

DESIGNER 301: MACROS

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AGE- NDA

Part I:

- Macro review
- Improving the Sample Tool
- Interface Elements
- Messaging
- Macro engine behavior
- Exercise

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GOALS

In this session, we expect that you may be comfortable in standard macros and may dabble in iterative/batch macros. Our goal is to get you better acquainted with these macros, and building them in creative ways you may not have thought to use them!



WHAT IS A MACRO?

It's the Alteryx SDK for Alteryx



YOU ALREADY WORK WITH ACROSS



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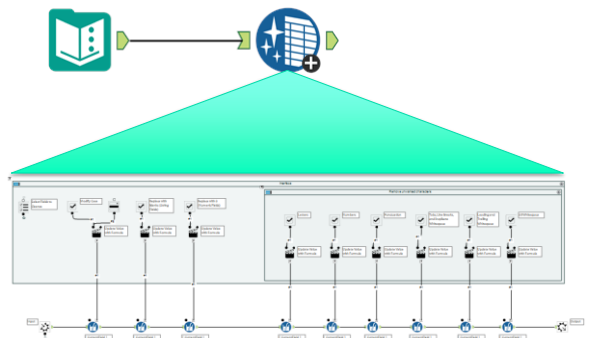
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CHANGE THE MACRO USER SETTINGS

INSTRUCTIONS

- Go to Options > User Settings > Edit User Settings > Canvas
- Select 'display macro indicators on tools'
- Drag a Data Cleanse tool onto the canvas
- Open the macro and view the underlying tool

RESULTS



FOLLOW ALONG

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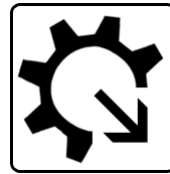
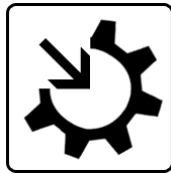
WHY MACROS?

REASONS TO GO MACRO

- 1. Address a repetitive functional or business process*
- 2. Make processes more approachable for less experienced users*
- 3. Solve problems faster*
- 4. Make the Designer work the way you need*
- 5. Be an innovator*



MACRO INPUT/OUTPUT



Macro Input

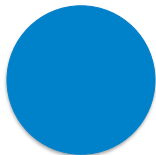
Macro Output



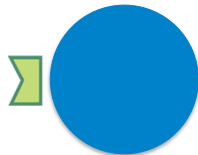
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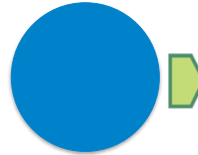
WHEN DO I USE THEM?



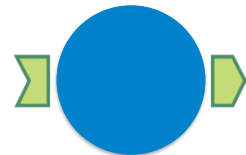
- No Macro Input
- No Macro Output



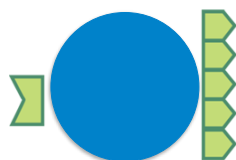
- 1 Macro Input
- No Macro Output



- No Macro Input
- 1 Macro Output



- 1 Macro Input
- 1 Macro Output



As many as you want!!



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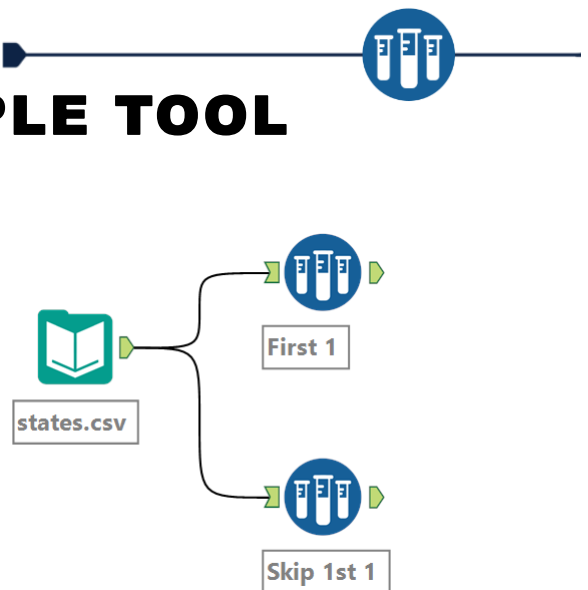
BUILDING OUR FIRST MACRO: IMPROVING AN EXISTING TOOL

MAKING A NEW SAMPLE TOOL

Example:

Often, but not always, you may be dropping two sample tools simultaneously onto a canvas. In this case, we have an example of a file that requires a set of passing to a row 1 (headers) and the rest of the data.

Wouldn't it be nice to just do this in one tool?!





WHAT DO WE NEED TO ACCOMPLISH THIS TASK?

Desired tool



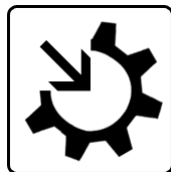
#ALTERYX18



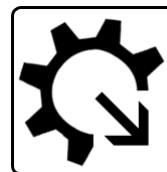
WHAT DO WE NEED TO ACCOMPLISH THIS TASK?

Desired tool

1 macro input



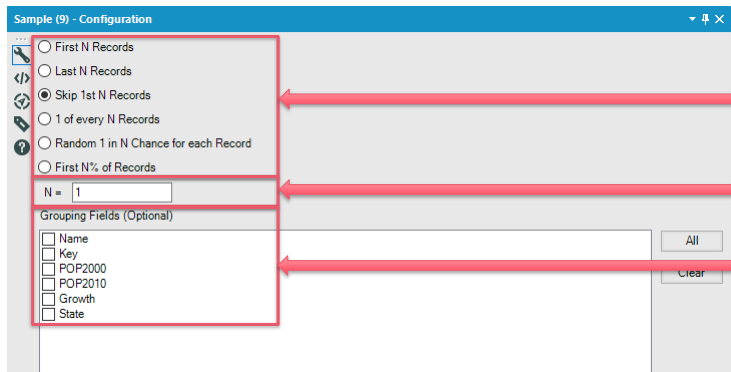
2 macro outputs



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WHAT DO WE NEED TO ACCOMPLISH THIS TASK?



A set of radio buttons for each action

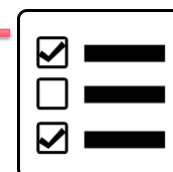
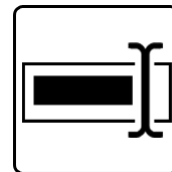
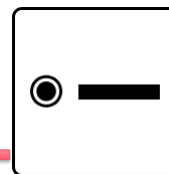
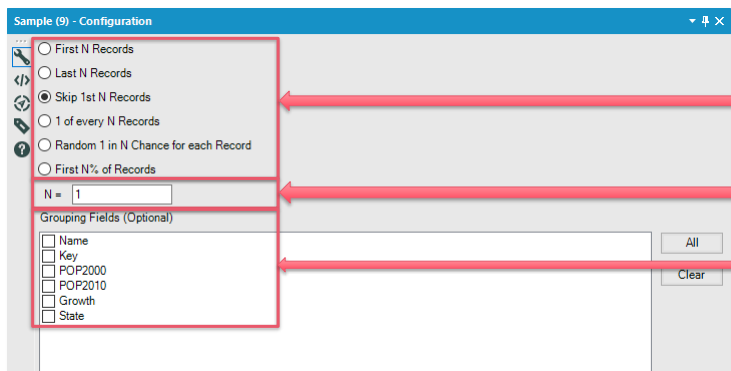
A text box to enter a number

A list to select field groupings



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WHAT DO WE NEED TO ACCOMPLISH THIS TASK?

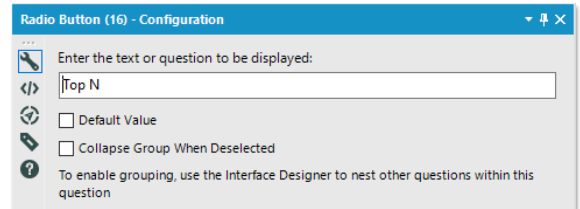


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RADIO BUTTON TOOL



- Enter text to be displayed
- Would you like this radio button to be selected by default?
- Collapse group when deselected
 - Want a different configuration experience per radio button?
 - Use the collapse group when you want to toggle different configuration grouping options

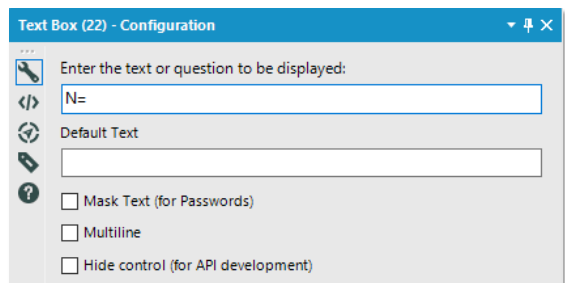


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TEXT TOOL



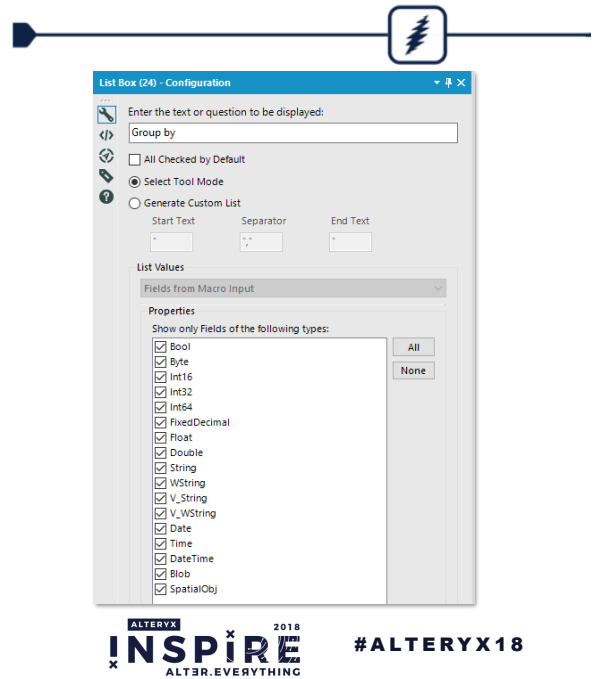
- Simple configuration
- Enter prompt text for 'N='
- Do you want a default value?
- Other options
 - Text masking
 - Multi-line text box for longer questions
 - Hide control – text box is hidden to end user but is available to developer for testing.



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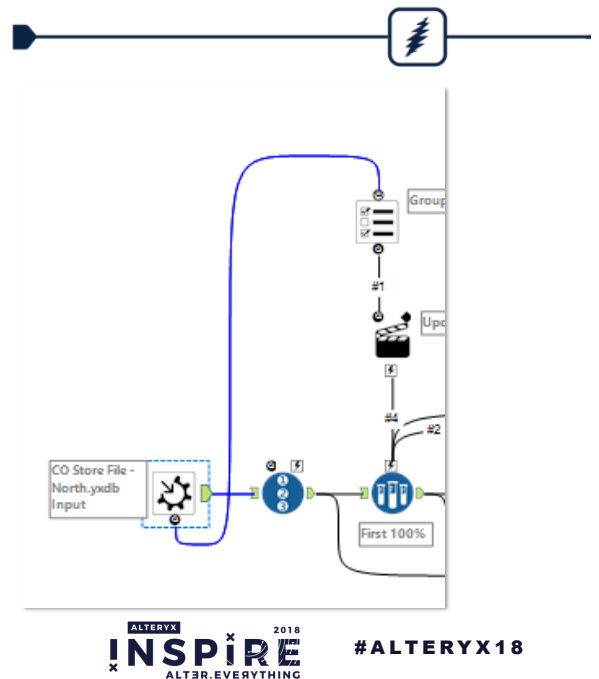
LIST BOX

- Easiest to use when interfacing with a tool with the 'embedded select' functionality
- Chose whether all fields should be selected by default or not
- Use 'select tool mode' to interface with embedded selects
- Other outputs a string of fields and 'True/False' indicators
- Select which field types a user will be able to select



LIST BOX (CONT.)

