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Using Alteryx Designer in Audit

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## ScholarWorks Citation

Alteryx Designer

Introduction

This document will cover the functionality of the common tools within Alteryx Designer. Alteryx Designer is a data manipulation software used for importing, cleaning, displaying, and exporting data. A major benefit of Alteryx Designer is the ability to save data workflows to for additional uses.

In Auditing, there are reports provided by the clients that are very difficult to work with in their raw forms. During an engagement, the audit team can spend hours cleaning and formatting the data in the reports to perform the necessary sampling and testing. By utilizing Alteryx Designer, an auditor can spend time creating a data workflow for the report then reuse the workflow for the same report in future year audits. Over time, these workflows will cut hours of unnecessary work from the budget.
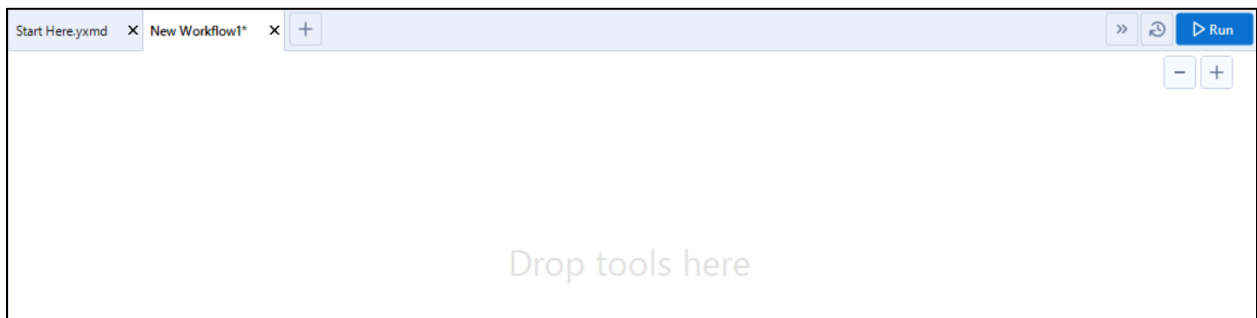
Basic Functions

Tools
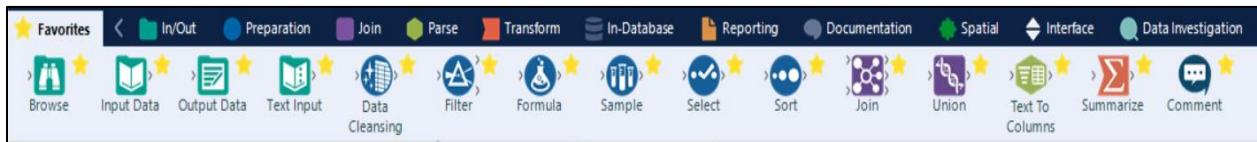
The tools found in the tabs of the ribbon in Alteryx Designer are the dropped into the workflow canvas shown below to perform specific functions. These tools are color coded to match the tabs they are found in based on functionality. Some of the tools are explained in further detail below as well.
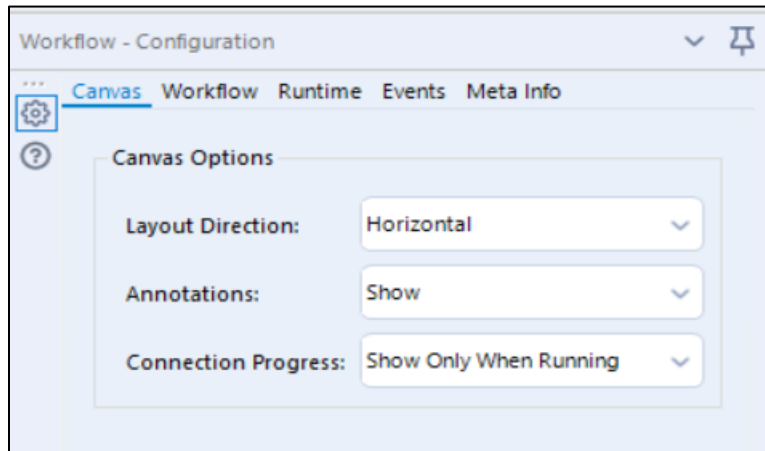
Workflow

The workflow is where you build, connect, and test your data manipulation.

