Automated Regression Testing with Worksoft Suite

Overview:

- The Worksoft suite (Continuous Testing Manager, Certify, etc.) is, by design, high-level. While basic knowledge of HTML elements and coding in general is useful, it is not required. Therefore, this document does not seek to explain such functions of coding on a low-level. Merely, this document seeks to provide information on the functions of Worksoft Certify and Continuous Testing Manager and provide very basic knowledge on how to use them.

Glossary:

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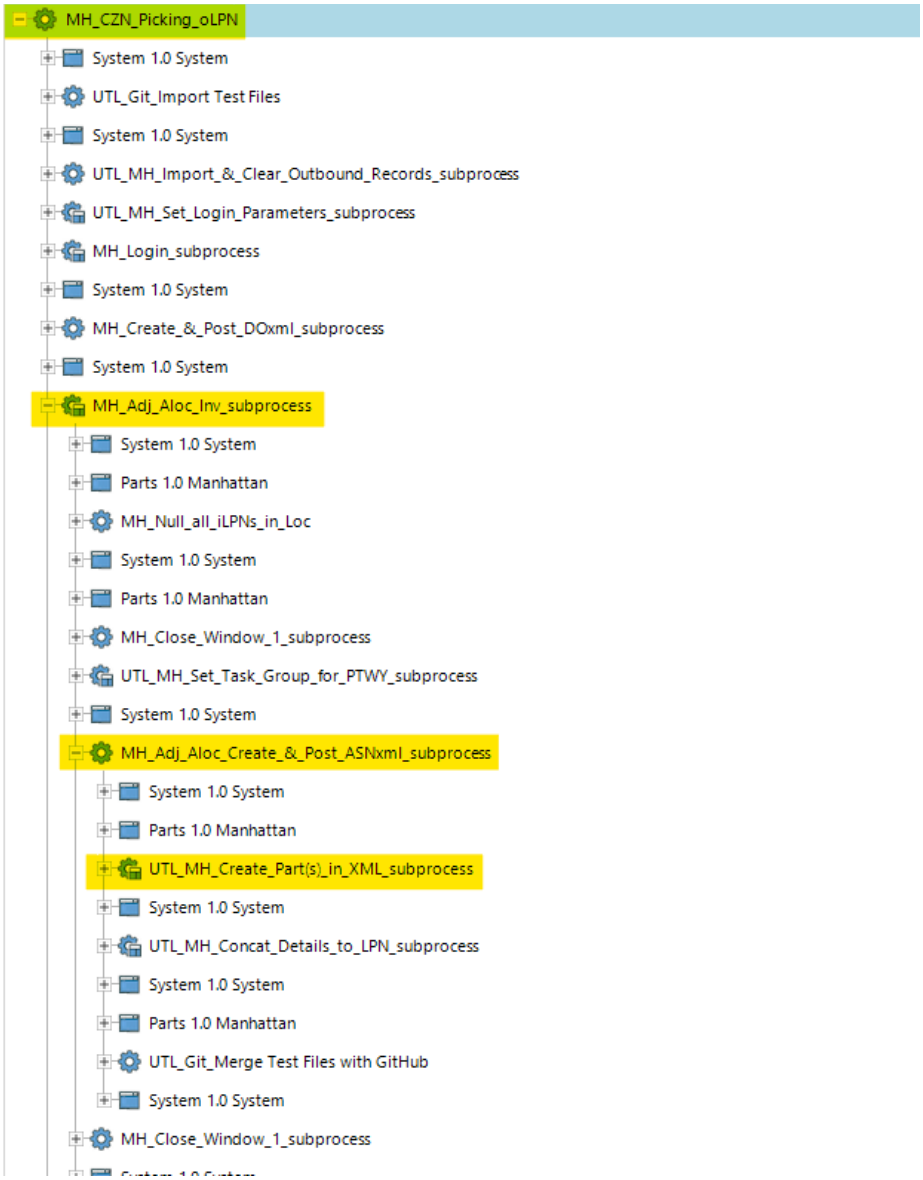
Processes:

- There are two main categories to processes – parent processes and child processes. Stacking processes, i.e., a parent having multiple children, and children of that parent having their own children, etc., can be done in Worksoft Certify to a theoretical infinite. See example below (note; the gears to the left of name denote this is a process):



Additionally, a subprocess can be used as many times, across as many scripts as we would like. If the subprocess is deleted from A process, it will remain in the B process, etc. However, be aware, if a process is edited within script A, it will change for B script, and so on. A new process can be created by simply right-clicking in appreciate Certify folder and selecting “New Process”

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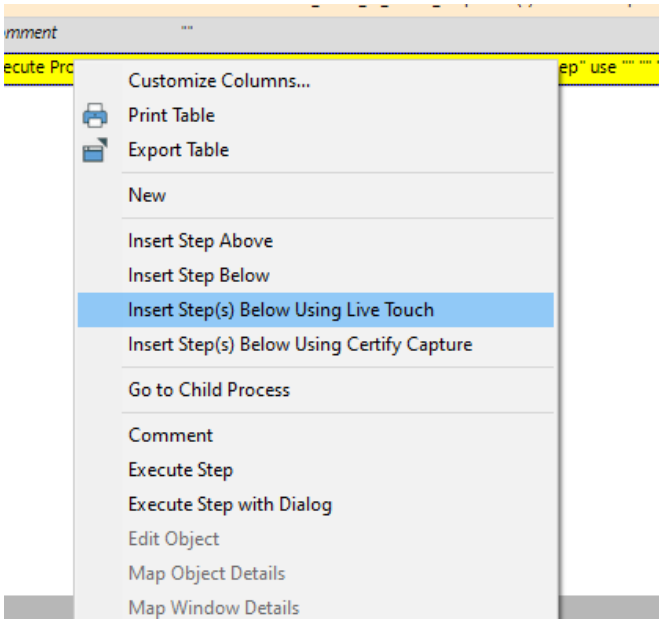
Objects:

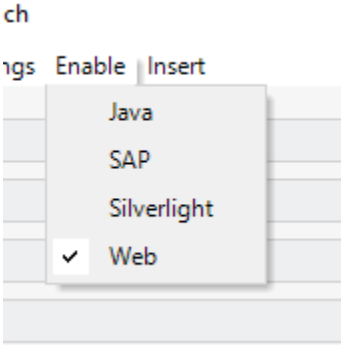
- Objects are the foundation of scripts, just like in many lower-level coding languages, they can be reused as many times as we want. Objects have a lot of power, and therefore can also be a bit overwhelming at first. Knowledge of how respective elements work within whatever application you are using Certify with (SAP, Web, etc.) is useful. Examples will be using a web-based program. There are two main ways to create objects in Certify, the first is LiveTouch. The second is Web Learn.