- List box is special because it can receive question values!
- This allows the macro input to detect what field names/types are entering into the macro, and dynamically creating a list based on the fields available at that time.



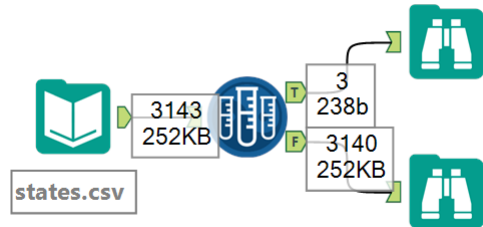


MAKING A BETTER SELECT TOOL

INSTRUCTIONS

- Since a sample tool should work on anything, start with any file.
- Using a list box, radio buttons, and a text tool, replicate everything that a sample tool can do, but add an output for what *was not* sampled.

RESULTS



FOLLOW ALONG



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...BUT WAIT, THERE'S MORE

We have a working sample tool! However, we could add a safety to ensure that the 'N=' freehand text box only received numbers. Currently, our tool doesn't error if a non-numeric value is entered.

Unfortunately, the error tool is only effective for applications. There is another tool we could use to get the tool to error under the wrong input.

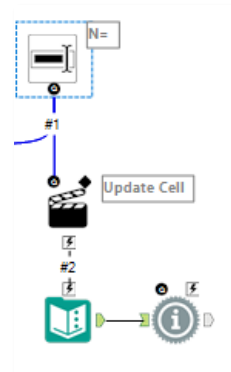


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HOW DO YOU PASS MESSAGING FROM YOUR MACRO?

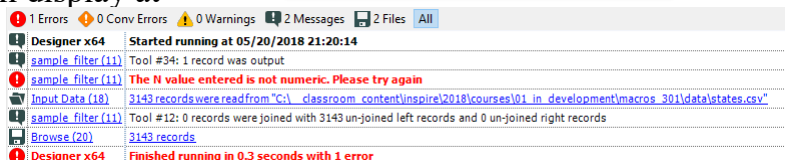
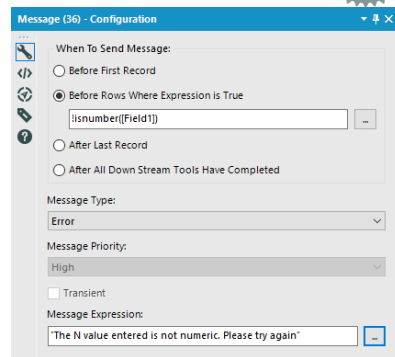
- For interface tools in macros, and easy way to check values is to drop them into a single text input tool and evaluate them.



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MESSAGE TOOL

- The message tool affects data in no way – it only evaluates the state of the data itself.
- Select when to pass a message
- Select the type of message to display
- Enter an expression that will display at the error.



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PUT A MESSAGE TOOL INTO THE IMPROVED SAMPLE TOOL

INSTRUCTIONS

- Populate a text input tool with the value entered into the text box
- Add a message tool
- Evaluate if the data is a number or not
- Create an message to display if the value is not a number.

RESULTS

```

1 Errors 0 Conv Errors 0 Warnings 2 Messages 2 Files All
Designer x64 Started running at 05/20/2018 21:20:14
Sample_Filter (11) Tool #34: 1 record was output
Sample_Filter (11) The N value entered is not numeric. Please try again
Input Data (18) 3143 records were read from "C:\_classroom_content\inspire\2018\courses\01_in_development\macros_301\data\states.csv"
Sample_Filter (11) Tool #12: 0 records were joined with 3143 un-joined left records and 0 un-joined right records
Browse (20) 3143 records
Designer x64 Finished running in 0.3 seconds with 1 error
    
```



EXERCISE



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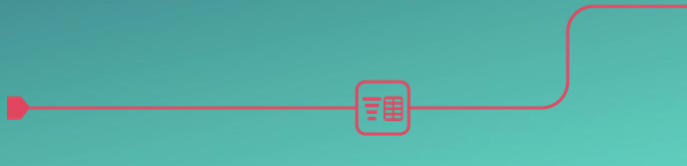
HACKING STANDARD WORKFLOWS

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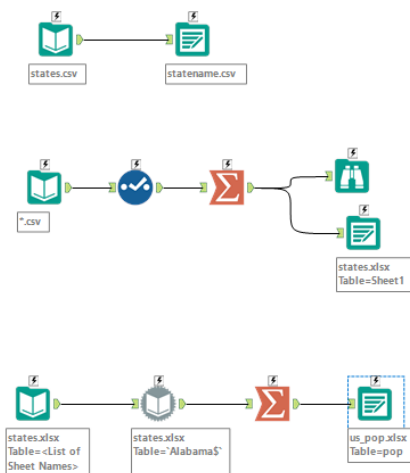
A QUICK NOTE

What we are about to show is in NO WAY supported by Alteryx, but is an interesting way of understanding engine behavior.

We will show workflow ordering with macros, but there can be many ‘gottchas’ along the way and should not be utilized in a production environment.

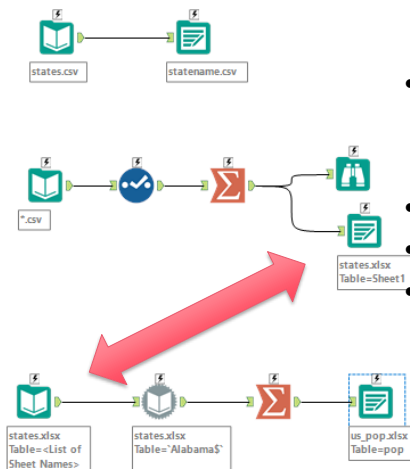


ANYONE HAVE WORKFLOWS LIKE THIS?





ANYONE HAVE WORKFLOWS LIKE THIS?



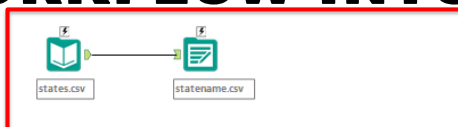
- Output file of second stream is the input of the third stream.
- Sometimes it works
- Sometimes they collide
- Sometimes they run in the wrong order.



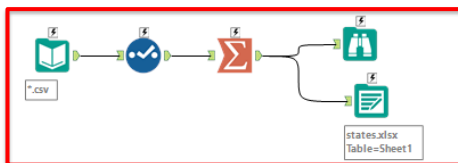
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TURN THE WORKFLOW INTO MACROS

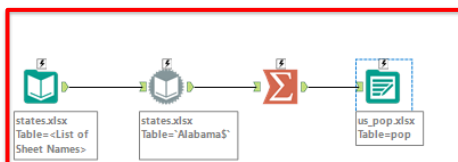
Turn each flow into a macro



Macro 1



Macro 2



Macro 3



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DROP THE MACROS ONTO A NEW CANVAS

Note: These ‘tools’ will now run ordinarily.

- Order will depend on the order they were placed onto the canvas (Tool NodeID).
- If workflow 2 was deleted and then readded, it would not be the last to run
- PRO TIP (unsupported) – Updating the tool NodeID in the XML will return order to the workflow

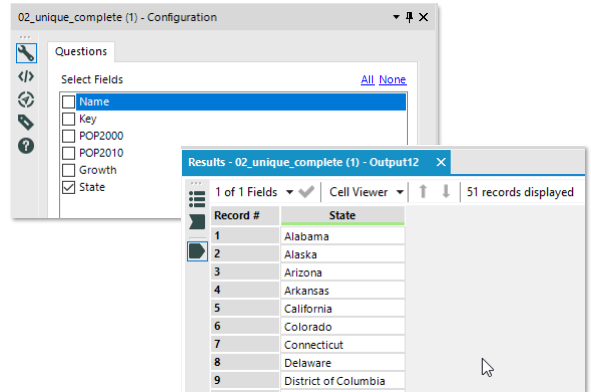


BUILD A NEW UNIQUE TOOL!

INSTRUCTIONS

- The default for a unique tool is to return all fields, but to return only unique values for selected fields.
- Try building a unique tool that ONLY returns the fields being “uniqued”
- Start with `03_unique_select/01_unique_start.yx mc`

RESULTS



EXERCISE



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DESIGNER 301: MACROS PART II


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Part II:

- Macro types
- Understanding grouped vs non-grouped batches
- Parsing with a batch macro
 - Dynamic formula
- Wildcard Input Macro
 - Managing changing schemas
- Exercise



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MACRO TYPES

There are four types of Macros typically used in the designer:

- 1) Standard Macro
 - 2) Batch Macro
 - 3) Iterative Macro
 - 4) Location Optimizer Macro
- } Most commonly used



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MACRO BEHAVIORS

Standard (SHARED PROCESS)

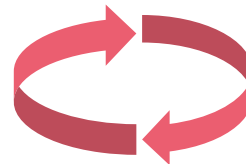
- Typical workflow
- Packaged set of tools

Iterative (DO UNTIL *Condition*)

- Repeating process
- Typically ends at a threshold

Batch (FOR EACH)

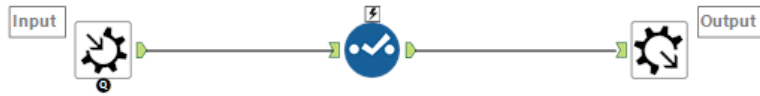
- Process Each individual record
- Process Each group of records



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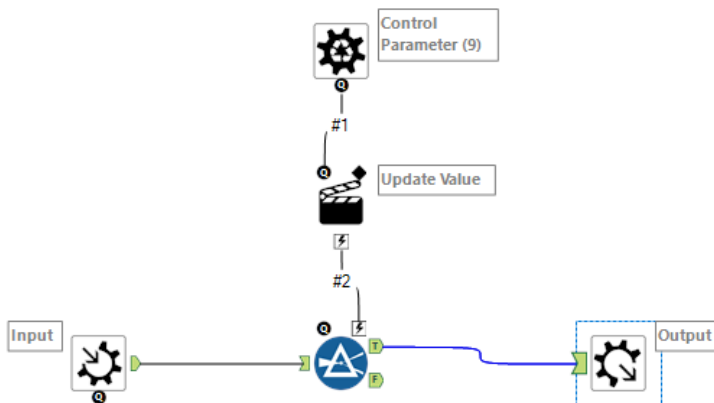
STANDARD MACRO



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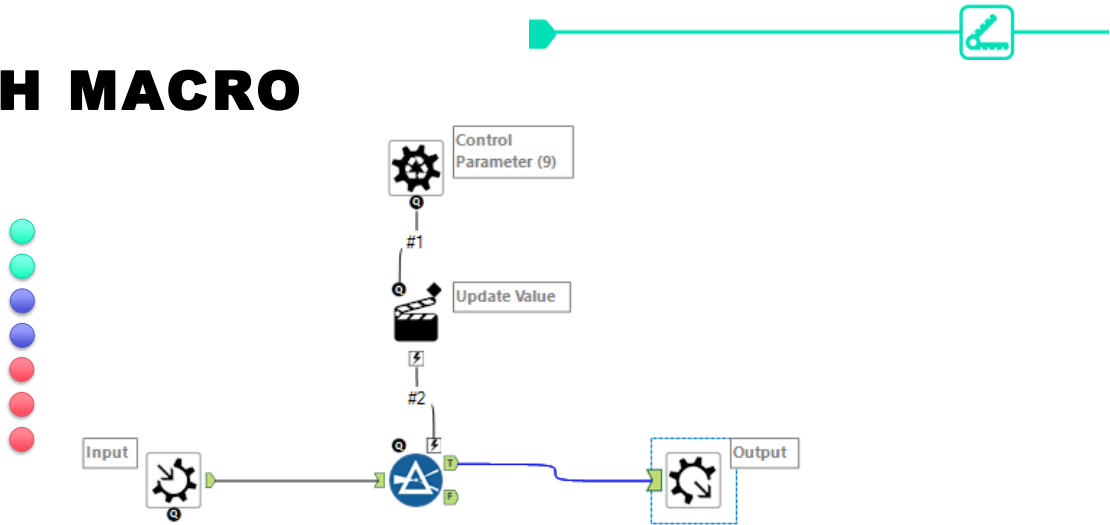


