

Extending Capabilities of the MS Excel VBO

Introduction

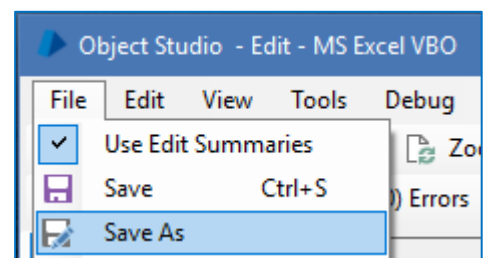
Blue Prism® is shipped with a base version of the MS Excel Visual Business Object (VBO). This VBO contains a number of common Actions which can be used to manipulate Excel Spreadsheets from a Blue Prism Process. In certain scenarios it may be required to perform additional activities within Excel which are not covered by this VBO.

This document describes the high level process for creating new Actions for new Excel functions.

Creation of an “MS Excel – Extended” Object

Blue Prism will periodically release new version of the official MS Excel VBO. To ensure that upgrading to the latest version does not result in the loss of any custom Actions it is recommended that a new object is created to contain the new Actions. The recommended name for this is “MS Excel VBO - Extended”.

This can be accomplished by opening the official VBO and clicking File > Save As and setting the name to MS Excel VBO – Extended.



Creating New Actions

New Actions can then be created to perform the required actions. These new actions should conform to the Blue Prism Development Best Practices (which can be found on the Blue Prism Portal). This ensures that new Actions are generic and can be utilized by all future Processes.

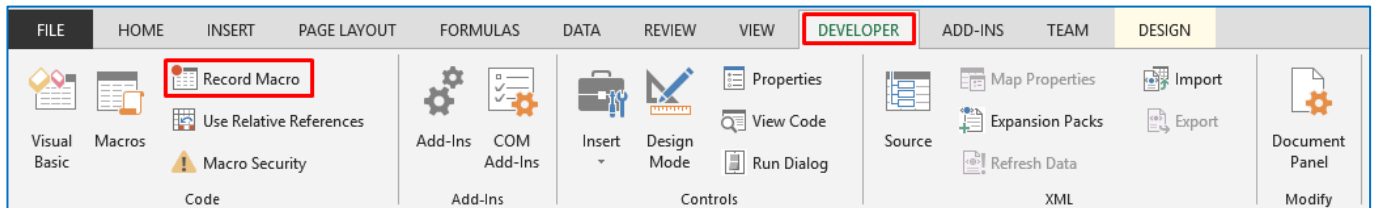
It is also important to thoroughly complete the Object documentation to ensure that future modellers are easily able to identify the pre-requisites for successful execution. This should, at a minimum, include the population of the below:

- Page Description
- Action Preconditions (*e.g. The range to be edited must already be active and highlighted*)
- Action Postconditions (*e.g. will the active cell change after completion?*)
- Action Input Descriptions (including any default values)
- Action Output Descriptions

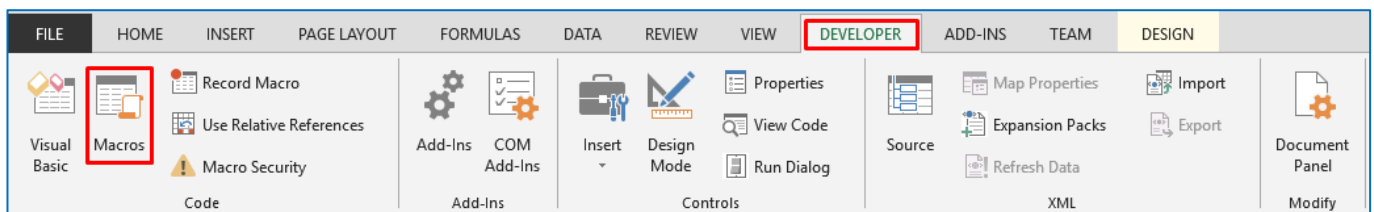
Recording Steps to Generate .Net Code

The creation of new Actions should be done only by a modeller with .Net experience. But it is possible to generate some of the required code using Excel's built in macro functionality. This can then be used as a basis for the new code within Blue Prism.

