

Hands-On Training



NTT ADVANCED TECHNOLOGY CORPORATION

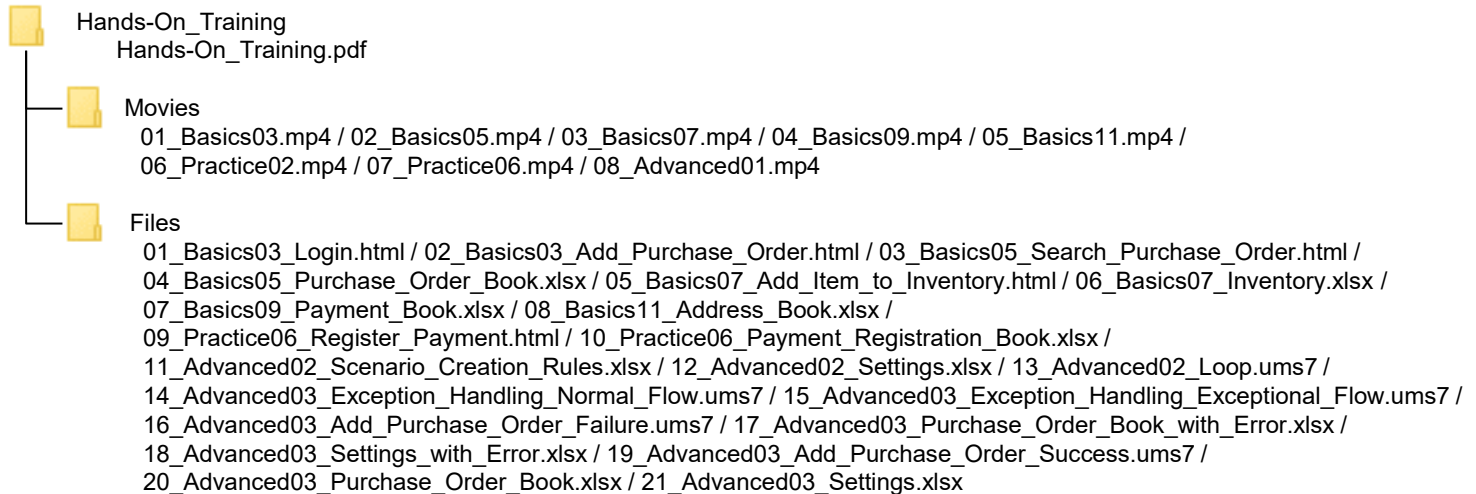
Introduction



1

Structure and learning objectives of this material

- Structure and learning objectives of this material are as follows.



Contents

Learning objectives

Chapter 1

Basic operations of WinActor

Basic operations of WinActor

Understand basic operations of WinActor



1

Structure and learning objectives of this material

- Structure and learning objectives of this material are as follows.

Chapter 2 Scenario creation		Contents	Learning objectives
Basics	Automation for click and input on a webpage	Understand how to manipulate data on a webpage Understand how to use Image Matching	
	Automation for data transfer from a webpage to Excel	Understand how to manipulate data on a webpage Understand how to transfer data with Excel	
	Automation for data transfer from Excel to an in-house system	Understand how to transfer data with an in-house system Understand how to transfer data with Excel	
	Automation for data transfer from Excel books to another Excel book	Understand how to transfer data with Excel	
	Automation for sending emails	Understand how to send emails	

1

Structure and learning objectives of this material

- Structure and learning objectives of this material are as follows.

Chapter 2 Scenario creation		Contents	Learning objectives
Practice		Loop processing for the same operation	Understand how to use loop processing
		Text editing of acquired characters and numbers	Understand editing methods
		Changing processes depending on conditions	Understand how to use conditional execution

1

Structure and learning objectives of this material

- Structure and learning objectives of this material are as follows.

Chapter 2 Scenario creation		Contents	Learning objectives
Advanced		Scenario creation using automatic recording	Create a scenario using automatic recording
		How to create a scenario that is easy to modify	Learn how to create a maintainable scenario
		Actions for troubleshooting	Learn about what to check and how to deal with it when trouble occurs

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*2 The official name of VBScript is Microsoft Visual Basic Scripting Edition.

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- The descriptions in this manual assume that users understand Windows operations and functions. For information that is not described in this manual, see the documents provided by Microsoft.