BATCH MACRO



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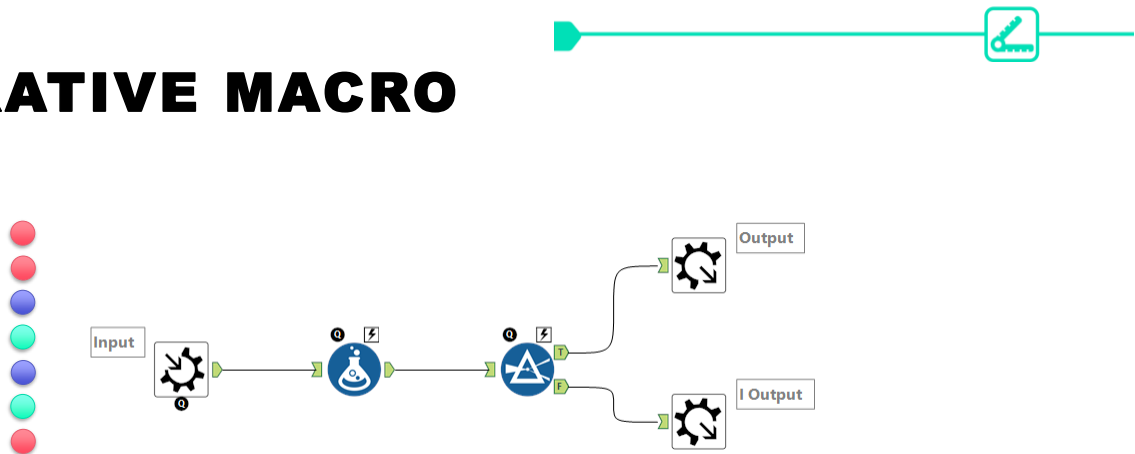
BATCH MACRO



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ITERATIVE MACRO



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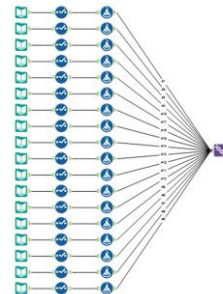
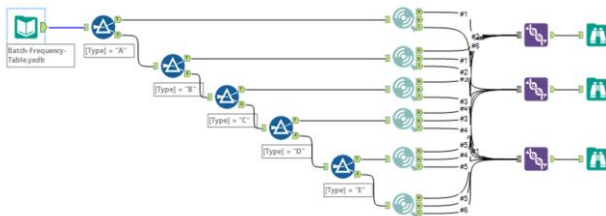
THE BATCH MACRO

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WHY USE A BATCH MACRO?

Use when trying to change your type of analysis on a per group basis!



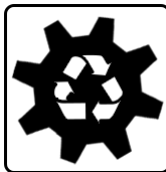
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WHAT MAKES A BATCH MACRO A BATCH MACRO?

One thing is needed to qualify your macro as a batch macro:



Control Parameter

The Control Parameter input will appear as a ⚙ below its input arrow on the macro tool icon. For each record coming into the Control Parameter input, the entire macro will be re-configured and run beginning to end



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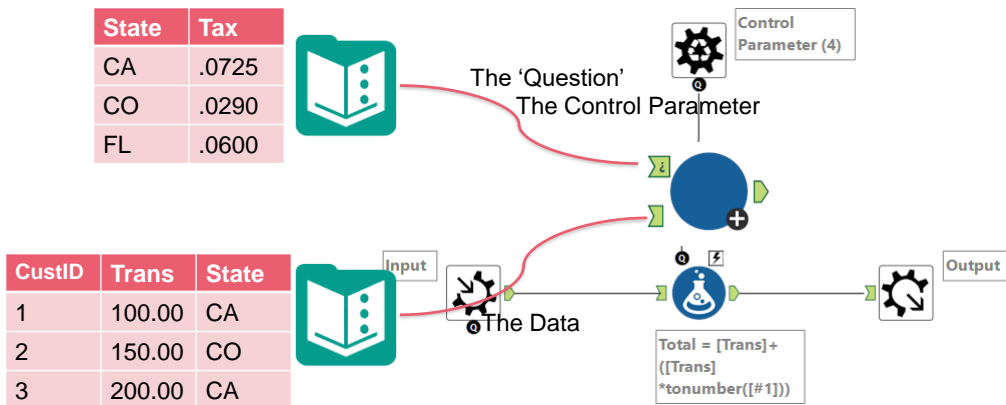
WORKING EXAMPLE: STATE TAXES

An internet retailer has customers from all over the country. However separate logic has to be implemented on a state-by-state basis. State rates vary from 0%-8%. We need to build a batch macro to calculate what the total for the online shopping carts should be for each customer from each state.



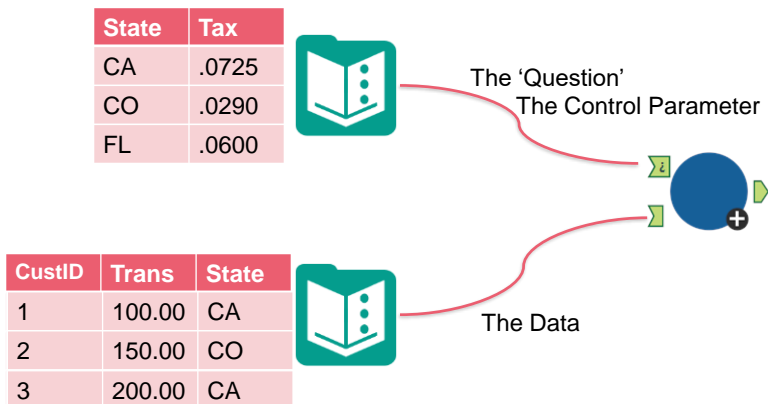
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WORKING EXAMPLE: STATE TAX



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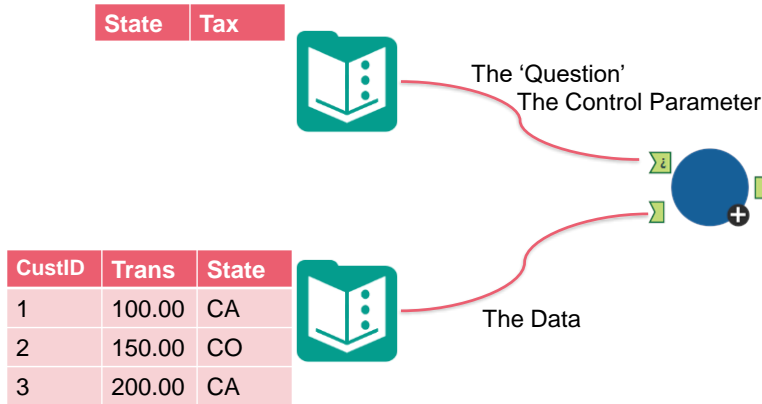
NON-GROUPED



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NON-GROUPED



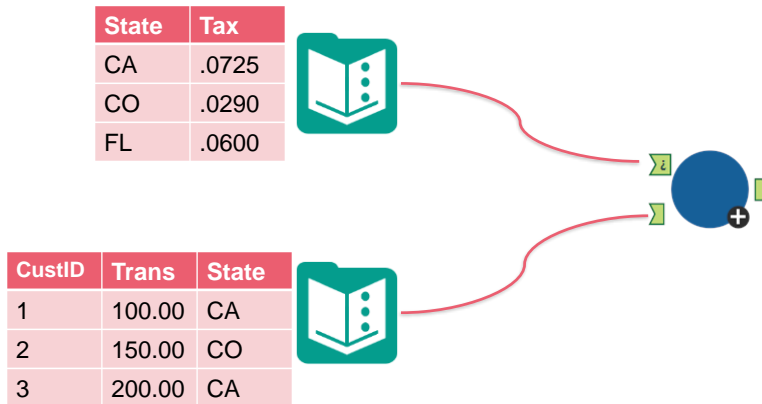
CA	.0725	1	100.00	CA
		2	150.00	CO
		3	200.00	CA
Batch 1				
CO	.0290	1	100.00	CA
		2	150.00	CO
		3	200.00	CA
Batch 2				
FL	.0600	1	100.00	CA
		2	150.00	CO
		3	200.00	CA
Batch 3				



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GROUPED



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GROUPED

State	Tax
CO	.0290
FL	.0600



CA	.0725
----	-------



CustID	Trans	State
1	100.00	CA
2	150.00	CO
3	200.00	CA



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GROUPED

State	Tax
CO	.0290
FL	.0600



CA	.0725	1	100.00	CA
		3	200.00	CA

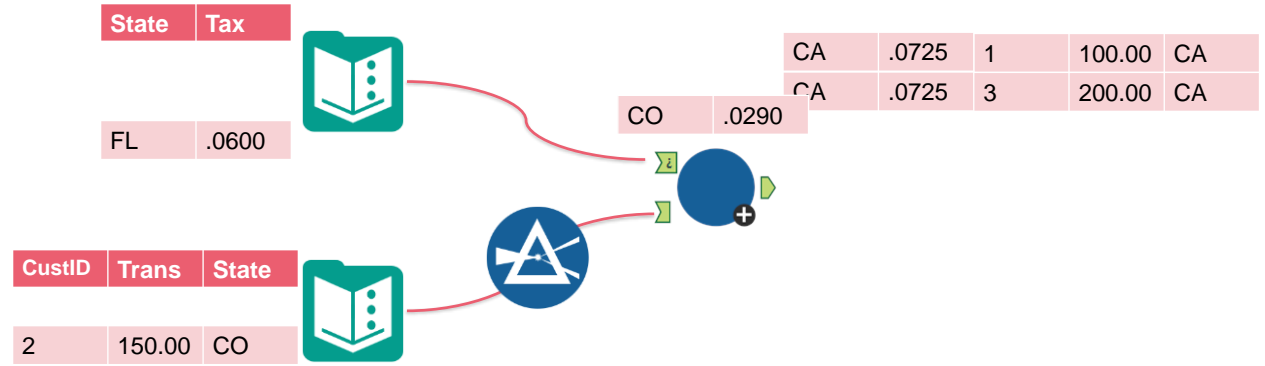


CustID	Trans	State
2	150.00	CO



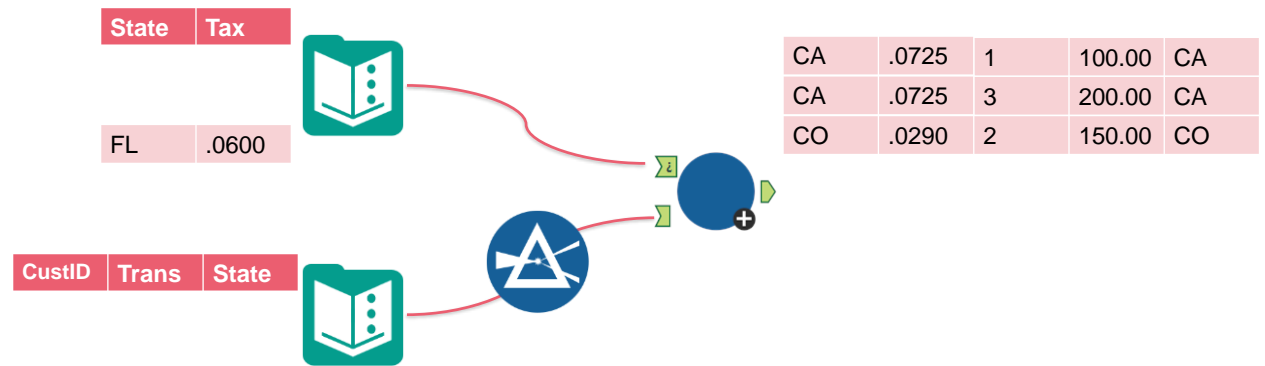
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GROUPED



