SELECTORS IN UIPATH

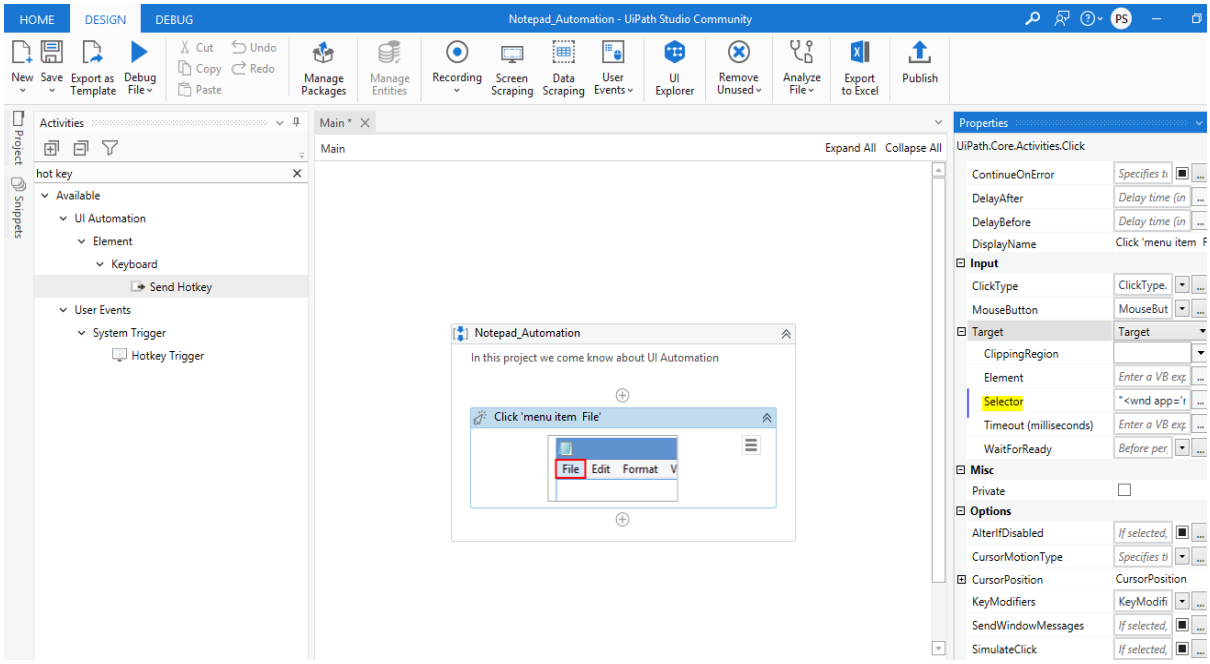
Why we go for selectors?

To automate specific actions in the user interface, you are required to interact with various windows, buttons, drop-down lists and many others. Most RPA products do this by relying on the screen position of UI elements, a method that is not at all dependable. To overcome this problem, UiPath Studio uses what we call selectors

What is a selector?

Selectors are generated automatically ever time we use an activity that interacts with graphical user interface elements

A selector in uipath Studio is a feature that enables the identification of the user interface elements through it's address and attributes stored as xml fragments

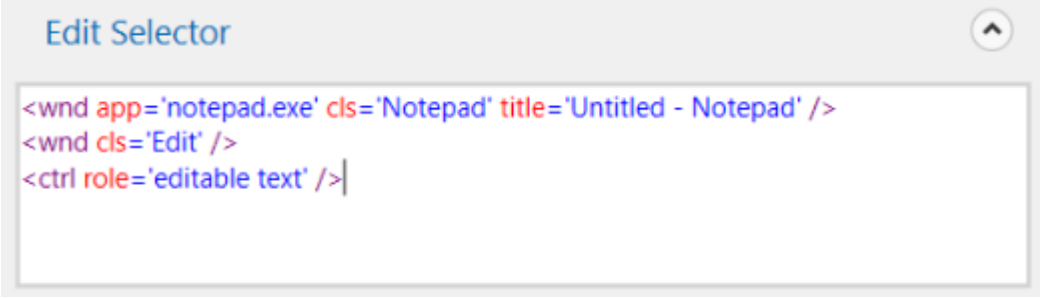


When we click file on the notepad the selectors appear like below

```
<wnd app='notepad.exe' cls='Notepad' title='Untitled - Notepad' />
<ctrl automationid='MenuBar' name='Application' role='menu bar' />
<ctrl name='File' role='menu item' />
```