LiveTouch:

Open the LiveTouch window by right-clicking an existing step within your script and selecting the option shown below,



Once the window is open, if you are creating an object from a web based application, under the Enable window, deselect all options except Web,



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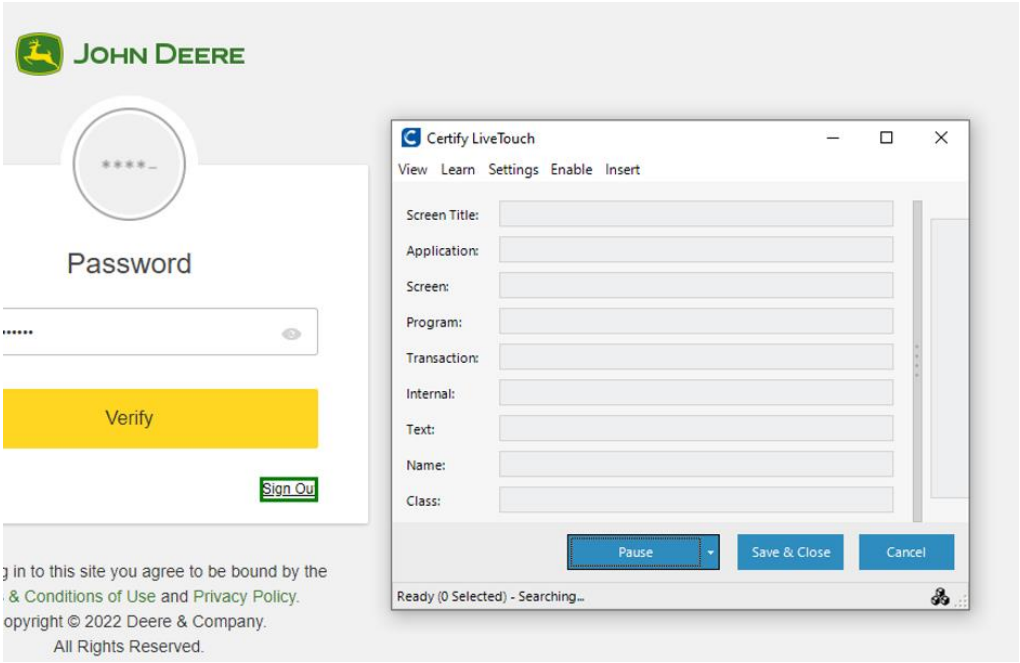
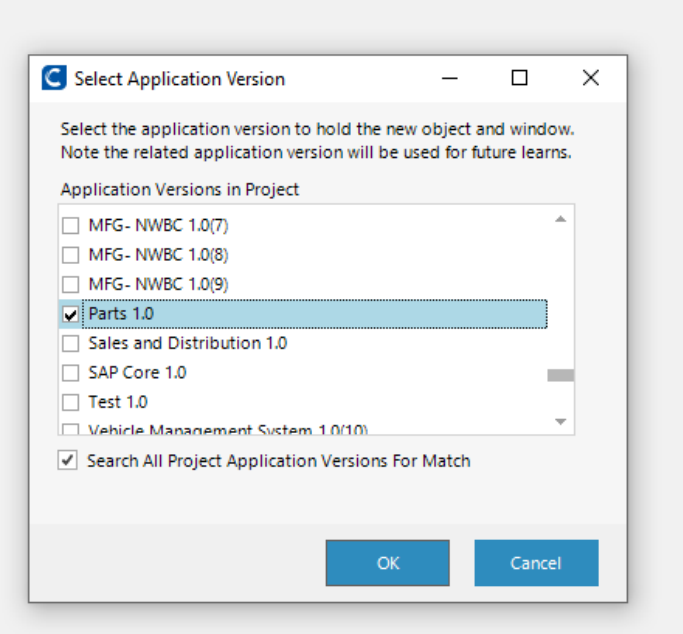
With the “Ready” status showing in the bottom left, simply click the element you would like turned into an object. Note; the selected element to be turned into an object will be highlighted, this may take a few seconds to show – give the application plenty of time to process



Next, a prompt for selecting the application version will automatically appear, in this case, we use the Parts 1.0 application, press OK after selecting the appropriate application,



Lastly, another prompt, this time to select the window will appear. The “Window” is essentially a folder from which objects can be accessed at a later time (when we want to edit said object,