4

Notices for the use of WinActor

- To confirm notices on using WinActor prior to learning with this training manual, see "WinActor Operation Manual – Precautions for using WinActor."
- To install and register a license of WinActor, see "WinActor Installation Manual" and "WinActor Operation Manual – Preparations for Using WinActor."
- For more information on the license types, see "WinActor Operation Manual - License Types and Available Functions."
- This material is for WinActor Ver.7.5.0 or newer.

Chapter 1

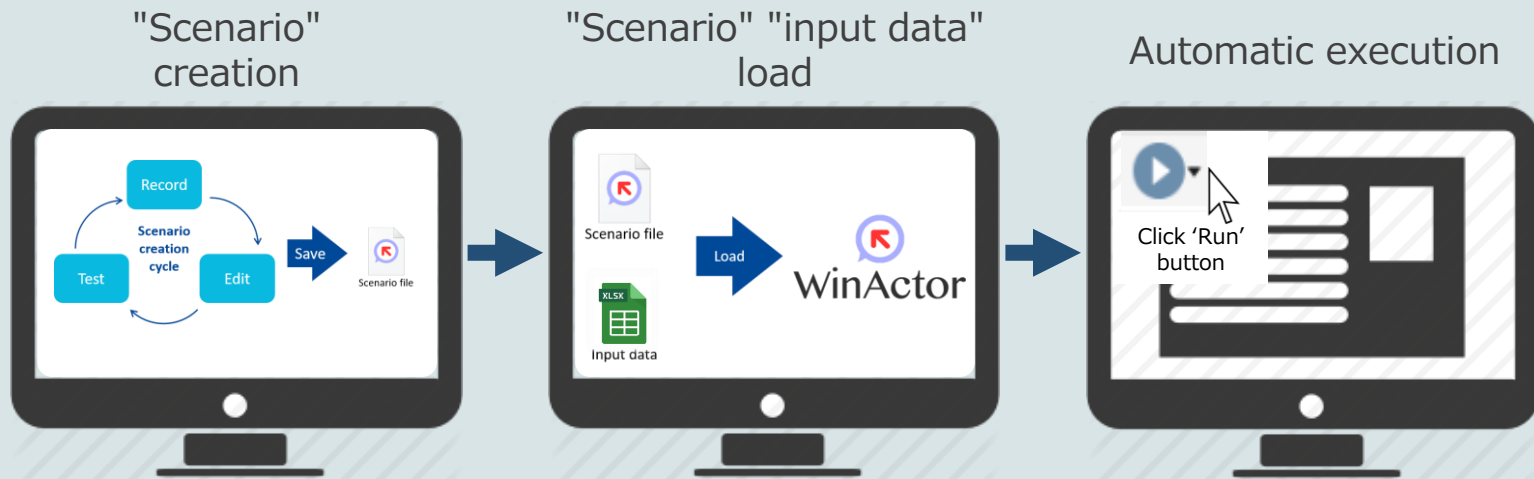
Basic operations of WinActor



1

Overview of WinActor operations

- In WinActor, you can create a **"scenario"** by repeating the cycle of recording, editing, and checking operations. You may need to load **"input data"** to run the created **"scenario."**



To create a **scenario**, you need to **define operations in the flowchart**.



You can create a **scenario** by **"defining operations manually"** or **"recording operations automatically."**

2

Basic operations of WinActor

2-1 Launching WinActor

1

Double-click the startup icon on the desktop.



If the window does not appear after double-clicking the startup icon, check the following points.

1. WinActor takes some time to start. Wait until it starts.
2. WinActor cannot run more than one instance. The WinActor that has already started may be minimized and stored in the task tray. Check the task tray.

