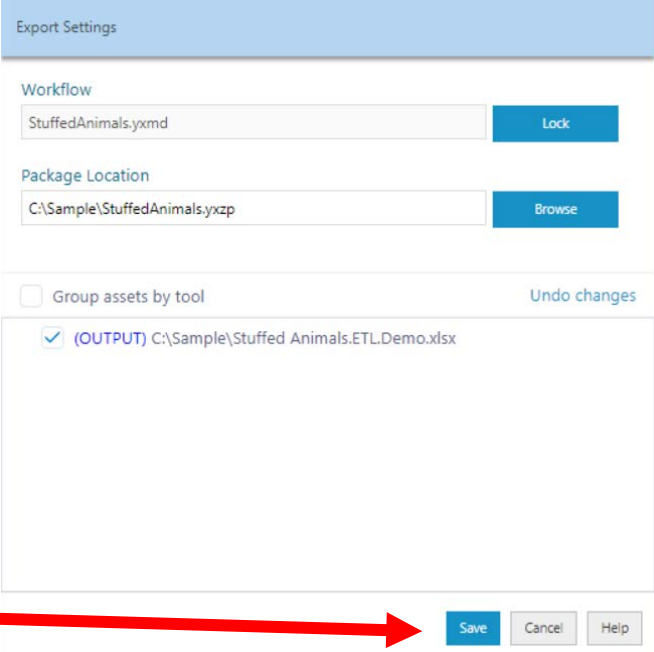
Select “Export Workflow”.



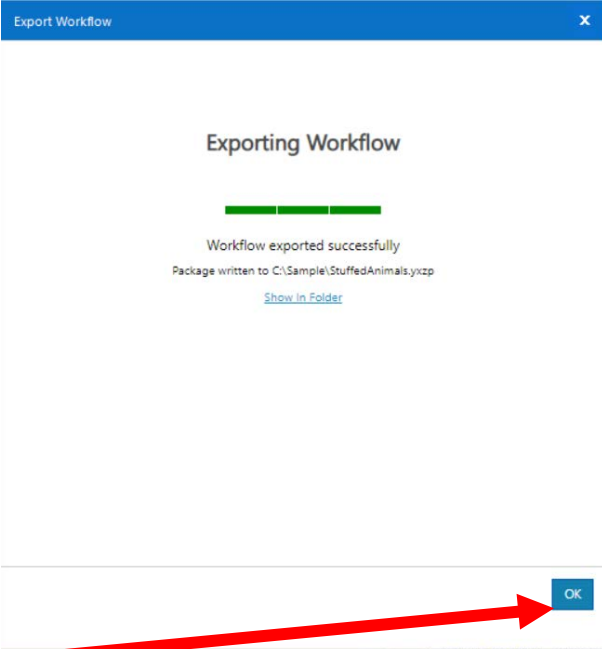
Verify the name of the “Workflow”.

Verify the “Package Location”.

Select “Save”.



The "Export Settings" dialog box is shown. It has a blue header bar with the title "Export Settings". Below the header, there are two sections. The first section is labeled "Workflow" and contains a text box with the value "StuffedAnimals.yxmd" and a "Lock" button to its right. The second section is labeled "Package Location" and contains a text box with the value "C:\Sample\StuffedAnimals.yxzip" and a "Browse" button to its right. Below these sections, there is a checkbox labeled "Group assets by tool" which is currently unchecked, and a link labeled "Undo changes". At the bottom of the dialog, there is a list of items with a checked item: "(OUTPUT) C:\Sample\Stuffed Animals.ETL.Demo.xlsx". At the very bottom, there are three buttons: "Save", "Cancel", and "Help".



The "Export Workflow" dialog box is shown. It has a blue header bar with the title "Export Workflow" and a close button (X). The main content area has a title "Exporting Workflow" and a green progress bar. Below the progress bar, it says "Workflow exported successfully" and "Package written to C:\Sample\StuffedAnimals.yxzip". There is a link labeled "Show in Folder". At the bottom right, there is an "OK" button.

Select “OK”.

Close Alteryx