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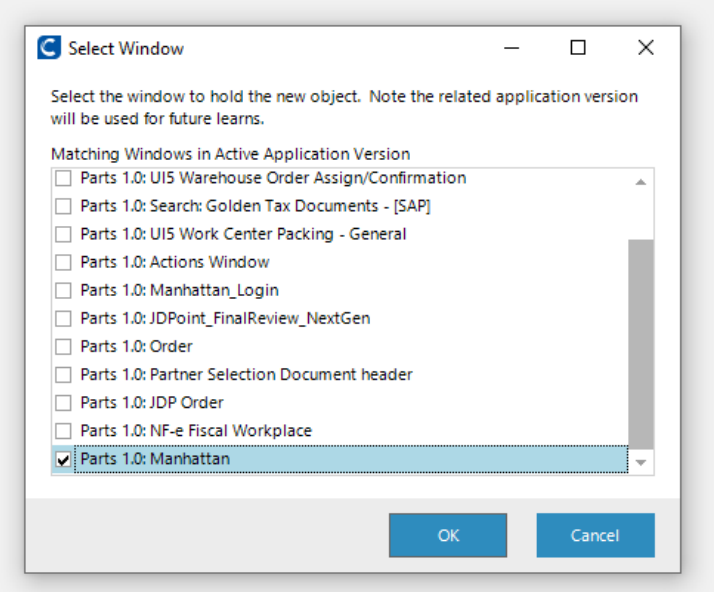
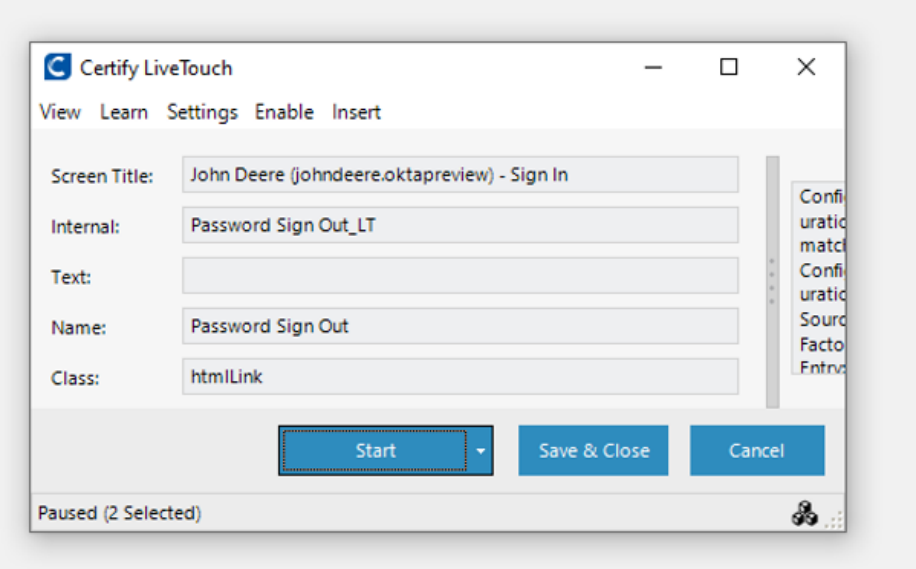
delete, etc.), in this case, we are working within the Manhattan app, so we will place the object in that window. Press OK once appropriate window is selected.



After pressing OK, the beginning LiveTouch window will appear, showing what object you have just created. Note in the bottom left, it will tell you how many objects you have selected (and thus created). You can continue creating objects (for which a new step will be added for each in your script), or you can press Save & close to complete the process and add the object into your script.



The object will now appear within your script with a default Action attached. Click the dropdown for your new step in the Action column to select what action you want the script to perform.

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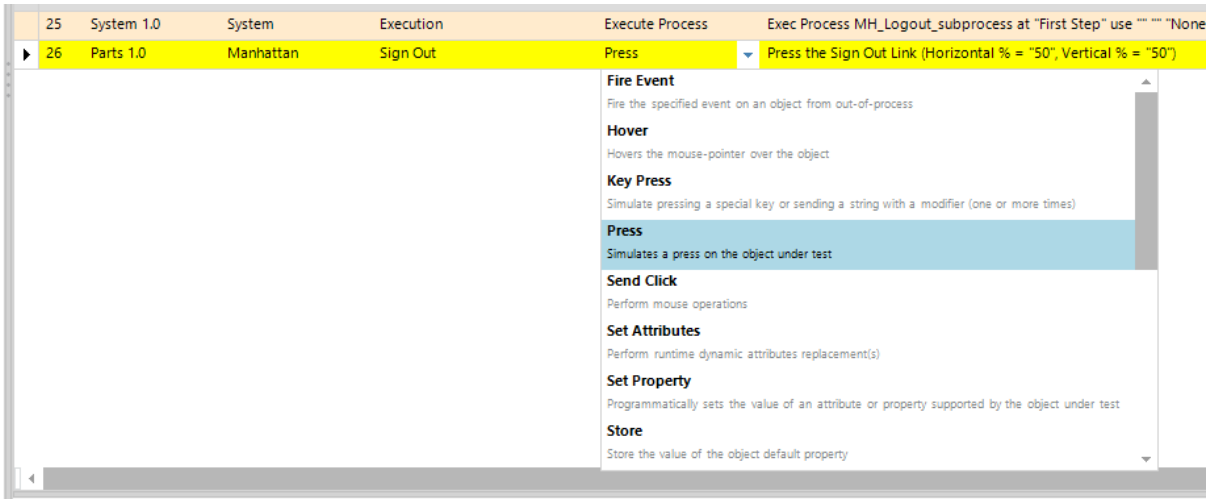
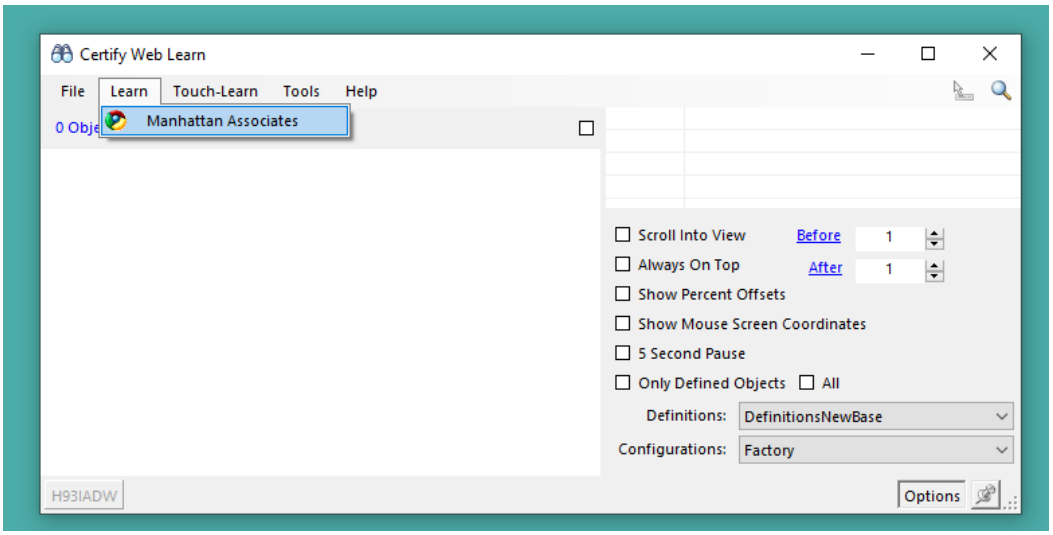