2-2 Window of WinActor

Menu bar

Palette area

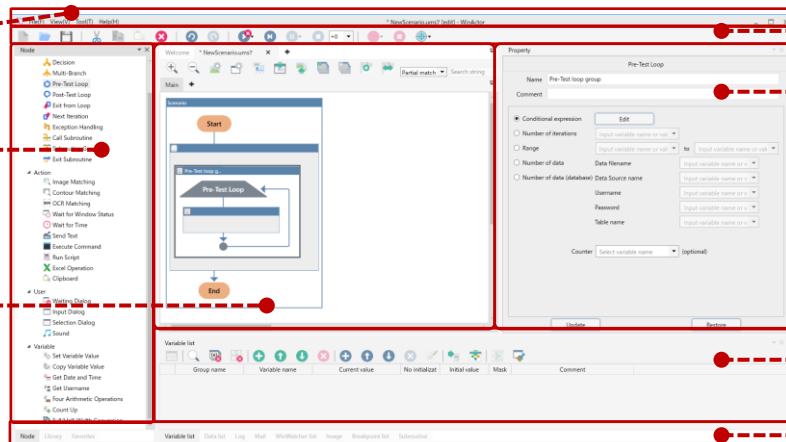
Scenario edit area

Toolbar

Property area

Function area

Status bar



For details on the window of WinActor, see "3. WinActor's Window" in WinActor Operation Manual.

2

Basic operations of WinActor

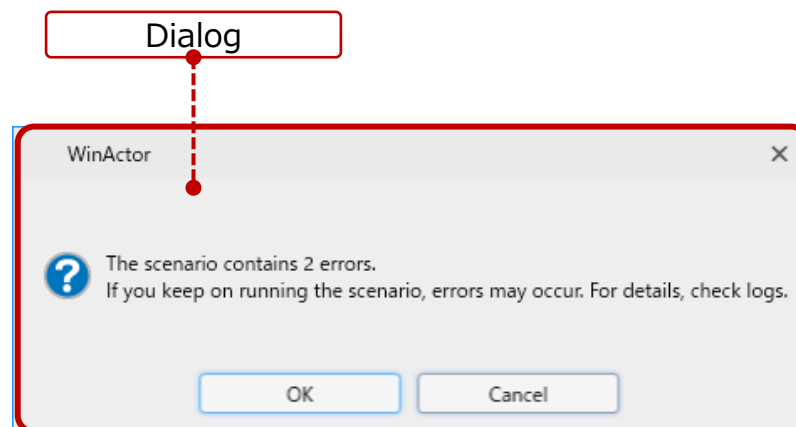
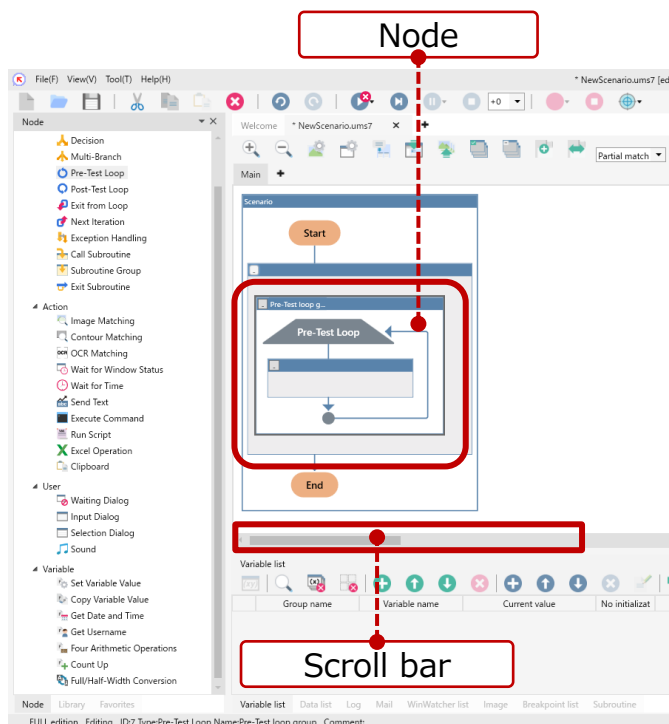
2-3 Window elements of WinActor



"Node" is a component that makes up a scenario. It is displayed as a box on the flowchart.



"Dialog" is a window displayed for user interaction. It displays information and warnings, and prompts a user to input information.