#ALTERYX18

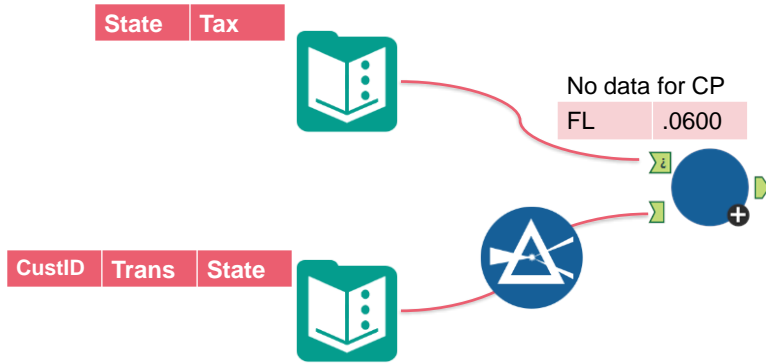
GROUPED



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GROUPED



CA	.0725	1	100.00	CA
CA	.0725	3	200.00	CA
CO	.0290	2	50.00	CO

Batch 1
Batch 2
Batch 3: No data



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PARSING A DIFFICULT TEXT FILE

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GNARLY DATA

Part Number	Part Type	Activate Date	Cond	Date Queued	Description	Location	Planner
*4000007	EXP	-	Yes	22Apr18	Place/Increase Order Outside L/T	084421	084421
*4000093	EXP	-	Yes	22Apr18	Place/Increase Order Outside L/T	084421	084421
*4001087	EXP	-	Yes	17Apr18	Unsatisfied Allocation Rqmt	150450	150450

Text file observations:

- 1) Header Row has multiple spaces between column names. All column names are 1 words or 2 words with a space in between them.
- 2) Second rows - number of continuous dashes represents the field length
- 3) The data is below is a variant number of spaces
- 4) User says fixed wont work because it largely varies week to week, file to file.



GNARLY DATA



Part Number	Part Type	Activate Date	Cond	Date Queued	Description	Location	Planner
*4000007	EXP	-	Yes	22Apr18	Place/Increase Order Outside L/T	084421	084421
*4000093	EXP	-	Yes	22Apr18	Place/Increase Order Outside L/T	084421	084421
*4001087	EXP	-	Yes	17Apr18	Unsatisfied Allocation Rqmt	150450	150450

What we need to do:

1. Separate data into three streams
 1. The header names – simple parse should be all we need
 2. The dash row – we will use this to generate a substring formula apply to the data below it
 3. The data which will have the row 2 logic applied to it.



SELDOM SEEN TECHNIQUES IN THIS EXERCISE

- Use of the iteration number
 - Few know it exists for batch macros
- Dynamically creating and applying a formula
- Ungrouped macro input
 - Most batches are used in a group function to take only a set of rows, but in this case we are applying a different formulas across the whole set of data.
- Macro in a macro



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CLEANLY PARSE THE TEXT FILE



INSTRUCTIONS

- Input the text data
- Calculate field length using the dashes
- Create a batch macro that will dynamically apply a substring formula across all of the data.

RESULTS

Record #	Part Number	Part Type	Activate Date	Cond	Date Queued	Description	Location	Planner	Queue Cond
1	*4000007	EXP	-	Yes	22Apr18	Place/Increase Order Outside L/T		084421	True
2	*4000093	EXP	-	Yes	22Apr18	Place/Increase Order Outside L/T		084421	True
3	*4001087	EXP	-	Yes	17Apr18	Unsatisfied Allocation Rqmt		150450	True



EXERCISE



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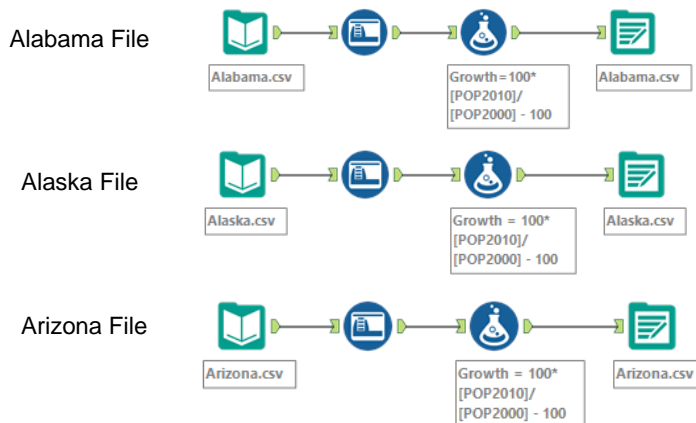
OTHER WAYS TO BATCH

INGENIOUS BATCHING

Fun fact: you don't need data to flow through this macro if you don't want to! You can just use the batch input to run the workflow under a number of different configurations!



VISUALIZING DATA-LESS BATCH

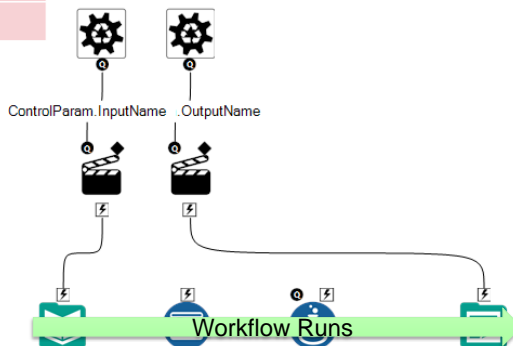


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VISUALIZING DATA-LESS BATCH

.source\Alabama.csv	.dest\Alabama.csv
.source\Alaska.csv	.dest\Alaska.csv
.source\Arizona.csv	.dest\Arizona.csv



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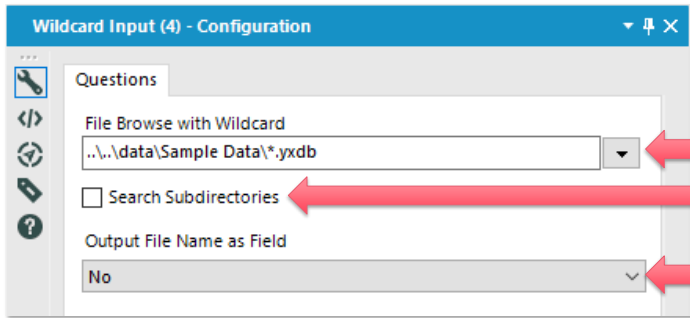
WILDCARD INPUT MACRO

SELDOM SEEN TECHNIQUES IN THIS EXERCISE

- Batch macro simply reconfigures a workflow
- A macro within a macro
- Interfacing with a macro embedded ‘two macros deep’
- Dealing with changing output schemas



INTERFACE TOOLS USED



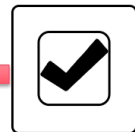
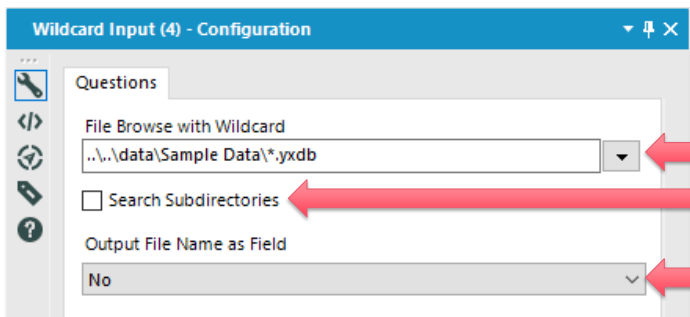
File Browse
Check Box
Drop Down



#ALTELYX18



INTERFACE TOOLS USED

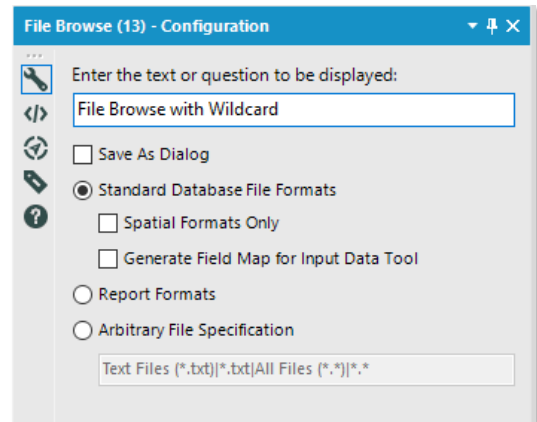


#ALTELYX18

FILE BROWSE



- Enter a text prompt
- Choose whether this file browse is to 'open' or 'save' a file
- Choose one of the following options
 - Standard DB formats
 - Report formats
 - Arbitrarily Specify a file
 - Choose file types to search for

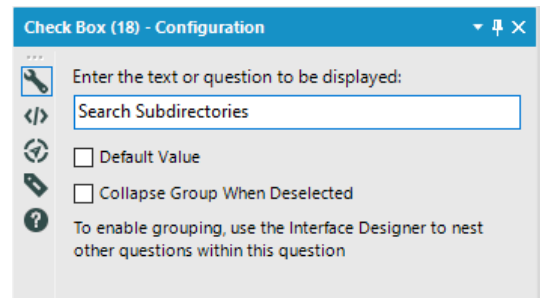


#ALTEREX18

CHECK BOX



- Identical configuration to the radio button
 - However multiple selects can be chosen in an interface whereas only one button can be selected
- Passes a 'true' value when selected and a 'false' value when not selected.

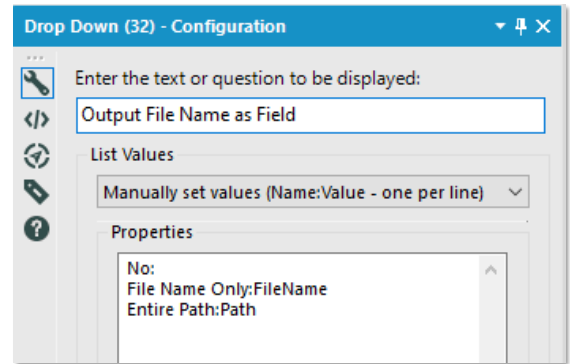


#ALTEREX18

DROP DOWN



- Many different ways to generate list values
- Most common use – manually set values
- Create a list for a user to select by separating by a new line
 - [Name]:[Value]
 - [What displays to user]:[What variable the workflow actually uses]



#ALTERYX18

BUILD A WILDCARD INPUT TOOL

INSTRUCTIONS

- The wildcard functionality of the input data tool only works with matching schemas.
- Build a macro that will input any file, no matter what schema
- Note that one dataset has two extra columns in our sample data

RESULTS

Wildcard Input (4) | Reading C:_classroom_content\inspire\2018\courses\01_in_development\macros_301\data\Sample Data\AK.yxdb
 Wildcard Input (4) | Reading C:_classroom_content\inspire\2018\courses\01_in_development\macros_301\data\Sample Data\AL.yxdb
 Wildcard Input (4) | Reading C:_classroom_content\inspire\2018\courses\01_in_development\macros_301\data\Sample Data\AZ.yxdb



FOLLOW ALONG



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EXERCISE

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FILE MOVER MACRO!