Web Learn:

Web Learn is its own application independent of other Worksoft apps. If you have it install, open as you would any other program. As per the name, this will only work for web based applications, such as Manhattan. With your web based app open and containing the elements you want to turn into objects, select the Learn button, and click the webpage you want it to scan – then wait for the scan process to complete (this may take several minutes depending on how much is present on the page)



After the scan is complete, select the magnifying glass in the top right, hover over the element you want, and hit right CTRL (this will find the element attributes within the raw code displayed in Web Learn).

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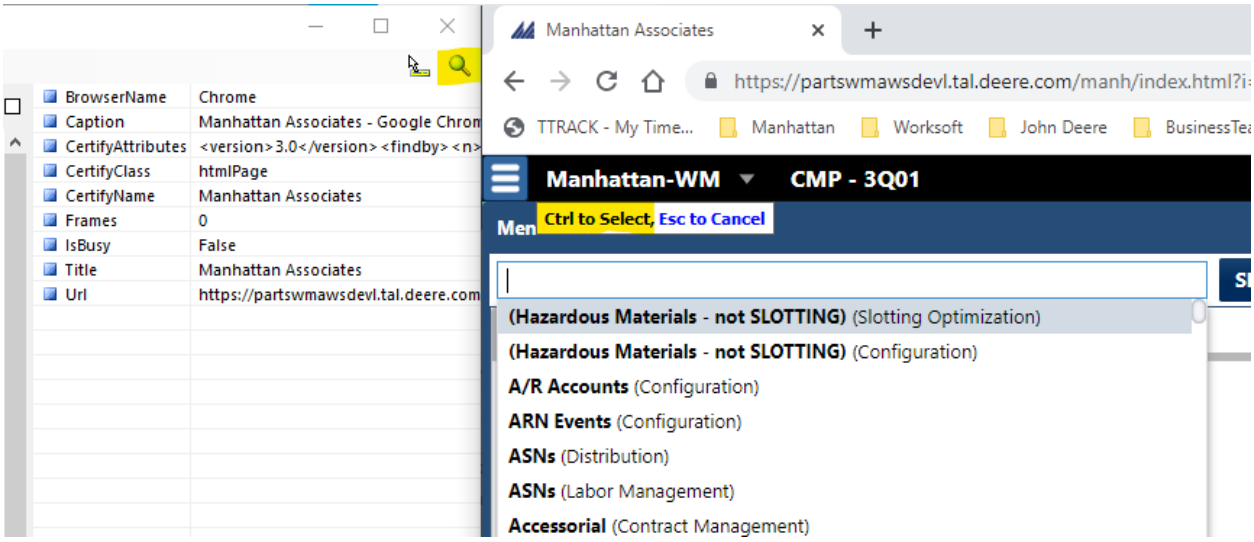
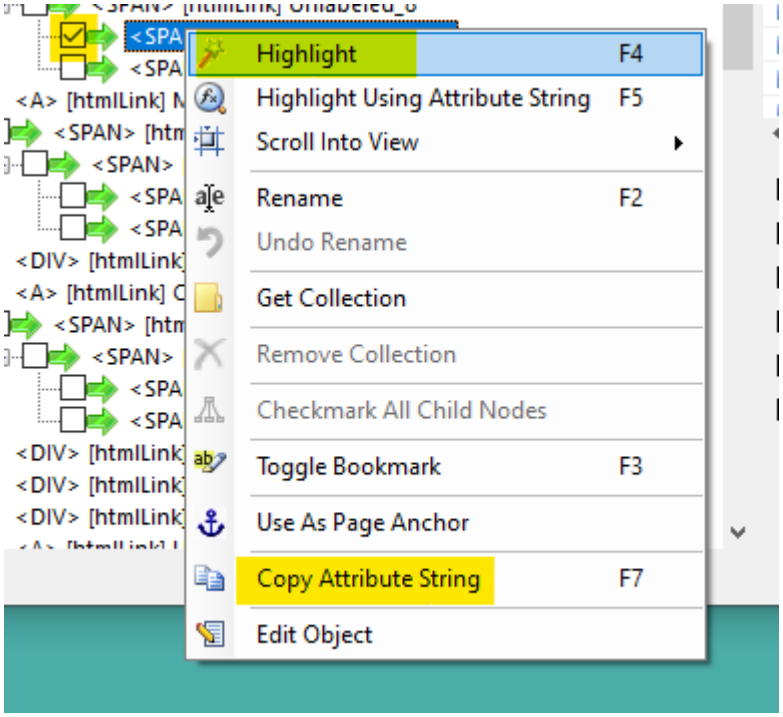


From here, there are several options, highlight the element to ensure you have the right item, then copy attribute string.