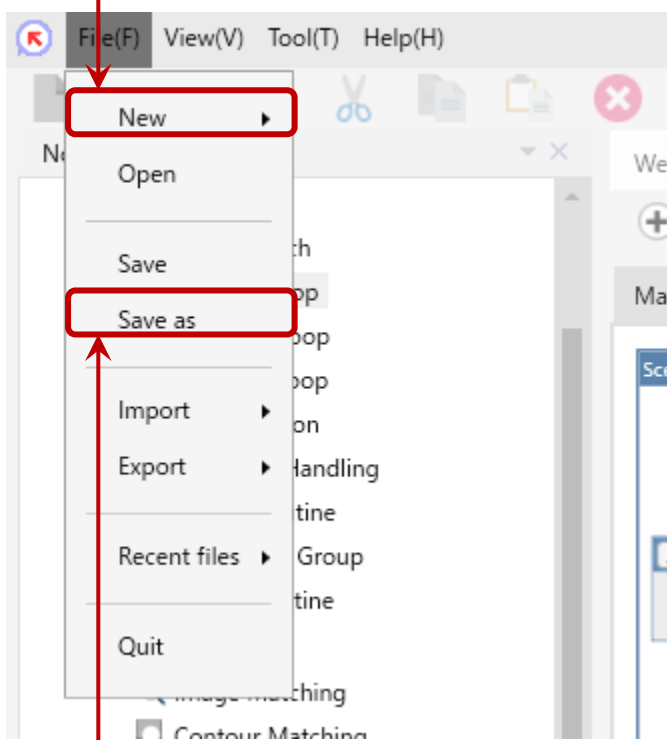
For details on the window elements of WinActor, see "7.2 Window Elements and Names" in WinActor Operation Manual.

2

Basic operations of WinActor

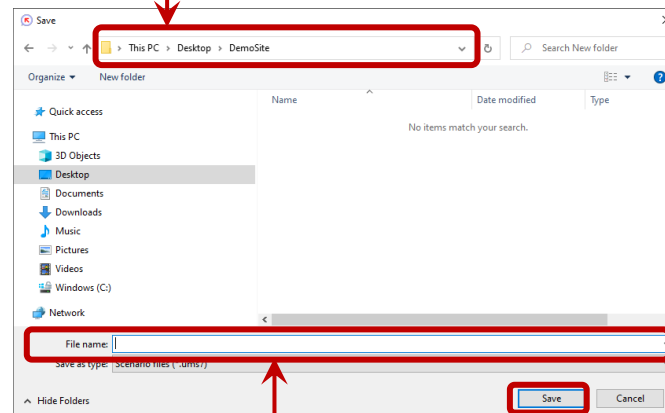
2-4 Creating a new scenario file

1 Select [File] > [New] > [New scenario] on the menu bar.



2 Select [File] > [Save as] after creating a scenario.

3 Select a folder to save a scenario file.



4 Enter a filename in the [File name] text box.

5 Click the [Save] button.



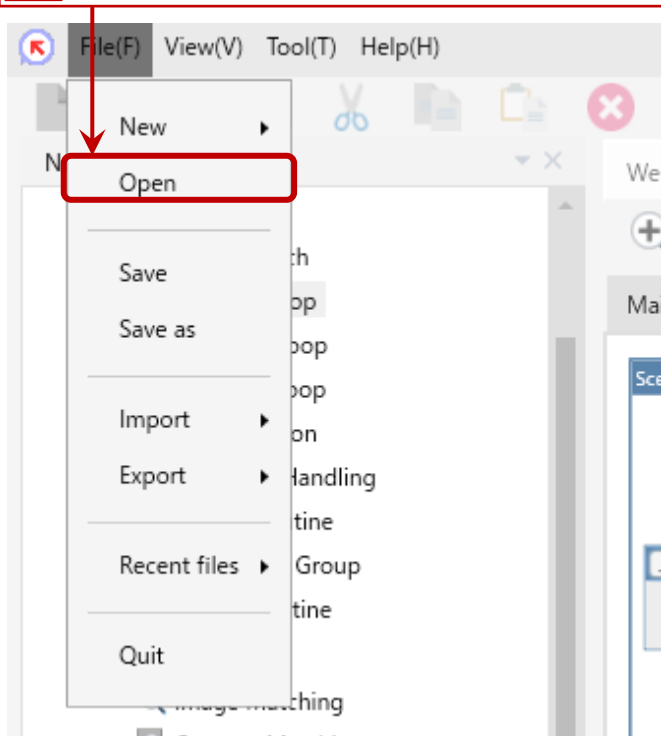
"Scenario" can be saved in a file format like Microsoft Office Word or Excel.