INSTRUCTIONS

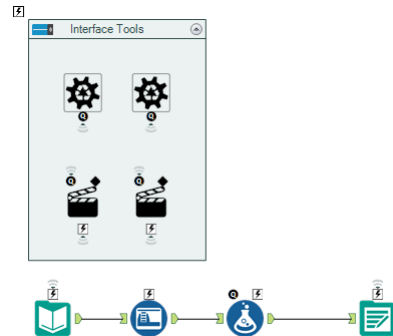
- Create a macro that opens a list of files from one location and writes it to another.
- It will batch on the file
- The batch macro itself could have 3-4 tools max!
- Start with
 06_file_move/01a_file_mover_wrapper_start



EXERCISE



RESULTS



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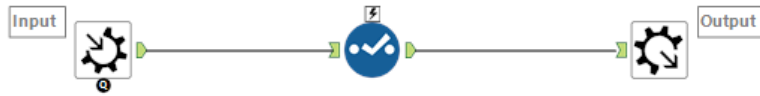
#ALTERYX18



Part III:



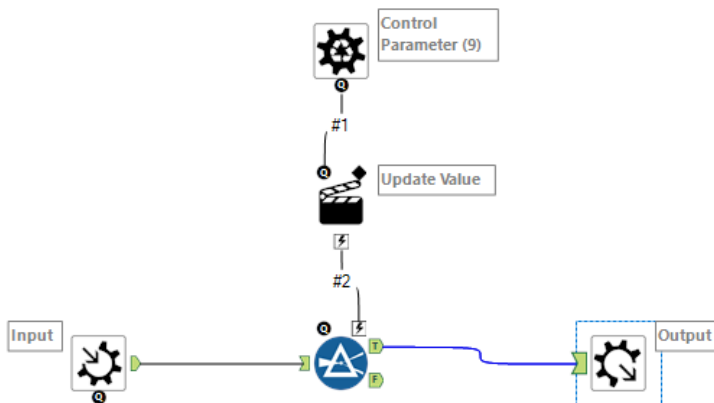
STANDARD MACRO



#ALTERNATIVE18

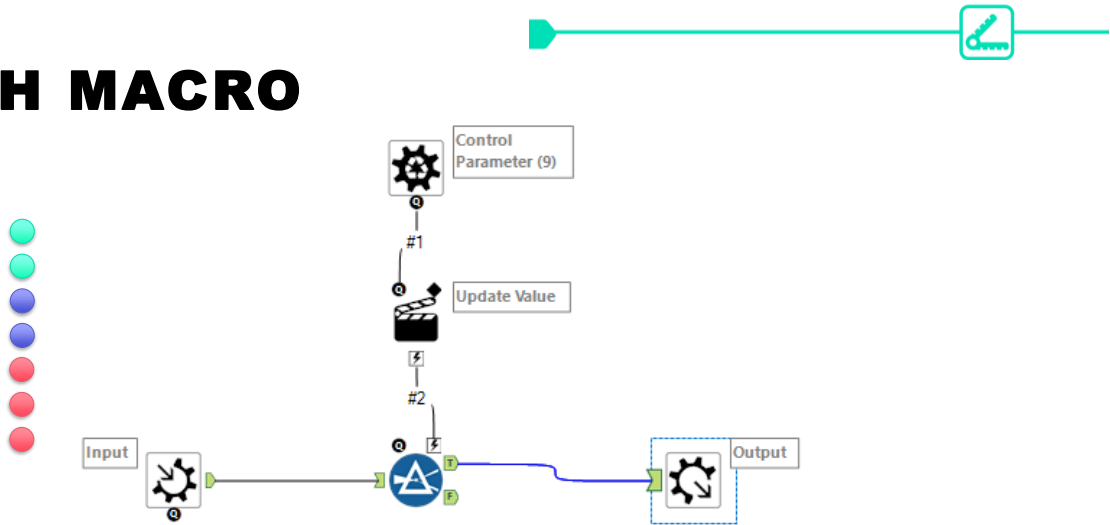


BATCH MACRO



#ALTERNATIVE18

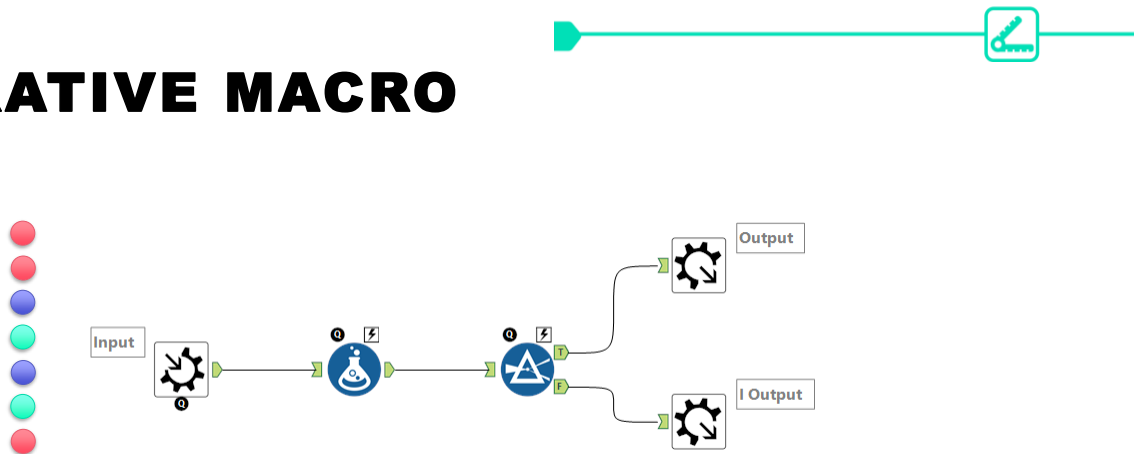
BATCH MACRO



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ITERATIVE MACRO

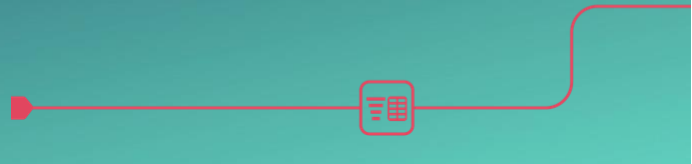


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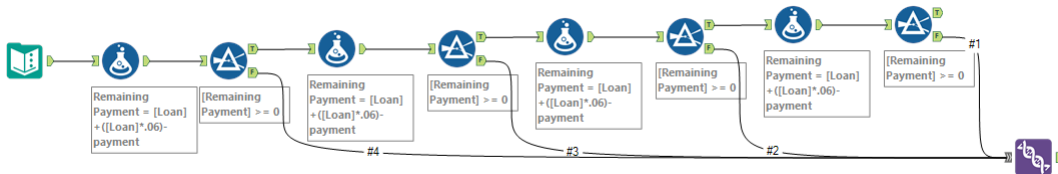
#ALTERYX18

HOW DOES AN ITERATIVE MACRO BEHAVE?

An iterative macro will run through every record and then loop the records back through the workflow – repeating the entire process as many times as specified, or until a condition is met.



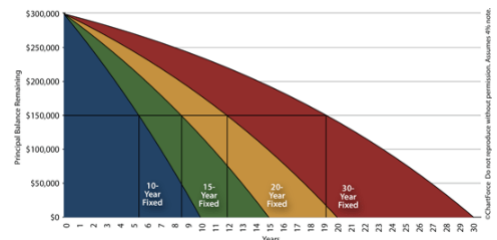
WHEN SHOULD I USE IT?



Whenever you find a repeating sub process, you may have an excellent use case for the iterative macro!

In the above workflow, amortization of loans are being calculated. The workflow calculates how many ‘rounds’ of payments it will take until the loans are paid off. This is an excellent example of an iterative macro, because the remaining principle must be recalculated at the end of every month. The amortization curve is not linear!

How Many Years To Payoff Half Of Your Mortgage Balance



AUDIENCE INTERACTION

Does anyone have any examples of what types of problems in our world iterative macros are good for?



ITERATIVE MACRO TYPES

- 1) Run by a certain iteration count
 - “Run this data through our macro 1000x”
 - “What does 100 years of our growth projection look like?”
- 2) Run until a True/False Condition is met
 - **This method is used far more frequently**
 - Typically need to keep running an iterations until an answer is discovered.

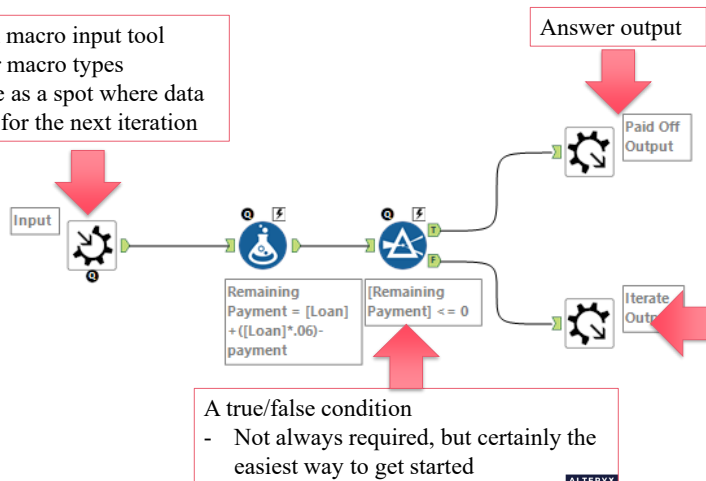




ITERATIVE MACRO KEY POINTS

Always requires a macro input tool

- Unlike the other macro types
- Inputs will serve as a spot where data re-enters macro for the next iteration



A true/false condition

- Not always required, but certainly the easiest way to get started

Iterative Output

- Records using this macro output will return back to the macro input for another iteration.

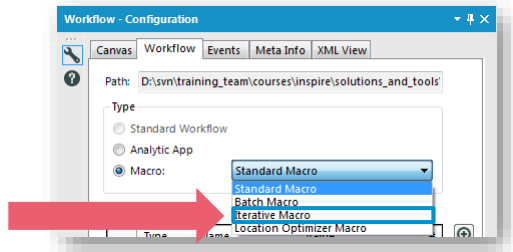
WORKFLOW AUTO TYPE DEFAULTS

- Default – .yxmd
- Standard macro – dropping a macro input/output on the canvas
- Batch macro – dropping a control parameter onto the canvas
- Iterative macro – does not automatically convert, must be changed in the workflow type settings



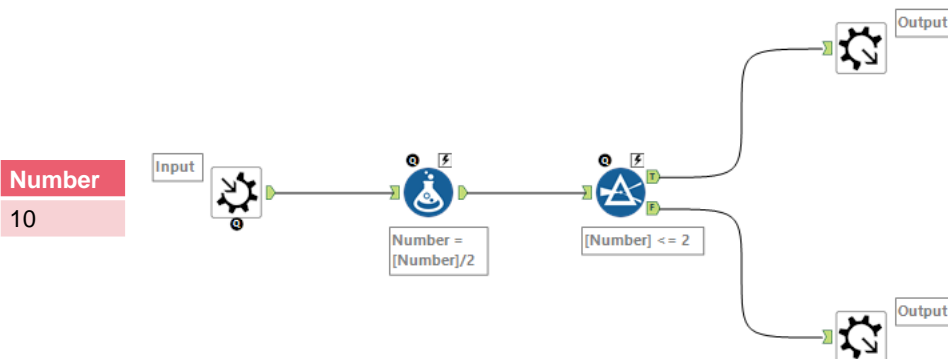
WORKFLOW TYPE SETTINGS

- Adding a Macro Input changes it to Standard
- Adding a Control Parameter changes it to Batch
- You must manually select the Iterative Macro type



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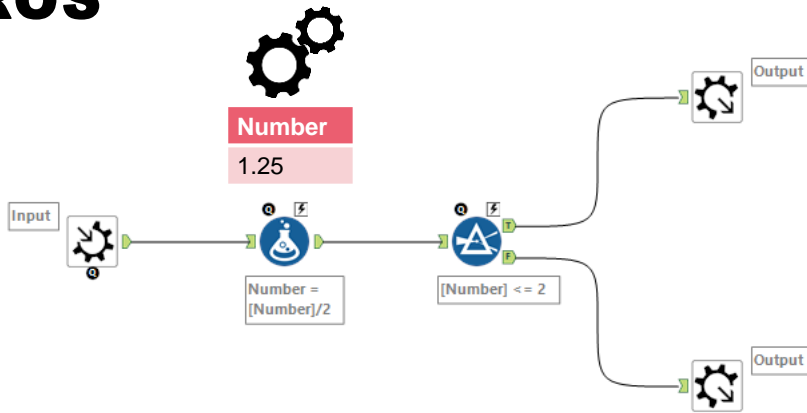
VISUALIZING ITERATIVE MACROS