Now open Worksoft Certify, and navigate to the Applications UI (bottom left)

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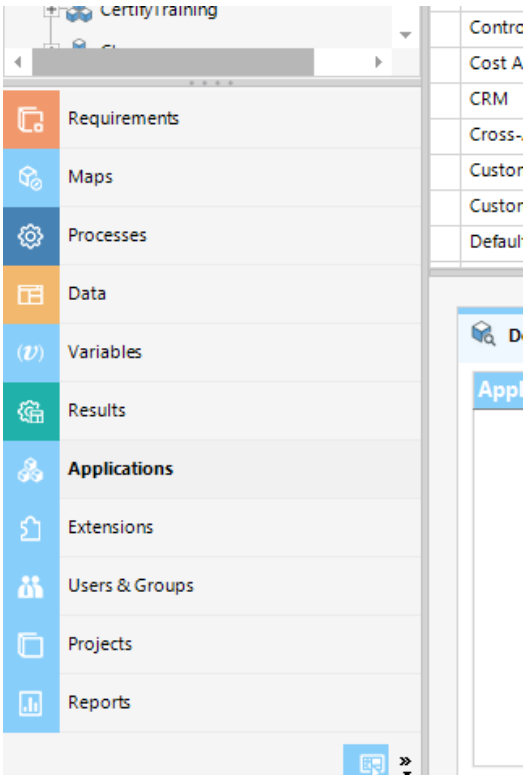
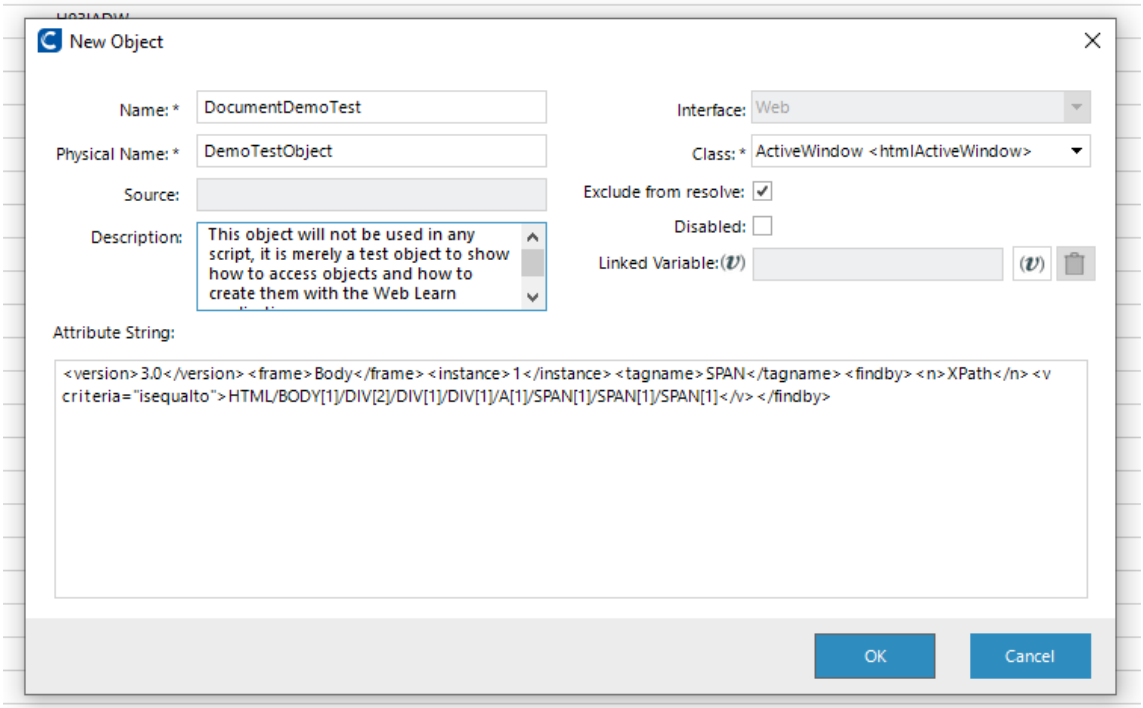


Within that UI, select the appropriate Application, and window (aka folder) you want your object to be place, right-click and select New Object. Paste the attribute string we copied from Web Learn in the last step, apply a name and description, hit OK, and now your object is created.



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To use your new object with a script, create a new step, select the application and window columns to reflect the folder you created the object in, and then select the object in the Object column (note, typing the first letter of the object name allows for quick filtering).

25	System 1.0	System	Execution	Execute Process	Exec Process MH_Logout_subprocess at "First Step" use "
26	Parts 1.0	Manhattan	DocumentDemoTest	Close Window	Close the window with caption that "Is Equal To" ""

Note again, that by finding the folder you placed a LiveTouch object in, you can edit said object, move it to a different folder, or delete it as necessary. Additionally, the above steps using Web Learn is how we create Table objects in which you can select individual cells, etc. (not possible with LiveTouch). To create such a table, follow the above Web Learn steps, but after you selected a table cell with right CTRL, go up the raw code in Web Learn and find the parent <TABLE> tag. Copy this tags attributes into a new object to create a table object with mutable cells.