2

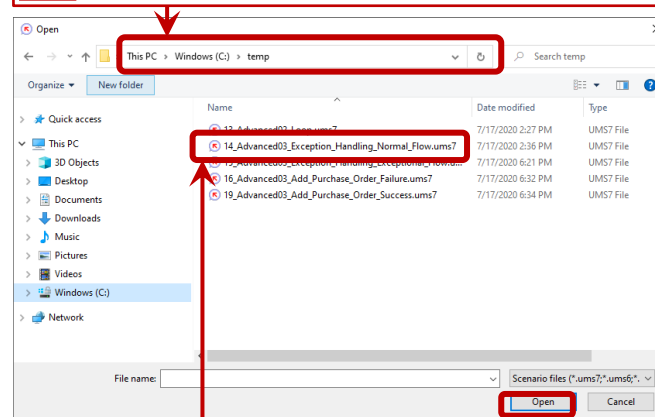
Basic operations of WinActor

2-5 Loading a scenario file

1 Select [File] > [Open] on the menu bar.

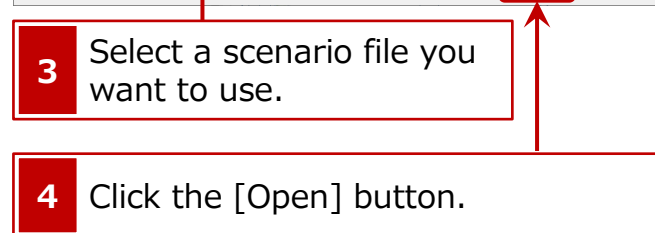


2 Select a folder where scenario files are saved.



3 Select a scenario file you want to use.

4 Click the [Open] button.

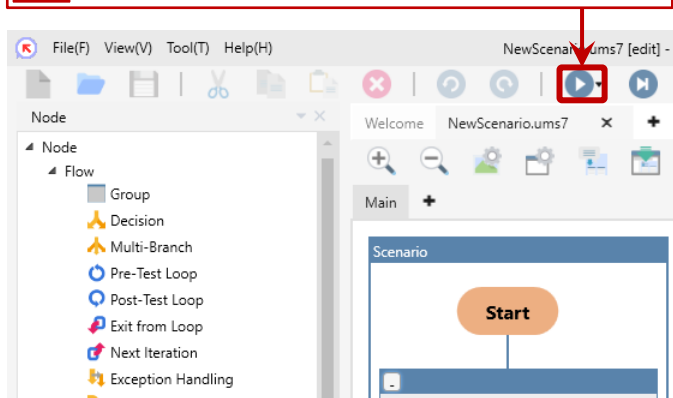


2

Basic operations of WinActor

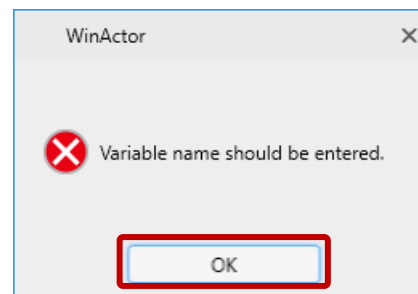
2-6-1 Running a scenario

1 Click the 'Run scenario' button.



2-6-2 Handling run-time errors

1 When an error occurs, check the error message shown in the dialog and click the [OK] button.



2 Click the 'Stop scenario' button.



3 Check the error logs and fix property settings.



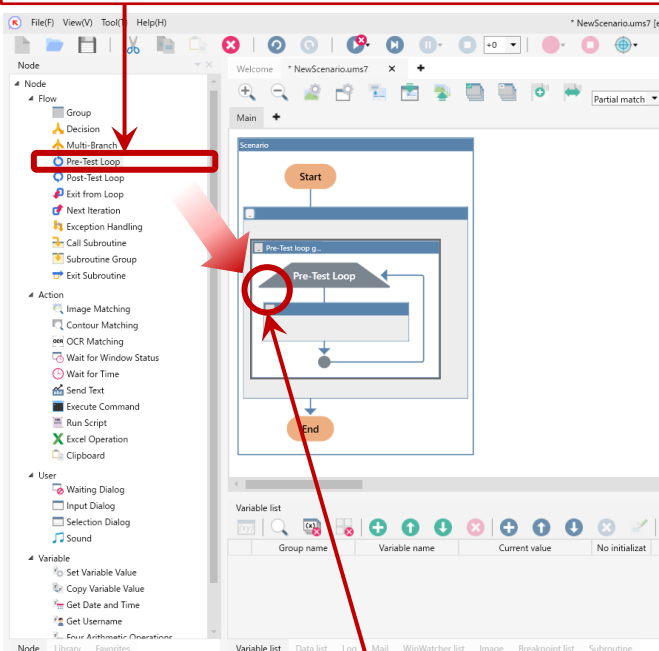
For displaying the Log pane, see 2-10 of this chapter.

