Manually Entering Data

The Text Input Tool
It's not uncommon to enter data on the fly in a workflow to serve as a test dataset for validating a workflow process or as a lookup table to add meaning to otherwise unclear data values or codes. While using manually entered data runs the risk of introducing errors into an analytic process, it also expands the flexibility and accessibility of data that can be used in a workflow.

Dataset Exploration
Our workflow contains three Input Data tools, each of which is used to read in a file containing data on trees in New York City. For the most part, the columns in these input datasets contain clear and intuitive values. All, except for one: [Borough Code], which contains the values 1 through 5, each representing a borough in New York City. However, aside from the fact that a tree is assigned a borough number, and that these numbers correspond to a borough, a general understanding of this information is limited. Our analysis would greatly benefit from understanding the significance of these values to understand where, in more accessible terms, trees are located.

Lookup Tables
To clarify the meaning of these codes, create a simple lookup table directly in Designer to associate each borough code with its name. Because the number of values to define (5) is small and only two columns are necessary, one for the [Borough Code] and another for the [Borough Name], it's no trouble to enter this data manually using a Text Input tool.

Drag a Text Input tool onto the Canvas.

The Text Input tool's configuration provides a blank table that can be used to customize an input dataset with columns and rows.

Manually Entering Data
First, create a column of data values to match those that currently exist in our inputs. In the header of the first column, type [Borough Code] to name the column.

This column will contain the code values for the five boroughs in New York: the numbers 1, 2, 3 4 and 5. Enter a one (1) in the empty cell in the column [Borough Code].

Once a cell is populated, another empty cell in the column [Borough Code] appears directly below the typed value one (1). In this new empty cell, enter the value two (2).

Continue entering the rest of the borough codes into the empty cells as they appear.

Now, create another column called [Borough Name].
The boroughs are defined, from 1 to 5, as: Manhattan, Bronx, Brooklyn, Queens and Staten Island. Enter each borough name into the cell next to the associated code.

Inputting Data from Other Sources
Like the Input Data tool, the Text Input tool can also read in existing data sets in the form of a file or database, and even paste in data that has been copied from another source. This is handy for quickly editing the contents of an input. Select a method below to import data into the Text Input tool.

Copy & Paste
Copy and paste the contents of an existing file, such as an Alteryx database, into a Text Input tool. Click the icon to copy the file's contents to the clipboard and select "All records with headers" from the menu.

Input Lookup Table
In the Text Input tool's configuration, click the Paste icon to populate the Text Input with the copied data.

In the Text Input tool's configuration, click the icon to import a file.

This dialog is the same as that in the Input Data tool's configuration. Use this to navigate to and select an input file to import into the Text Input tool. Once the file's contents populate the Text Input tool, its contents can be manually edited.

Unnecessary Columns
This particular input file contains extra columns, namely the columns [Land Area Sq Km] and [Pop Density], that are not necessary for this analysis and should be removed.

Highlight the columns [Land Area Sq Mile] and [Pop Density]. Then, click the Delete button and select “Columns" from the menu.

This input also contains a duplicate row for borough code 2, the Bronx. Click a row that contains this value. Then, click the Delete button and select "Rows".

A value is missing from this input: the borough code 3 for Brooklyn. Manually add it to the table by clicking the row containing the borough code 4. Then, click "Insert" and select "Row" from the menu.

Enter the borough code “3” and the name “Brooklyn” into the appropriate cells to complete the lookup table.

Completed Table
Now, this table can be used for data blending processes that will be implemented further downstream in the workflow. Unlike data that is read into the workflow with the Input Data tool and is externally linked to a file or data connection on a machine or network, data entered into a Text Input tool lives within the workflow. This means that data values are not only static but also accessible to anyone with whom you might choose to share this workflow.

There is one important difference in how input data is handled in the Text Input tool as opposed to an Input Data tool. When using the Text Input tool, data is automatically categorized to the smallest possible field type and size. How have the manually entered values been affected by this functionality?

Data Types
In the Results window, click "Metadata".

The Text Input tool has assigned the datatype "Byte", which is numeric, with a size of 1 to the column [Borough Code]. In other Input Data tools, this same column of values is input as a string. As such, changes to this data type will be necessary to match that in other inputs, especially if this column is used for any data blending later on in the workflow. The column [Borough Name] has been assigned a string data type, which is appropriate for the values it contains. However, the string data type does not have any built-in flexibility when it comes to the length of data values. Luckily, this data is static no other values will be introduced into this table, so this data type can remain unchanged. Any empty values in a Text Input tool will be assigned a Null Value.