#ALTERYX18



VISUALIZING ITERATIVE MACROS



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THE INTERFACE DESIGNER

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THE INTERFACE DESIGNER

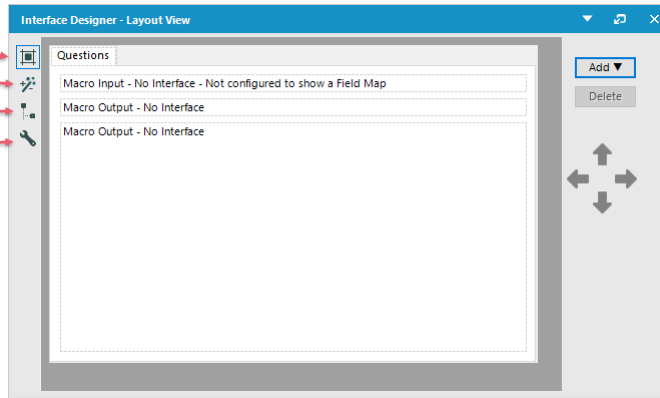
View>Options>Interface Designer

Layout View

Test View

Tree View

Property View



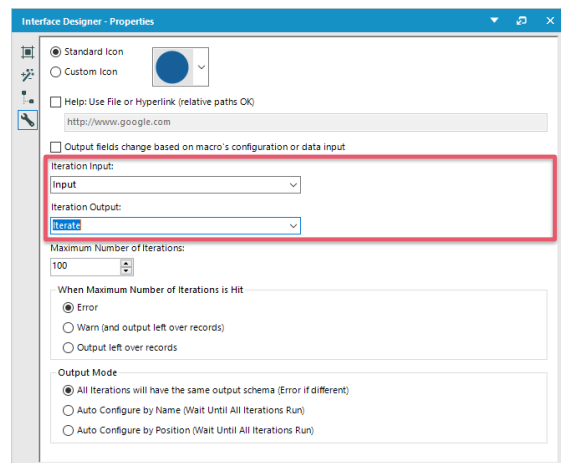
#ALTERYX18

INTERFACE TOOL - PROPERTIES



Time to assign what input/output goes where!

- Select the iteration input
- Select the iteration output
- PRO TIP: Name your inputs and outputs to make this process simpler
 - Choosing between Output17 and Output32 is not helpful

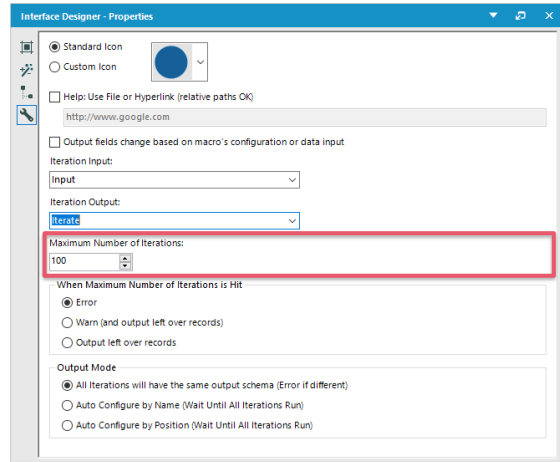


#ALTERYX18

INTERFACE TOOL - PROPERTIES

Maximum Iterations:

- Is there a maximum number of times you want the macro to run?
- If these limit hits, there are a few options...

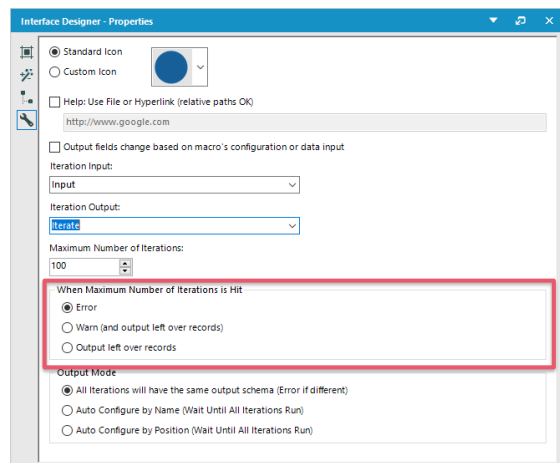


#ALTERYX18

INTERFACE TOOL - PROPERTIES

In this case, you can choose to do a few things when 100 iterations are run:

- 1) Fail the macro saying all data was not able to exit the macro before 100 iterations
- 2) Let the macro complete the warning and pass the remaining rows out the Iteration Output
- 3) Output records out iteration output without warning

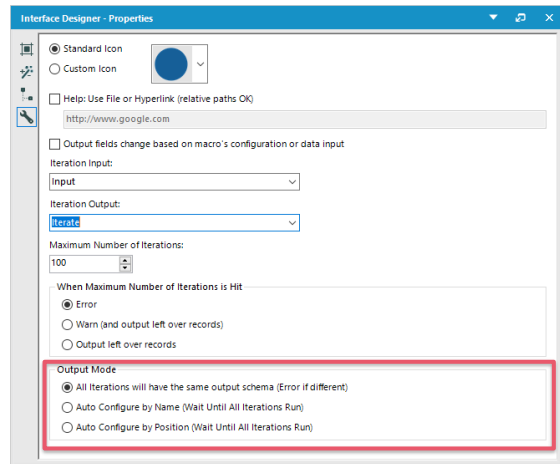


#ALTERYX18

INTERFACE TOOL - PROPERTIES

Output mode (advanced)

- Do you expect all iterations to be the same columns? For beginners, the answer is typically yes.
- If you add columns each iteration, you can configure all iterations to align via name or position.



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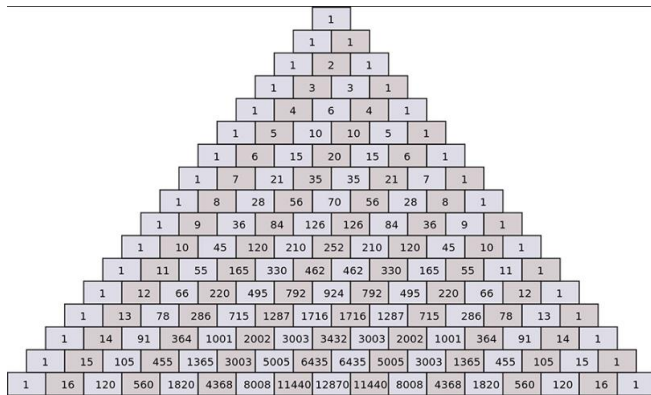
MACRO: PASCAL'S TRIANGLE BUILDER



#ALTERYX18



WHAT IS PASCAL'S TRIANGLE



WHAT MAKES THIS MACRO ADVANCED?

- 1) Variant schema
 - a) The more rows we ask for in the Pascal's triangle, the more we get.
- 2) Changing Data
 - a) We start off with the number 1 and grow to many times that size. Sometimes your data can outgrow your datatypes



CHANGING DATA

Situation: We have a macro that has an input of 1 penny (non-decimal) and we want to see how many pennies we have at the end of the month if we double them everyday.

Oopsie: We assigned int16 with a select tool to the penny field right after the macro input

Result: INT16 can hold up to 32,767.

Day 16 is 32,768 pennies.

Result for day 16 on – NULL

*Moral of the story – be painfully aware of your datatypes.



Day 1	\$.01	Day 16	\$327.68
Day 2	\$.02	Day 17	\$655.36
Day 3	\$.04	Day 18	\$1,310.72
Day 4	\$.08	Day 19	\$2,621.44
Day 5	\$.16	Day 20	\$5,242.88
Day 6	\$.32	Day 21	\$10,485.76
Day 7	\$.64	Day 22	\$20,971.52
Day 8	\$1.28	Day 23	\$41,943.04
Day 9	\$2.56	Day 24	\$83,886.08
Day 10	\$5.12	Day 25	\$167,772.16
Day 11	\$10.24	Day 26	\$335,544.32
Day 12	\$20.48	Day 27	\$671,088.64
Day 13	\$40.96	Day 28	\$1,342,177.28
Day 14	\$81.92	Day 29	\$2,684,354.56
Day 15	\$163.84	Day 30	\$5,368,709.12



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PASCAL'S TRIANGLE BUILD

INSTRUCTIONS

- Create a macro that generates a pascal's triangle
- Allow user to select rows to be generated
- Columns generated should be equal to that of the rows

RESULTS

Record #	1	2	3	4	5
1	1	[Null]	[Null]	[Null]	[Null]
2	1	1	[Null]	[Null]	[Null]
3	1	2	1	[Null]	[Null]
4	1	3	3	1	[Null]
5	1	4	6	4	1



FOLLOW ALONG



#ALTERNATIVE18



NULLIFY THE DATA

INSTRUCTIONS

- Create a simple iterative macro by create a 1x1 data table with the value of 1.
- Double the value of 1 over each iteration until the macro starts to return NULL() values for an Int32 datatype? What was the last iteration successfully logged? What was the last value?

RESULTS

Record #	Principle	Rate	Payments	Payment
1	-235.149437	0.007	500	97



EXERCISE



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PART IV: DEPLOYING MACROS

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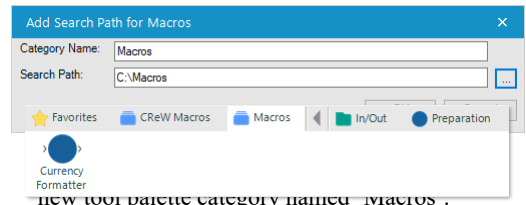
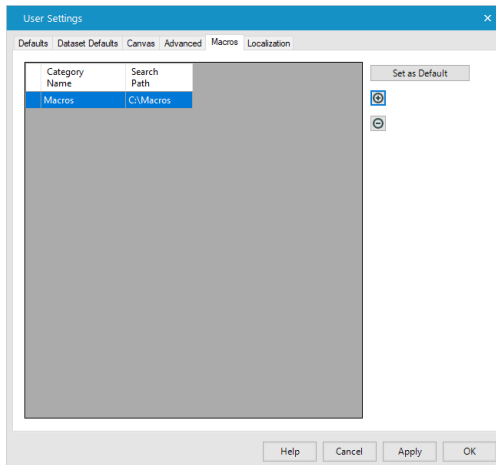
DEPLOYING MACROS

You may have made your macros, but now they lack that final polish. In this section, you will learn how to make your macro nearly indiscernible from other tools in the Designer.