2


Basic operations of WinActor

2-7-1 Creating a scenario manually

- 1 Drag a node you want to use from the Node palette.

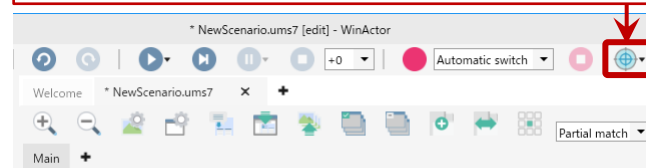


- 2 Drop it on the scenario edit area. If there is no input or any setting error, it will be displayed in a red frame.

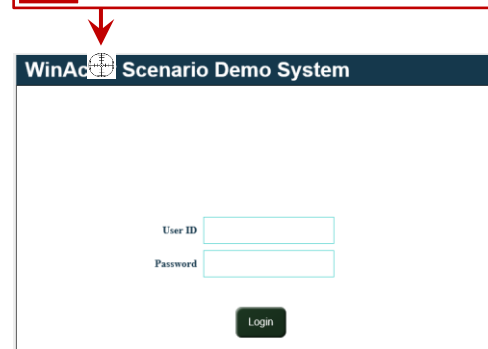
 For details on nodes, see "4. Node" in WinActor Operation Manual.

2-7-2 Creating a scenario by recording operations automatically

- 1 Click the 'Select window for recording' button on the toolbar.



- 2 Click a target to record operations.

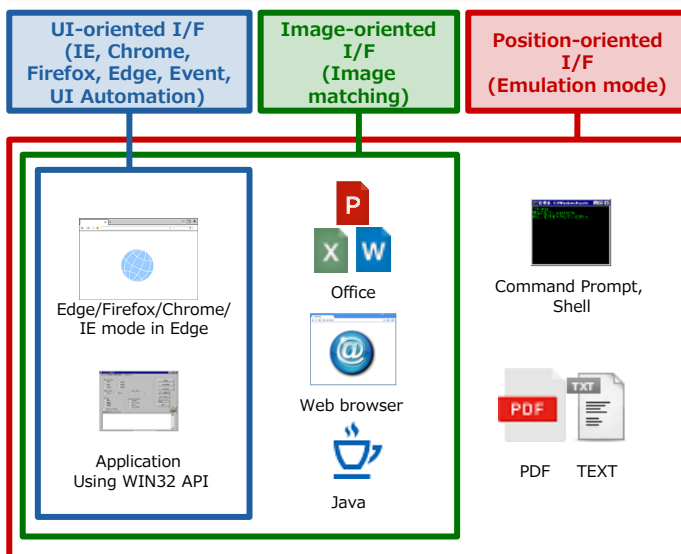


2

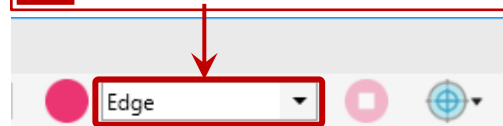
Basic operations of WinActor

2-7-2 Creating a scenario by recording operations automatically (continued)

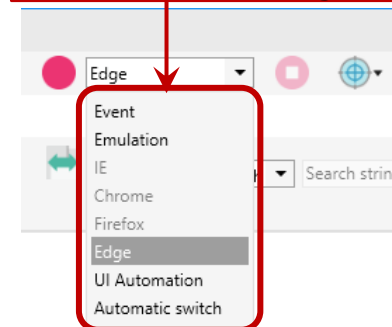
3 One of the following recording modes will be automatically selected according to the target for automatic operation recording.



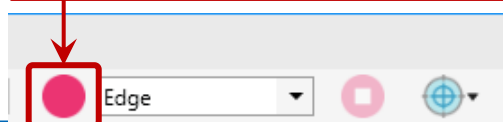
4 You can check the selected recording mode.



