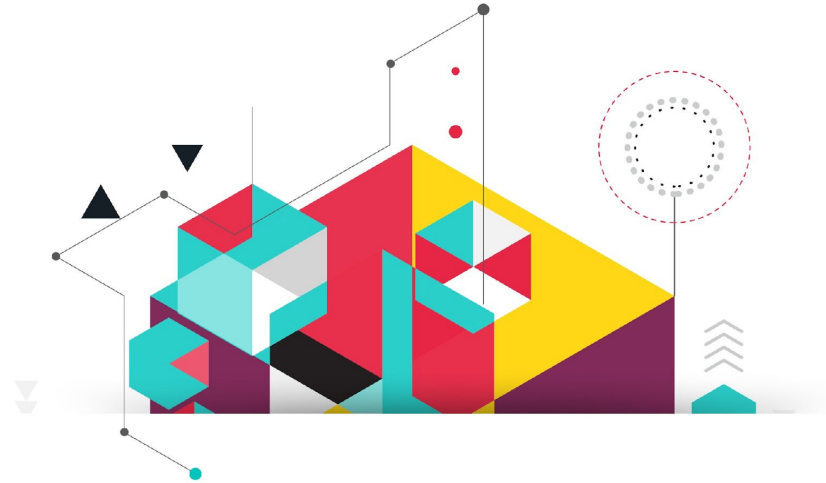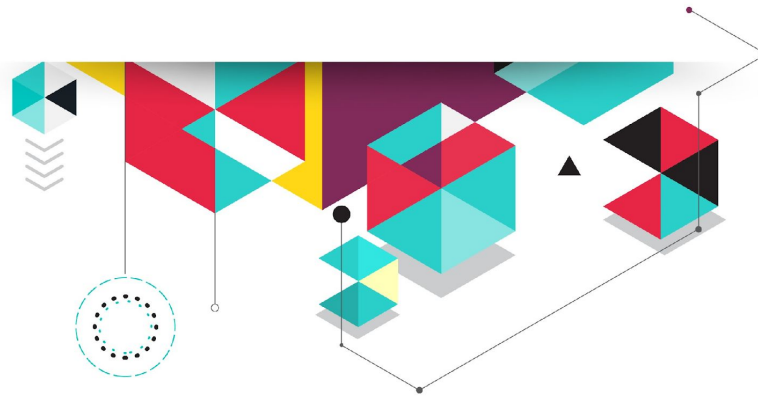# LESSON 5 – ADVANCED UI INTERACTION - RECAP

Overview

This chapter covered the User Interface interactions and their main corresponding methods, with their pros and cons. You have also been introduced to the **Data Scraping Wizard**.

Takeaways

Input actions are those that take some direct actions on the entity you are automating, making it **do** something.

Output actions are those that pull information **out** of the entity you are working with.

Input actions are split into 3 methods:

	Compatibility	Background	Speed	Hotkeys	Empty field
Default	100%		50%	YES	
Window Messages	80%	YES	50%	YES	
Simulate Type/Click	95%	YES	100%		YES

The **Default** method uses the mouse and keyboard drivers to simulate an actual human operating them.

Takeaways

Output actions that do **Screen Scraping** are split into 3 methods:

	Speed	Accuracy	Background	Text Position	Hidden Text	Citrix
Full Text	100%	100%	YES		YES	
Native	80%	100%		YES		
OCR	30%	98%		YES		YES

- An advantage of the Native method is that it also gets the text position while maintaining the accuracy of the FullText method.

- OCR uses 2 engines: **Microsoft OCR** is suitable for large images, while **Google's engine** works better with smaller images and also provides a few more options like **scale** or **invert**.

- **Data Scraping** allows you to extract structured data by pointing the first and second element you want to extract (and, when required, the link to the next page).

- Use **Extract correlated data** when you need more than 1 piece of information from each element and **Max Number Of Results** to limit the amount of items you get.

Best practices

- Make sure you always choose the right input method that suits your needs.

- The recommended input method is **Simulate** because it's the fastest.

- The recommended output method is **FullText** because it's fast and accurate**.**

- You should only use OCR only as a last resort.

Useful links

About UI Elements