MAKING A MACRO REPOSITORY

Options>User Settings>Edit User Settings>Macros

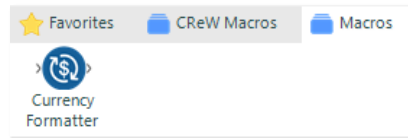
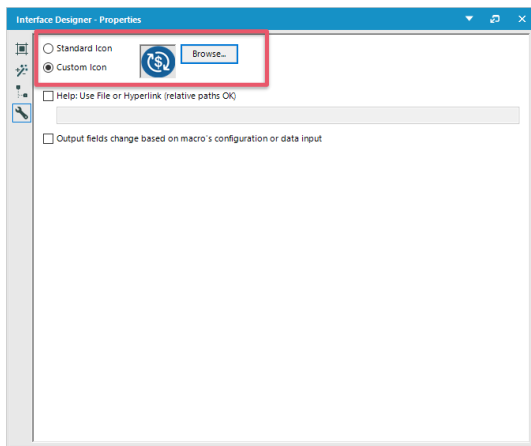


Pro tip: There is another way to move macro categories, so less search paths will make your life easier



CHANGING A MACRO ICON

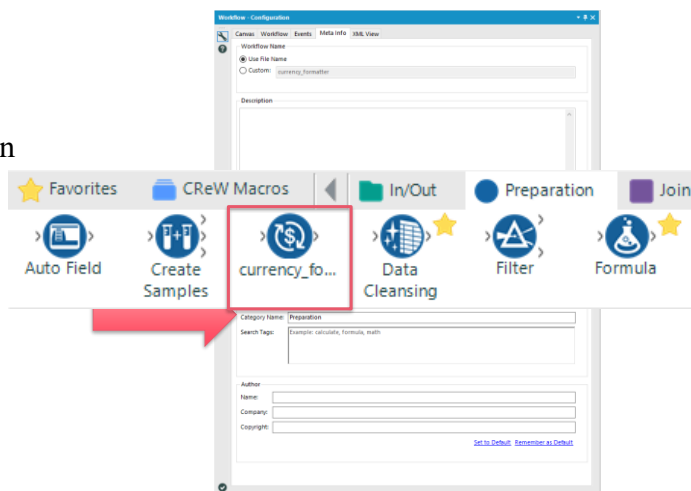
With the macro open: View>Interface Designer>Properties



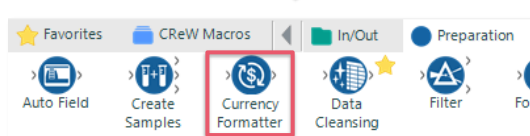
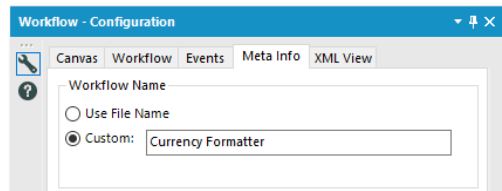
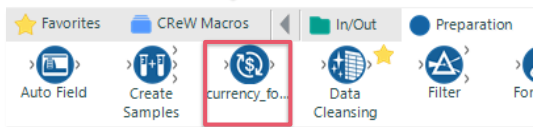
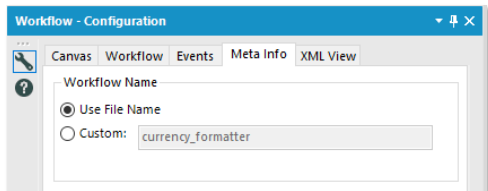
CHANGING A MACRO'S CATEGORY



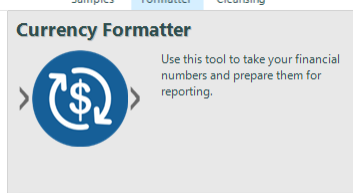
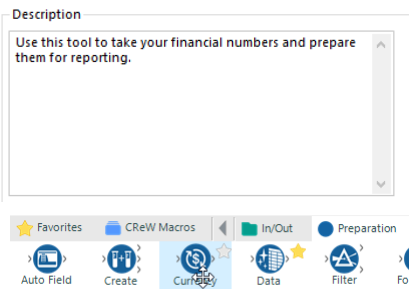
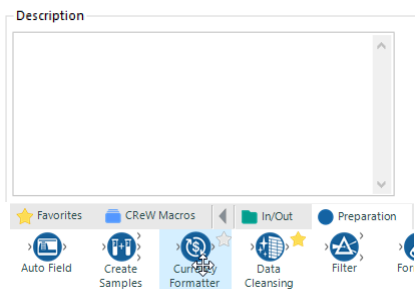
- With the macro canvas, open workflow meta info.
- Click Canvas > Click Meta Info Tab in the Configuration Window
- Choose a new or existing category name
 - Existing will include it in that category
 - New will create a completely new category



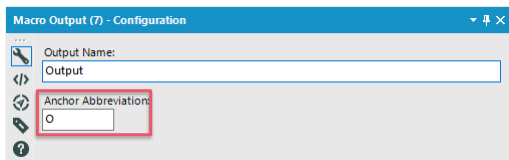
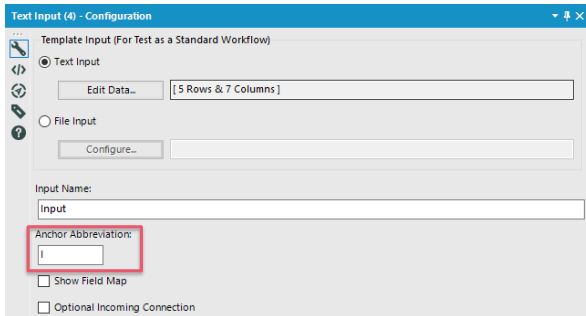
CHANGING A MACRO'S DISPLAYED NAME



CREATING A MACRO DESCRIPTION

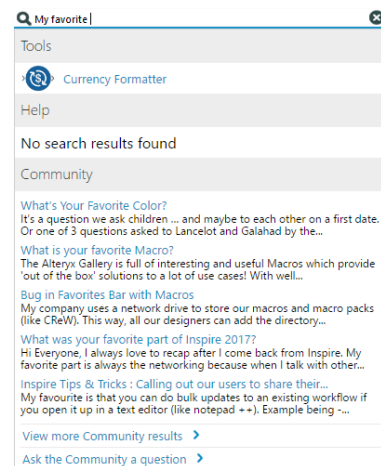
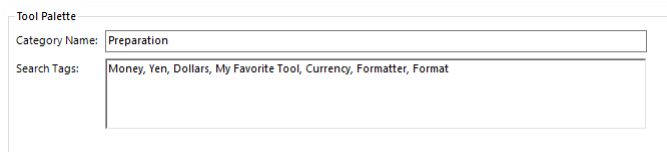


ADDING ANCHOR INDICATORS



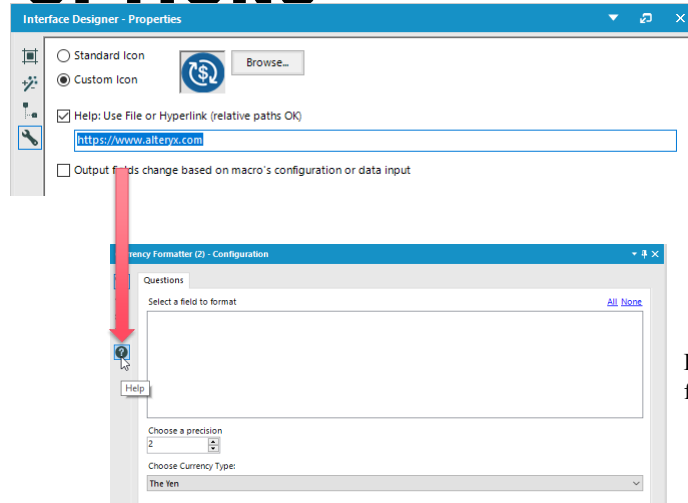
#ALTERNATIVE18

MAKE IT SEARCHABLE!



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ADD HELP OPTIONS



Pro tip: Help also opens from 'F1' keystroke



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SHARING

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METHOD 1 – SEND FILE .YXMC

Sharing via file:



currency_formatter

- Sharing on email

Pros:

- Easy

Risks:

- Only works if the file has no dependencies
 - No files
 - No other macros embedded
- Will create issues if macro input uses a file input – file will need to be shared too.



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SHARING METHOD 2

Sharing from a network drive:



currency_formatter

Pros:

- Easy
- Updating the macro instantly updates it for everyone

Risks:

- Macro may not be accessible across VPN
- All risks that apply to network paths
 - Others editing/deleting
- All people with access can see it



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SHARING METHOD 3

Sharing to and from the Alteryx Gallery:



Pros:

- Easy to share/provision access
- Version Control
- Control which version is public

Risks:

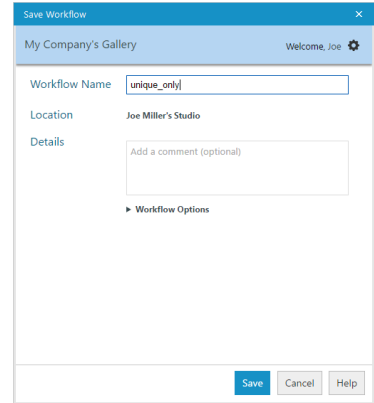
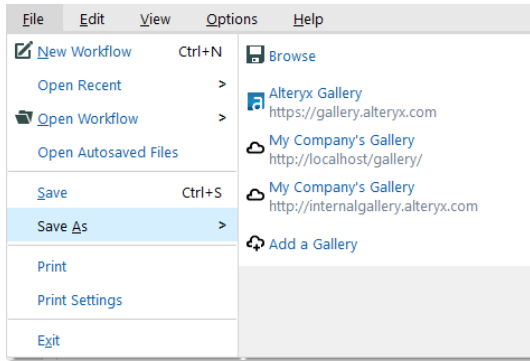
- Updating the macro to a new version would require share-ee to re-download the workflow



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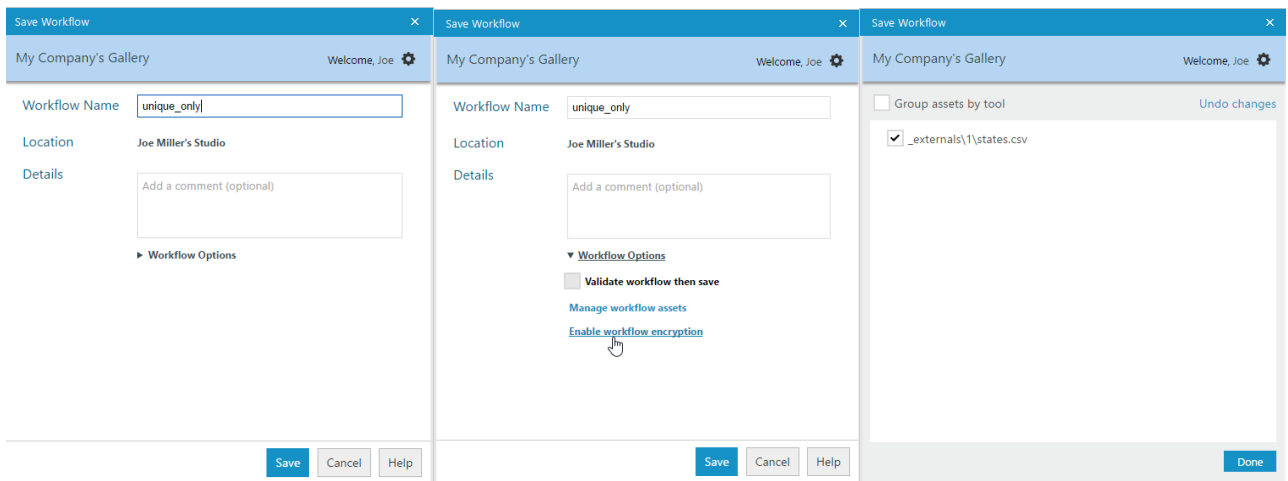


SAVE A MACRO TO GALLERY



#ALteryx18

SAVE A MACRO TO GALLERY



#ALteryx18



SAVE A MACRO TO GALLERY



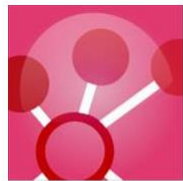
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SAVE A MACRO TO GALLERY




#ALTERNATIVE18

SHARING WITHIN THE GALLERY



currency_formatter
 Joe Miller's Studio - Joe Miller
 Latest: Version 1 - Uploaded Just now
 Published: Version 1 - Uploaded Just now

Change Icon
 Replace Workflow

Add Tags

RUN DOWNLOAD Sharing

- Place in My Company's Gallery
- Add to Collection ...

Share with everyone!

Share with a specific group only.

Use this tool to take your financial numbers and prepare them for reporting.



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ADDING TO A COLLECTION

Collect currency_formatter

Choose or create a collection below to place this workflow within.