5 You can, if necessary, manually select the recording mode you want to use by clicking the '▼' button to the right of the recording mode window.



6 Click the 'Start recording' button.



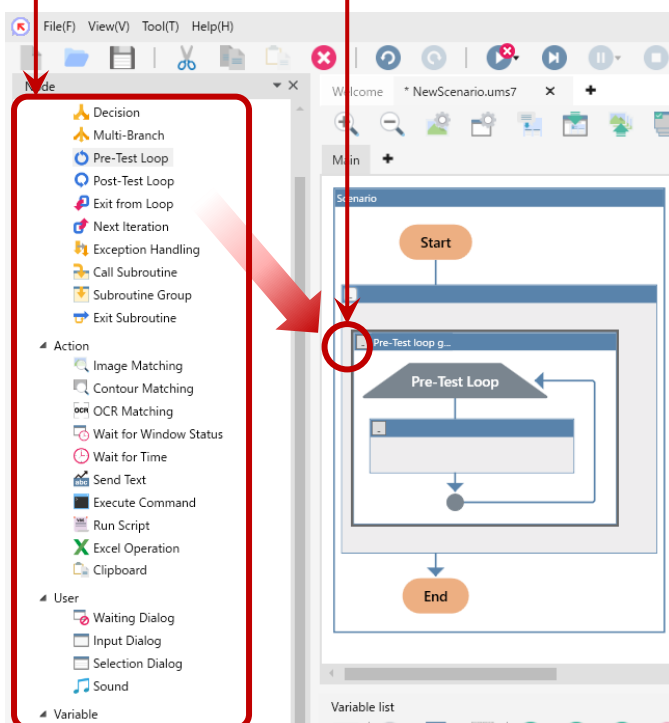
2

Basic operations of WinActor

2-8-1 Editing a scenario

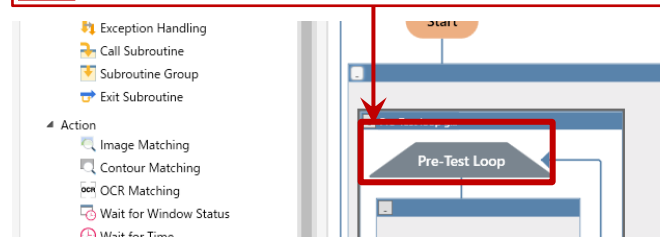
1 Drag a node you want to add from the Node palette.

2 Drop it at the appropriate position in the scenario edit area.

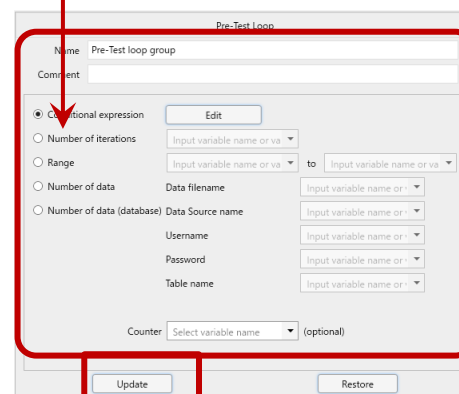


2-8-2 Editing a scenario (property pane)

1 Double-click the node on the scenario edit area.



2 Set the property items of each node.



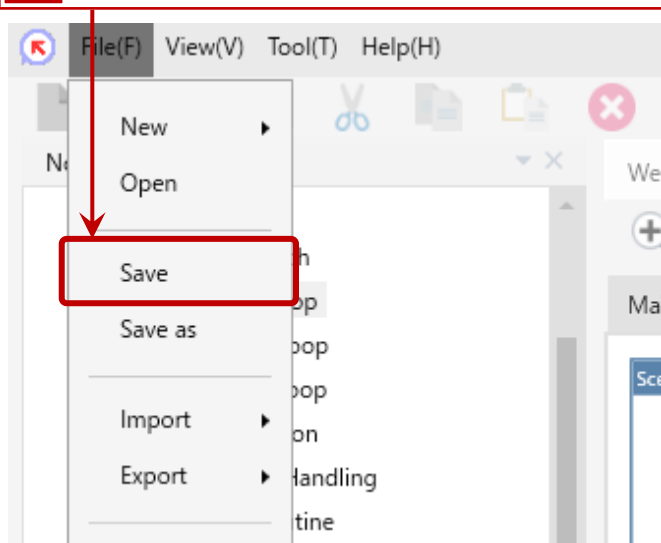
3 Click the [Update] button.