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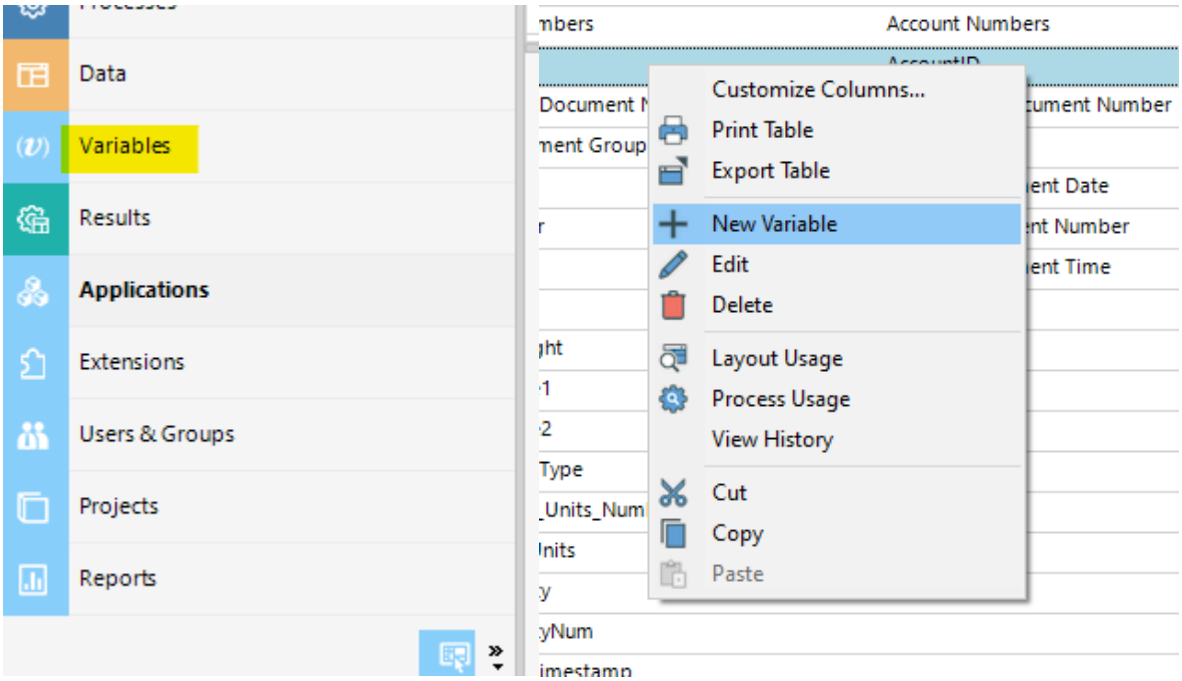
Variables:

- Variables are mutable, allow you to store values found within objects into something that can be used later in your script. They also form the foundation of what is known in Worksoft as Recordsets (discussed in the next section). There is not much to creating Variables and using them is very easy.

Open the Variables UI in the bottom left of Worksoft Certify, select the folder you want your variable created in, right-click and select New Variable



Easy as that. Noting, there are three types of variables, Text (string), Number (integer), and Date (special). Actions for each variable depend on its type. If you want to add two numbers, you will need them in the number format, and so on. Additionally, variables can have an "Initial Value." If an initial value is set, that does not make the variable static (non-mutable), so you can edit that value within a script, if needed. Nevertheless, such a function can be useful to save the space of hard coding the same value in every time XYZ script runs.

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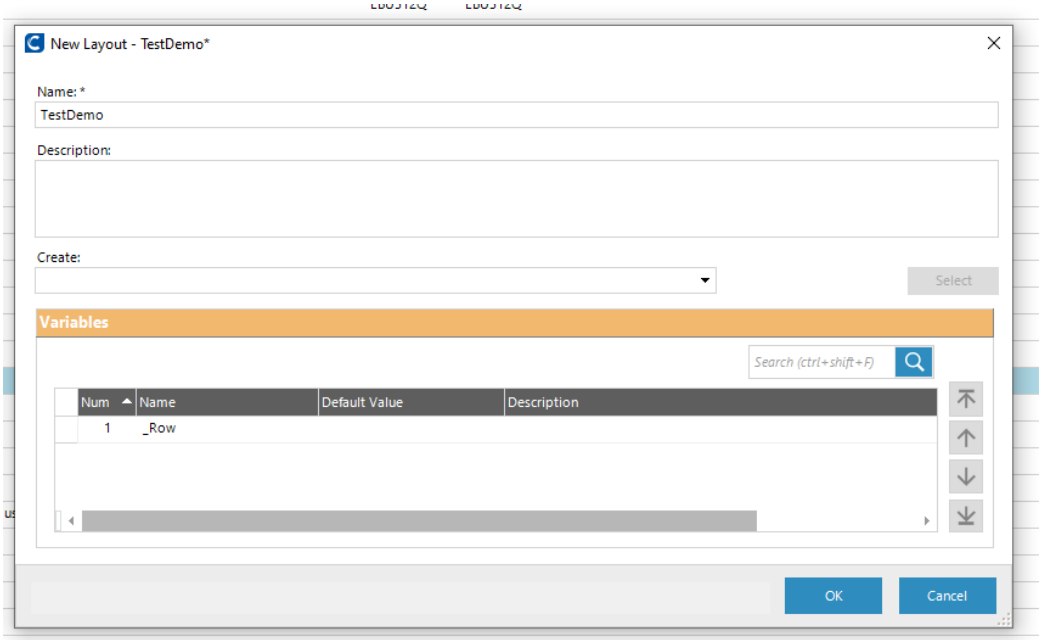
Recordsets:

- Recordsets are your greatest ally when using Worksoft Certify. They are quite simply tables. Tables that can be whatever size you make or need them to be. Tables that can be hard coded with values (for comparing, etc.), or tables that can be dynamic with values imported at X point in a script and later used at Y point in the same script. Additionally, recordsets allow exportation of data in table format (i.e., export things into Excel documents).

Recordsets and be viewed, created, and edited within the Data UI (above Variables UI – see above).

Recordsets are place within layouts. To create a layout, right-click and select New Layout, give it a name, and add at least ONE variable to the layout.



While viewing that layout, select the Recordsets tab, right-click and select New Recordset. Note, multiple recordsets can be created per layout – however, each recordset within that layout will have all the same variables that you assigned when either creating the layout or editing and adding them later on.