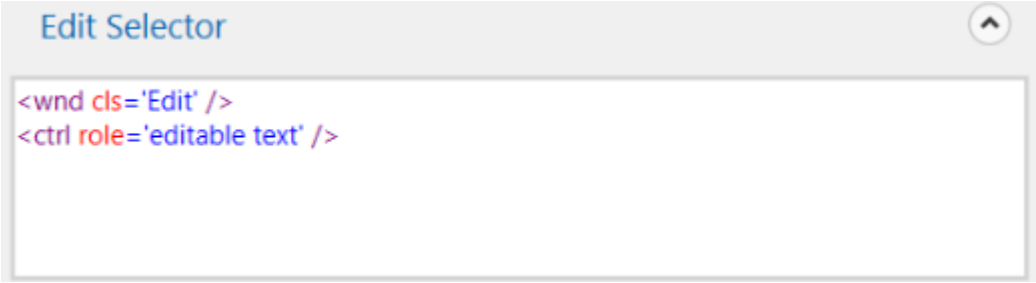
Full selectors:

Contain all the elements needed to identify a UI element, including the top-level window
Generated by the Basic recorder
Recommended when switching between multiple windows
Example of a full selector for the editable panel in Notepad:



Partial selectors:

Generated by the Desktop recorder
Do not contain information about the top-level window
Activities containing partial selectors are enclosed in a container (Attach Browser or Attach Window) that contains a full selector of the top-level window
Recommended when performing multiple actions in the same window
Example of a partial selector for the editable panel in Notepad



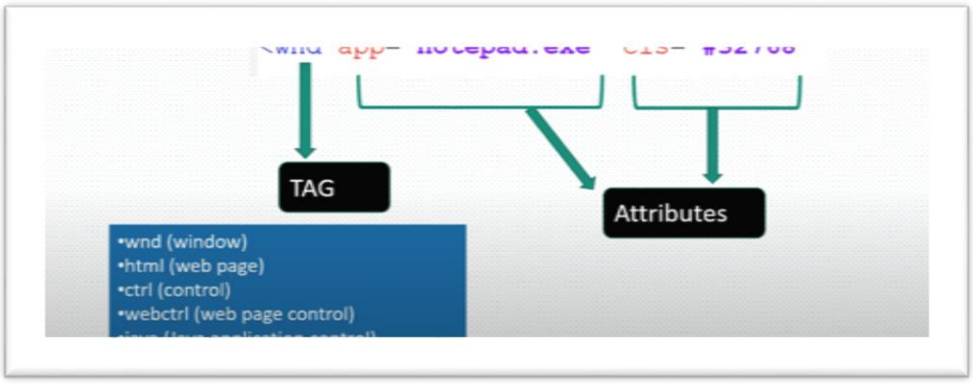
How the selectos made?

Selectos are made of nodes

UI(user interface) are bulid using a series of containers nested one inside the other

The last line is the actual identifier of the UI element,the upper lines are successive parents and the first line is generally known as the root node

Each node is of tags and attributes



There are two types of Wildcards in UiPath:

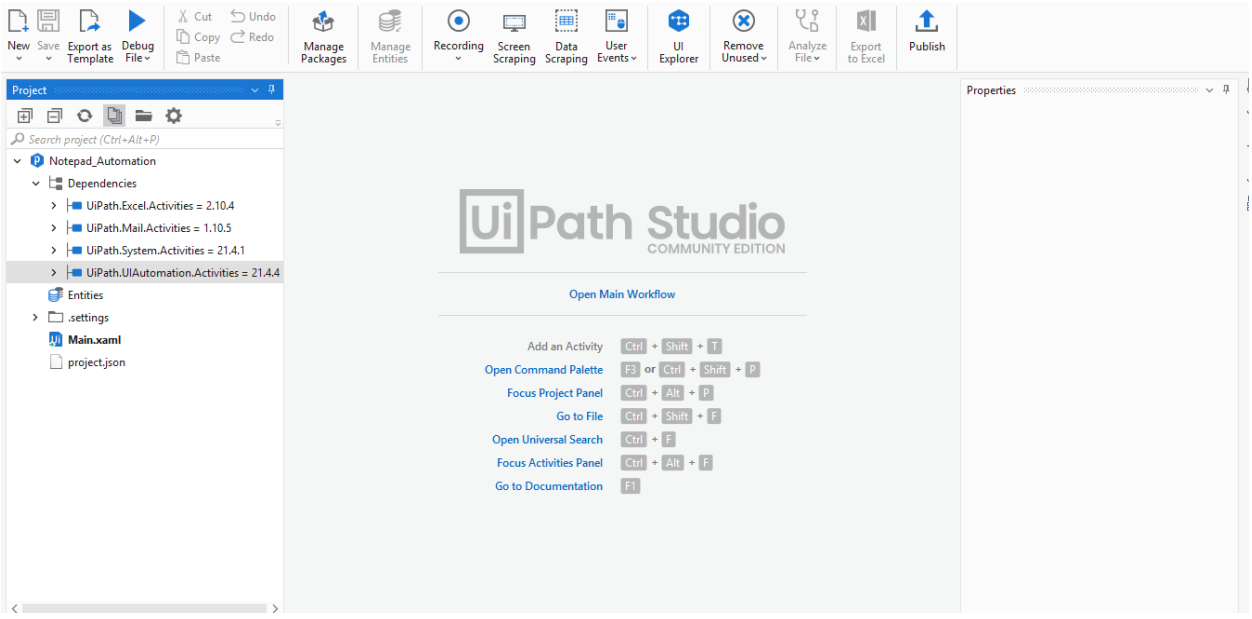
- **Asterisk (*):** It replaces zero or more characters.
- **Question mark (?):** It replaces a single character

What is UI Explore?