Choose an Existing Collection
 My First Collection [v] [ADD]

Create a New Collection
 Our Team's Macros [v] [CREATE AND ADD]

Our Team's Macros

Created by you Just now
 1 workflows shared with 0 users and 0 studios

Workflows Users Private Studios

Workflow

+ Search for Workflows to add to this collection

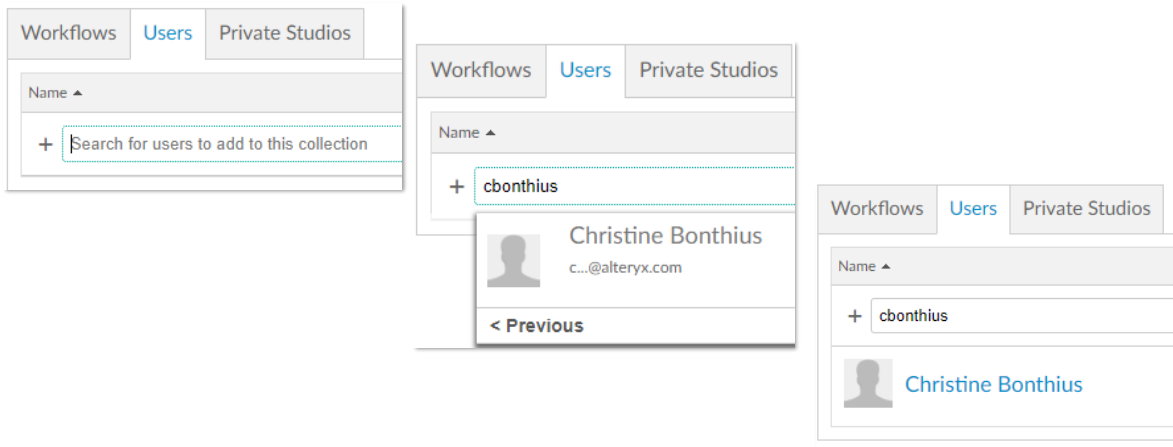
currency_formatter
 Use this tool to take your financial numbers and prepare them for reporting.



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SHARING WITH OTHERS



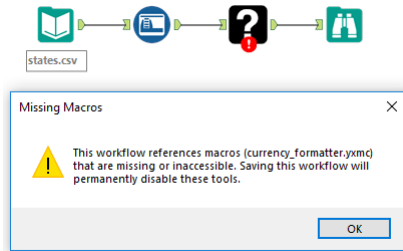
#ALTERYX18





ERRONEOUSLY SHARED WORKFLOWS

If you built a workflow and used a macro not native to the Designer AND shared it to a coworker as a .yxmd, they would likely see this! While you had it available to you, they might not have it available to them.

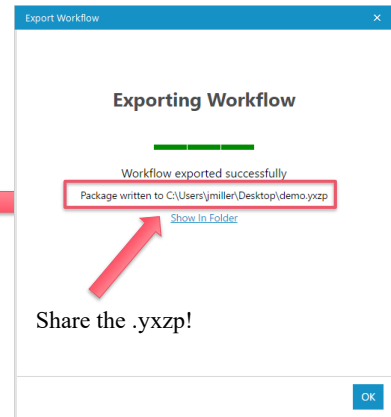
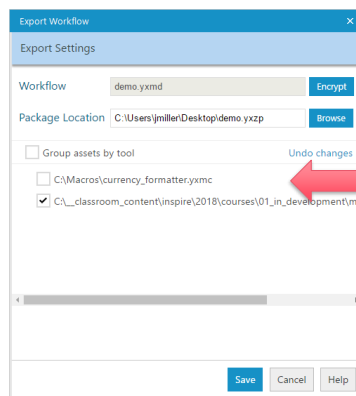
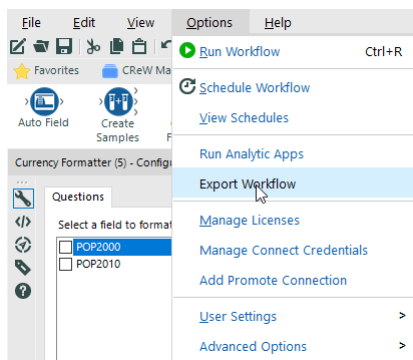


#ALTEYX18

EXPORTING YOUR WORKFLOW



Instead, there is a way to include your macro!



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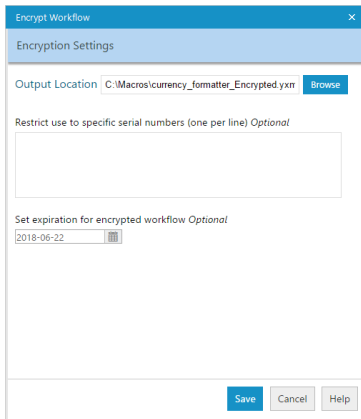
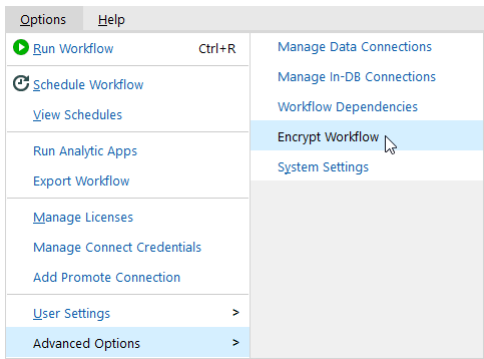
ENCRYPTION

ENCRYPTING MACROS

If there is a macro tool that was built around a specific business practice and requires governance by not allowing others to customize the tool, encryption can be an excellent choice.

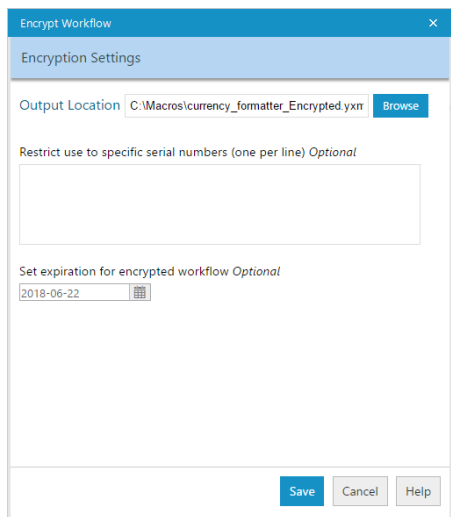
ENCRYPTING A .YXMC

Options>Advanced Options>Encrypt Workflow



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ENCRYPTING A .YXMC

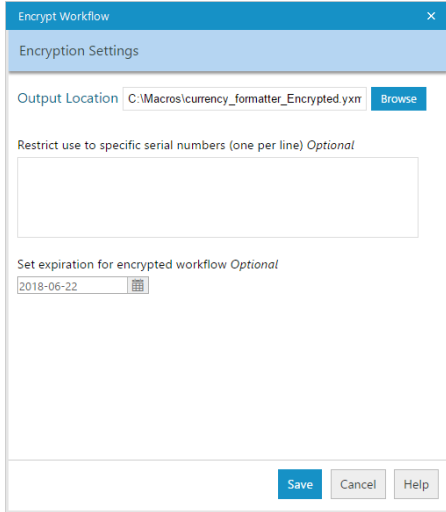


Note that the default is to create an encrypted version to not overwrite current version. Be sure to share the encrypted version.

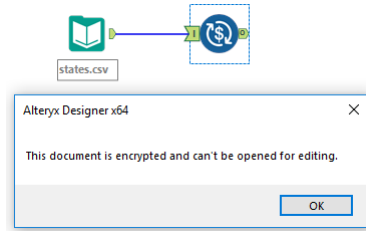


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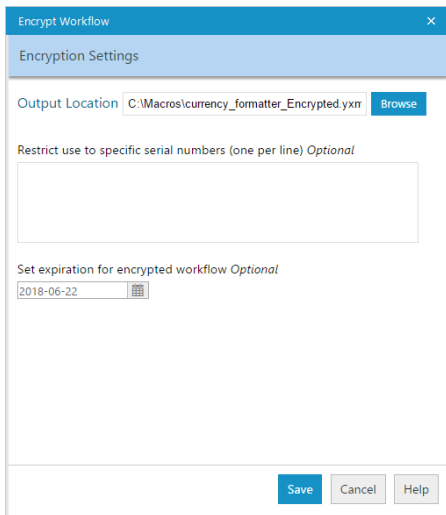
ENCRYPTING A .YXMC



Enter certain serial numbers (email addresses) to allow only certain users to RUN the macro. If nothing is entered, the macro can be run by anyone, but cannot be opened.



ENCRYPTING A .YXMC



Enter a date to make the macro expire. Users will no longer be able to run the macro. It can be an excellent way of ensuring people stay up to date on versioning.

ADDITIONAL THOUGHTS

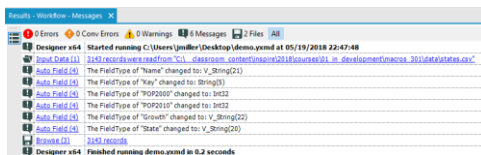
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MACRO MESSAGING

- When embedding a macro inside of a workflow, it may be hard to see what is happening inside of it. In other cases, it may error but you may be unsure as to what caused it.
- Go to the runtime settings (in the canvas config) and select ‘show all macro messages’

Without



With





PERFORMANCE PROFILING

Gain insight to who performant (or not) your macro can be in the context of your workflow by enabling performance profiling in the runtime configuration settings.

	Currency Formatter (5)	Profile Time: 69.43ms, 78.03%
	Auto Field (4)	Profile Time: 8.07ms, 9.07%
	Browse (3)	Profile Time: 6.14ms, 6.90%
	Input Data (1)	Profile Time: 5.34ms, 6.00%



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CHECK OUT CREW MACROS!

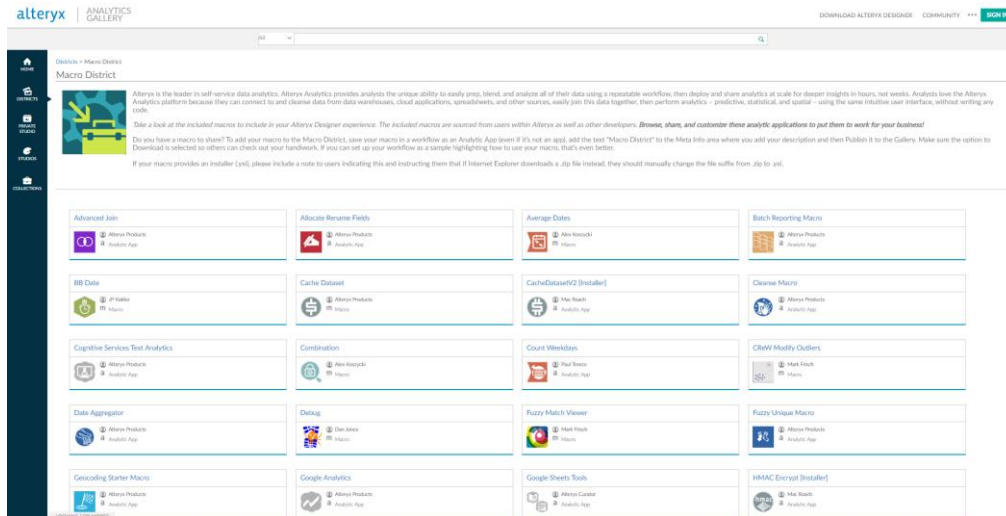


Wildcard Input, Wildcard XLSX Input, Field Sort, Only Unique, Skip Last N, Conditional Runner, List Runner, Log Parser, Runner
 Add Totals, JSON Create, Moving Summarize, Trim Mean, Weighted Median, Bivariate Theming, Gauge, html5 render, NVD3
 Street View, Tableau Format, Weighted Average, Chi Square Test, Blocking Test, Dynamic Formula, Dynamic Metadata, Ensure Fields, Label Block Until Done
 Parallel Block Until Done, Version, Wait A Second, Expect Equal (BETA), Expect Error (BETA), Expect Zero Records (BE...), Test Runner (BETA)



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CHECK OUT THE ANALYTIC GALLERY FOR MORE!



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SAMPLE FILTER FINALE



INSTRUCTIONS

Do the following for the completed sample filter tool.

1. Map the macro into Designer
2. Add it to the 'Preparation' category
3. Make it searchable
4. Make a tool tip
5. Update Icon to anything but a blue dot
6. Encrypt the macro so it cannot be opened



EXERCISE



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Q&A

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THANK YOU

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Please complete a feedback survey!

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