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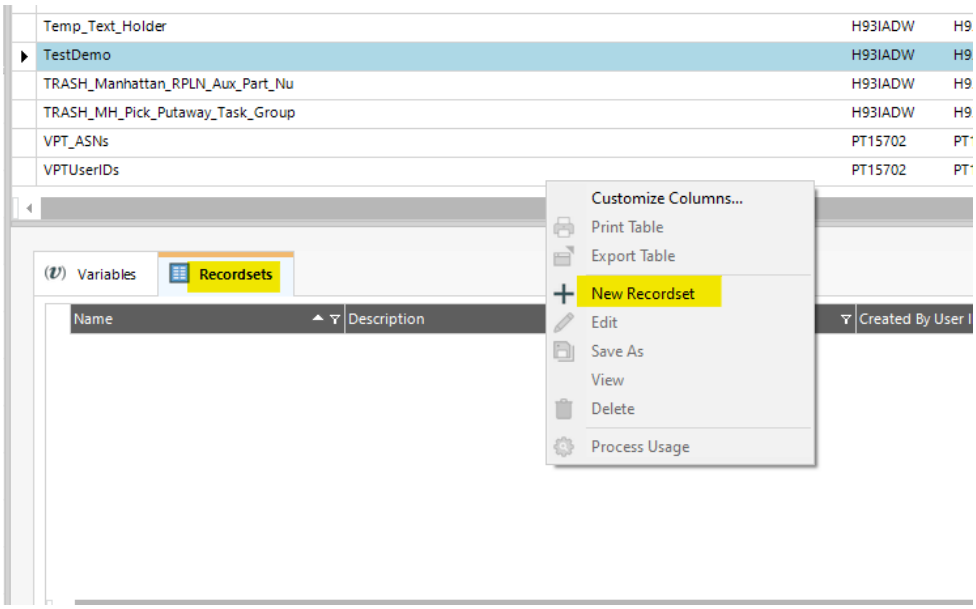
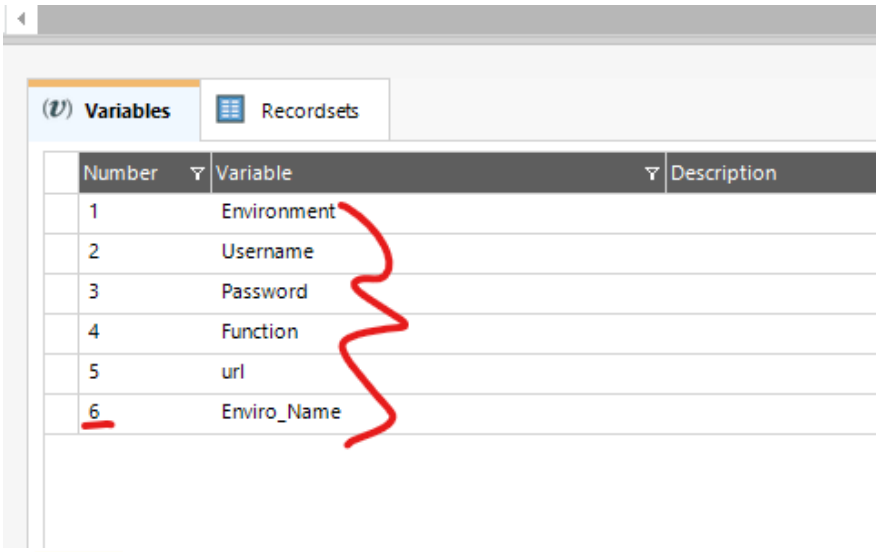
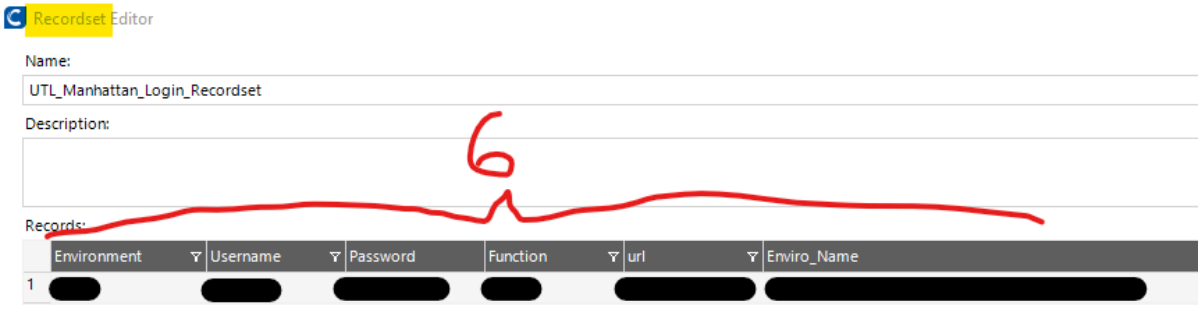


Note the below layout has six variables attached to it.



Note one of the recordsets for the above layout below and how it has the same six variables (no more, no less. Also note the variables are in the same order).



An example of recordset usage: We have just created a shipment within our warehouse application… since we cannot see the test when it is running remotely, we will need to store the shipment number into something we can access later. With a recordset or a layout having the variable “ShipmentNum” with the right Actions in our script, we can read and store the

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shipment value to the text variable “ShipmentNum,” then, when we append into our recordset, all the values set within the script will be appended as a new row in the recordset (if we had a variable for “DistributionOrderNum” in our layout but did not set it in the script before we appended, that value would be blank (unless an initial value was set for the variable). Moving on, we can now export our Recordset into an Excel file of our chosen – which can be accessed on our local machine whenever we want it. If we wanted to process this shipment later, we could do the inverse and import the values of the Excel doc into a recordset (we can then set the variables equal to those in the recordset and use them accordingly).

Understanding recordset will unlock the full potential of Certify. They are easily the most important part of any automated scripts you create.

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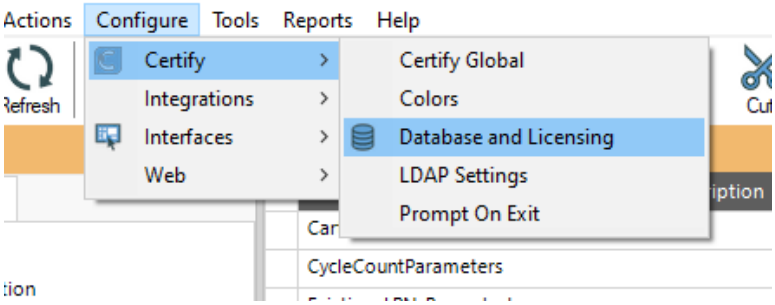
Best Practices / Tips

- The below lists some things that myself (Anthony Granato) and John Do have learned over the past one and half years using Worksoft Certify. Often times we learned the hard way, follow these tips to avoid the same mistakes and save yourself time.
    - Worksoft Certify can run slow sometimes, likely due to internet connection. You will notice inside a Deere facility; the program will run much faster than compared to an at home network. Noting, that if slowness is encountered, this is nothing to pursue by making a ticket with Worksoft, as you will not get anywhere with that. Give Certify plenty of time when saving, do not try to complete multiple things at once within Certify – you will only make it worse. If LiveTouch is running slow, make sure to only have the items you need under the "Enable" dropdown.
    - If CTM or Certify say they cannot edit Recordsets because another user has them locked (but in reality, no user has them locked), make sure you have Classic Mode enabled in the Database and Licensing UI under the Configure dropdown.