UI Explore ia an advanced tool that enables you to create a custom selector for a specific UI Element

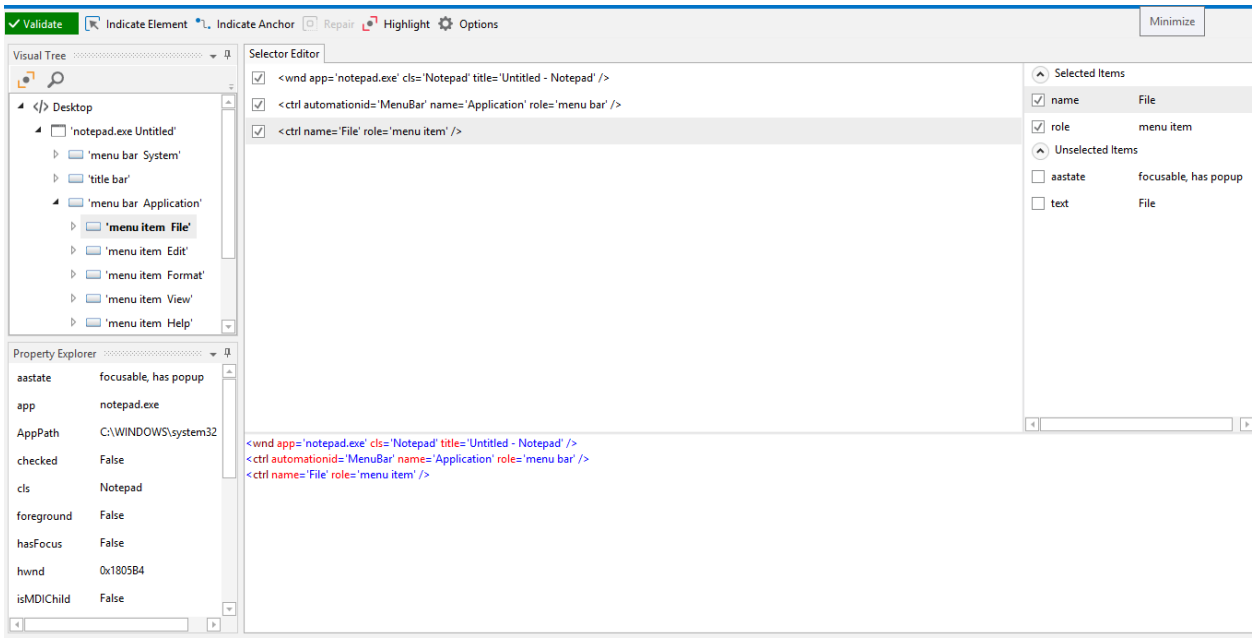
Available as a standalone tool we can download from the Resource center in your Automation Cloud instance

If we have the uipath.UIAutomation.Activities pack installes as a dependency for the current project, the UI Explorer button will appear in the Ribbon



Once you click on UI explorer the page opens like below it will have

- Visual Tree
- Property Explorer
- Selector editor
- Selected item



Why& when UI Explorer?

The UI Explorer is the functionality in UiPath studio that allows analyzing and editing selectors

The UI Explorer displays all the available tags and attributes and gives the option to check them in or out

Has a status button to check the state of the selector

Whenever the selectors that were automatically generated are not stable or adaptable enough

Validate button:

The button shows the ststus of the selector by checkingthe validity of the selector definition and the visibility of the target element on the screen

UI Frameworks:

Changes the technology used to determine UI elements and their selectors. The following options are available:

Default – UiPath proprietary method. Usually works fine with all types of user interfaces.

Active Accessibility – an eariler solution from Microsoft for making apps accessible. It is recommended that you use this option with legacy software, when the Default one does not work.

UI Automation – the improved accessibility model from Microsoft. It is recommended that you use this option with newer apps, when the Default one does not work.

Highlight:

To highlight the web element which we select we use this option.

This will enable when we select the web element

Repair:

Repair will enable when the selector is wrong

When to use property Explorer?

Displays all the attributes that a specified UI object can have, including the ones that do not appear in the selector. They cannot be changed.

When you want to start an activity after a certain attribute changed its value(using the wait attribute activity)

When you want to change the value of an attribute on a webpage, like its visibility(using the set attribute activity)

When you want to check the state of a certain UI element by checking on an attribute(using the get attribute activity)

For any RPA Implementations/ resources in your organization please reach out to rpa@gxplabs.com