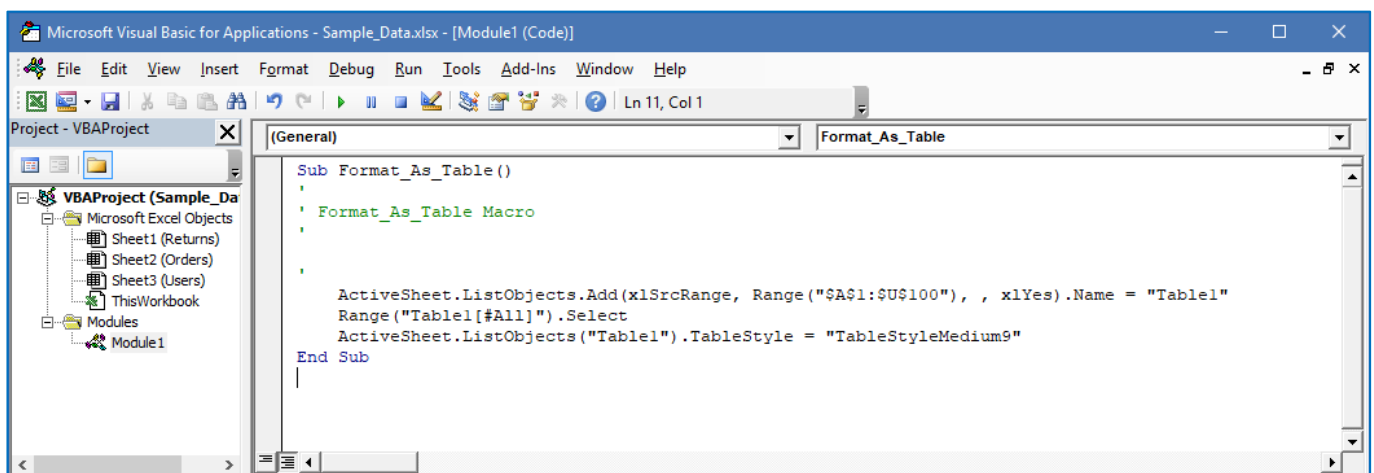
The Developer tab should be enabled from within Excel's options. The Record Macro button can then be used to record the user interactions with the screen to accomplish the required functions.



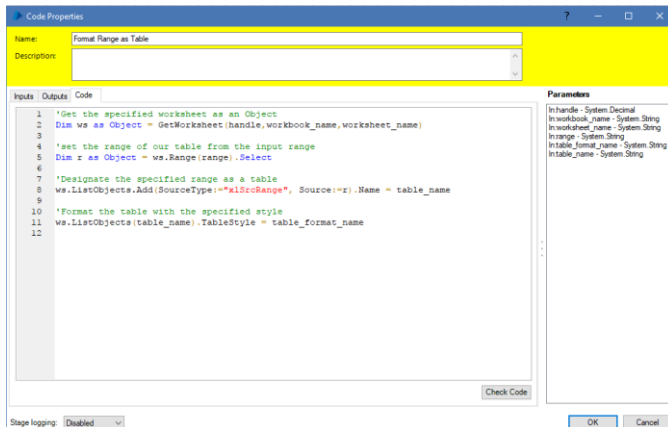
The Macros button can then be used to view the auto-generated code.



The code that is produced by Excel will not be suitable for a direct copy and paste into a Blue Prism Code Stage. But it can be used as a basis for the Action.



Below is a sample of how the above code would be used within a Blue Prism Code Stage.



The code stage has been made more generic and reusable by parameterizing all of the variables and allowing the consuming process to specify the Handle, Workbook, Worksheet, Range and Table Style. There is also adequate commenting to allow future developers to easily understand the code.

Modification of Existing Actions

As with all Blue Prism Objects/Actions, it is critical to understand the impact of any modifications that you make on existing processes.

- Give any new inputs default values (so that old processes are not forced to be changed)
- Removing any inputs should be avoided as it may remove functionality and flexibility that is being relied upon by existing processes
- Removing outputs should be avoided as they may be required to make decisions in existing processes
- Changing Exception Messages should be avoided as process level logic may depend on the exact wording of Exception Messages

Support with Creation of New Actions

Extending these vital shared components is something that should only be completed by a competent and trained .Net developer. As the risks that can be introduced by changing existing/functioning Actions can cause problems across many existing Processes.

In addition, the Blue Prism forums are a great place to discuss new Actions and get assistance with coding.

Unfortunately the Blue Prism support team are not able to assist with the creation of such Actions. However if you have suggestions for enhancements to the standard Object then these can be suggested through the Blue Prism Portal.