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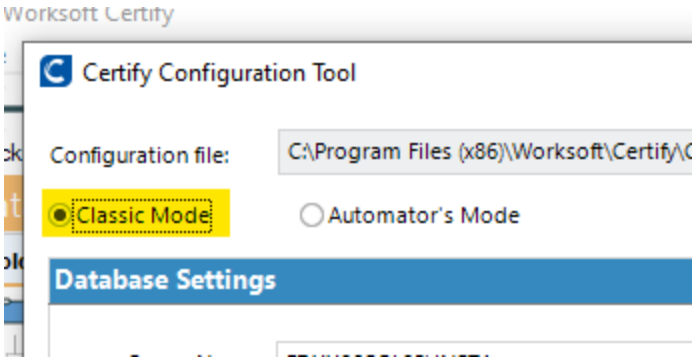
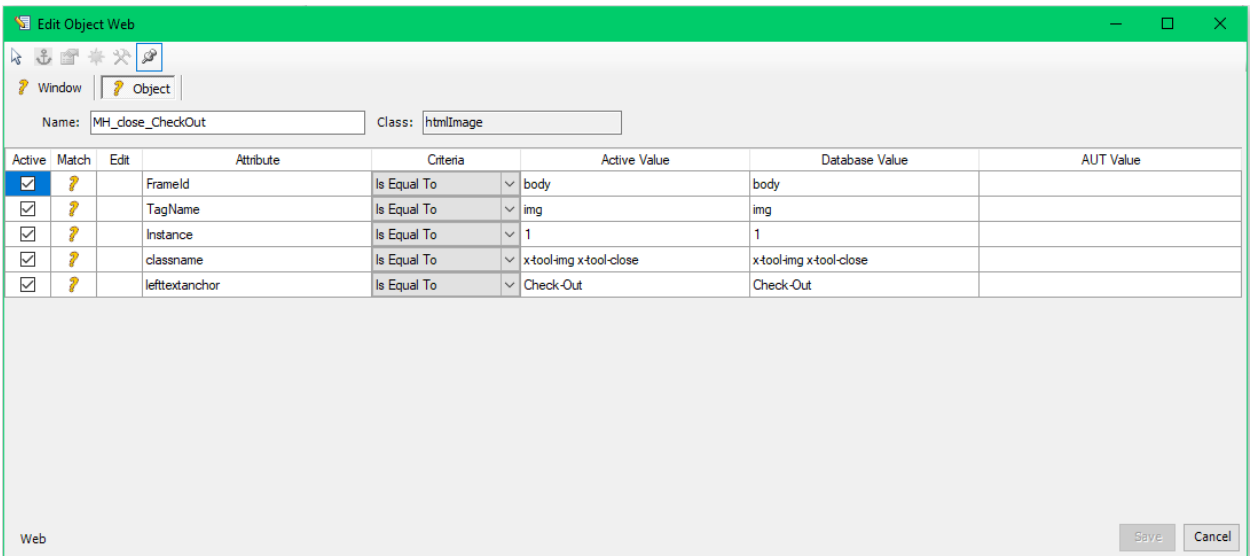


- When editing an object, this window will pop up. If you are working with multiple monitors, be careful with which monitor you view it in. For example, if you have a laptop and then a separate monitor connected to extend your desktop view and move the edit object window to that monitor, and then proceed to disconnect the monitor from your laptop, if you try to open the edit object window again it will not show up on your laptop's view as the software thinks it should still display it on your monitor.



If your script seems to be having trouble detecting objects, ensure that you have the worksoft automation extension for certify enabled in your browser. If you do not see it your browser's extensions, then go to your Windows's settings, then apps, then go to worksoft certify, click on the icon, then modify, and reinstall. This should install the extension again to your browser. This reinstall troubleshoot can also be used to try and resolve other issues if no other solutions work.

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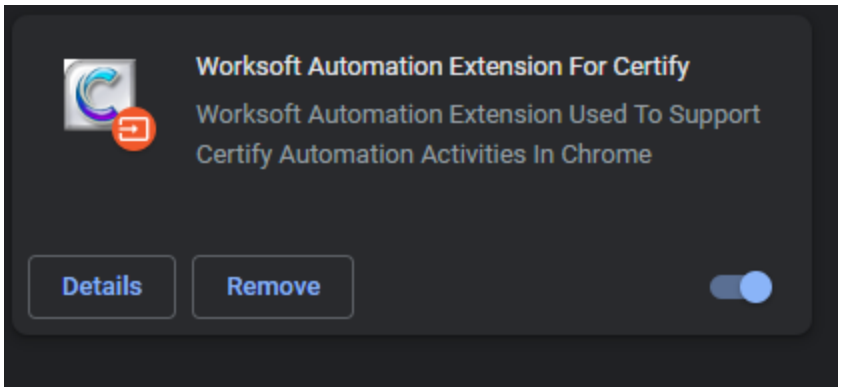

Continuous Testing Manager (CTM)

See: Worksoft CTM Documentation for all the information you will need on learning to use the CTM tool. Also see: Teams Channel - CTM install and tenants for additional information.

Manhattan tenant name: **parts-manhattanwareho**

Link to use for access to production CTM when installing agent:
https://fdxx90app853.jdnet.deere.com/Portal

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