Configuration

The configuration area (found on the left-hand side of Alteryx Designer) is an area that specifies what the user would like each tool to do within the workflow. The Configuration options change based on which tool is selected in the workflow.
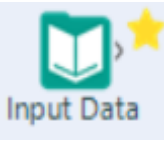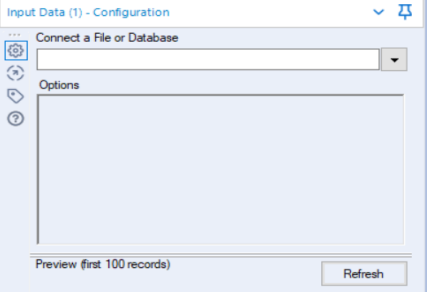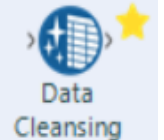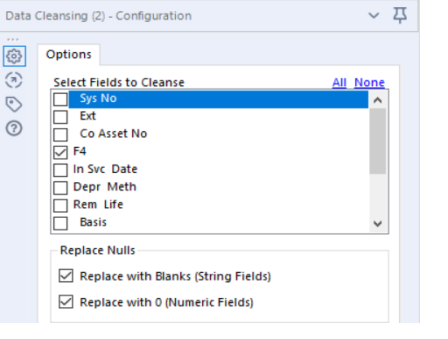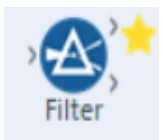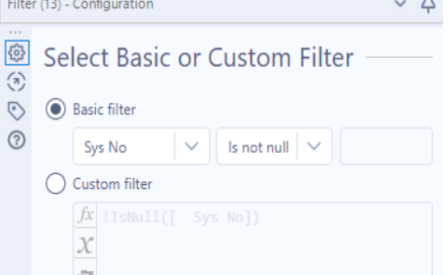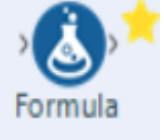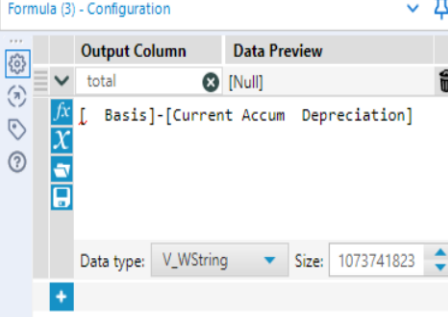
Results
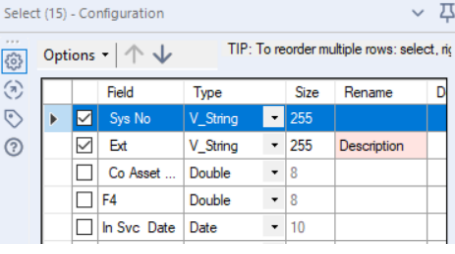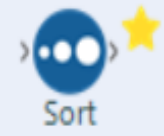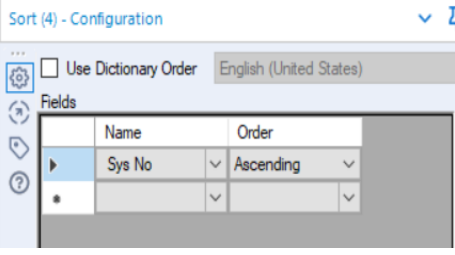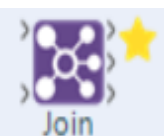
When a workflow is executed, the results section of the screen will show what the finished data will look like after the manipulation is performed. This screen is very important to ensure the tools selected and configured in the workflow are performing as intended.

Key Tools

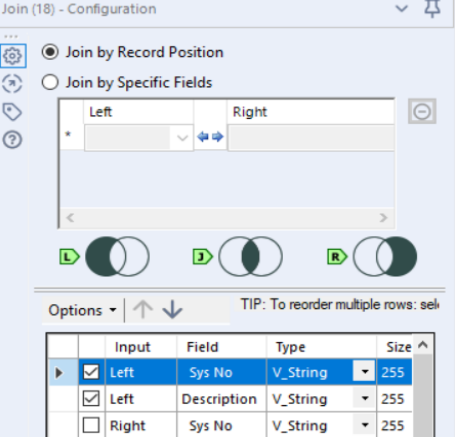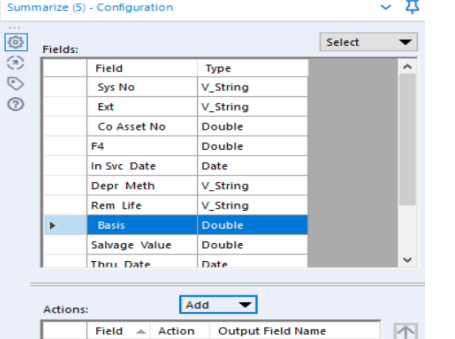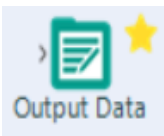| Tool Icon	Description	Configuration Window Preview
Input Data	The Input Data tool is where the source of data to be run through the workflow is selected. In practice, this will typically be a file location for a report provided by the client, but Alteryx Designer supports database connections as well.	
Data Cleansing	Data Cleansing allows you to format cells and remove unnecessary characters. In the configuration window, there are options to get rid of blank spaces, numbers, punctuation, etc. This tool is useful when filtering on columns later.	
Filter	The Filter tool requires criteria for a specified column. Records that match the specified criteria are added to a new dataset that is split off and indicated by a "T." The remaining records that don't match the criteria are added to the dataset indicated by an "F."	
Formula	The Formula tool can manipulate data in columns with actions specified by the user. This data can be changed in the existing column or a new column can be created. This is a great tool for auditors because it does not require the clients to manipulate their report calculations in the native system.	

Select	The functionality of the Select tool is very simple. This tool allows you to declare which columns you would like in the output, rename the columns, define data types, and reorganize the column order.	
Sort	The Sort tool is also very basic but very useful. Adding this tool to a workflow will sort the output by a specified column in the desired order. This could be used in an audit to identify higher dollar amounts within a report.	
Join	By using the Join tool, two datasets can be combined into one dataset based on a common characteristic. Data can be joined by record position or matching field values. This tool is also beneficial because the configuration window allows the user to select which columns they would like in their output. This tool is beneficial to bring in necessary or helpful information to the provided report such as an item description based on the item ID.	
Summarize	The Summarize tool should be added to a workflow when the user wants to see details about their dataset. The Summarize tool can be used to add a row for basic calcluations like totals, minimum/maximum values, and averages. This tool also supports more advanced statistics like standard deviation, net present values, and rates of return.	
Output Data	Output Data is the tool put at the end of the workflow to specify where the finalized dataset should be exported to. Alteryx Designer supports exporting to Excel, various databases, and even Tableau.	