2

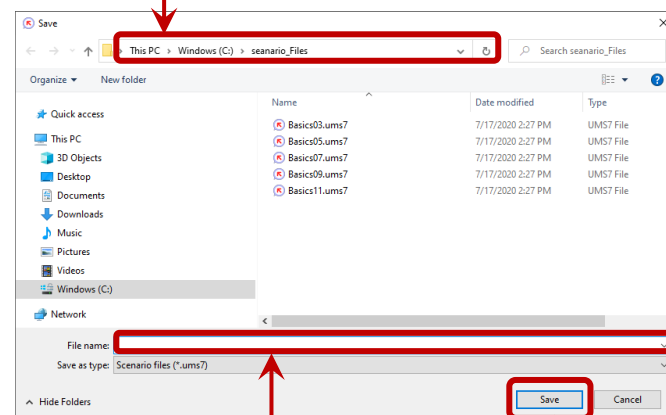
Basic operations of WinActor

2-9 Saving a scenario file

- 1 Select [File] > [Save as] or [Save] on the menu bar.



- 2 Select a folder to save a scenario file.



- 3 Enter a filename in the [File name] text box.

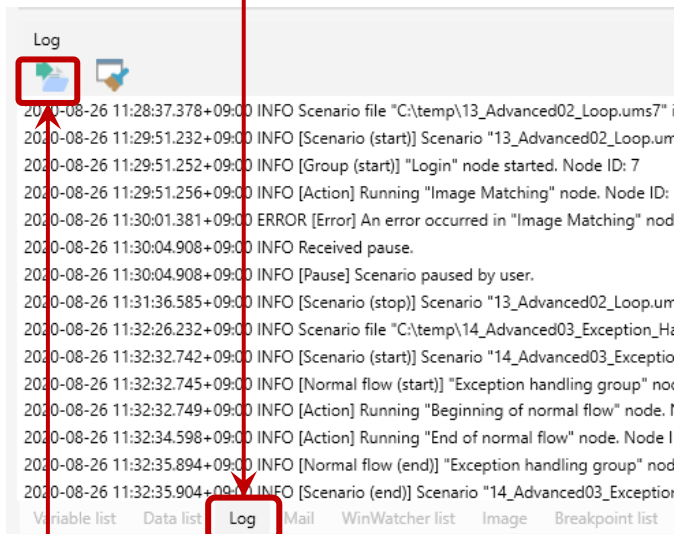
- 4 Click the [Save] button.

2

Basic operations of WinActor

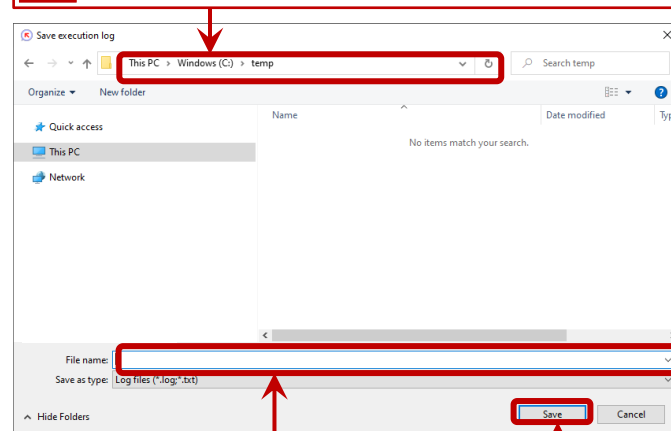
2-10 Saving a log file

1 Click the [Log] tab of the function area.



2 Click the 'Save logs' button.

3 Select a folder to save a log file.



4 Enter a log filename in the [File name] text box.

5 Click the [Save] button.



Displaying the Log pane is not mandatory. WinActor traces error logs for every scenario. However it is recommended to display it for checking error logs in your scenario.

Chapter 2

Scenario Creation



- Basics -



1

Scenario creation - Basics prologue -

Case

This is the story of the procurement department of a company.

As a second-year employee of the procurement department, William Lee has been assigned to a huge task in addition to the routine work that he has been doing. However, due to the increase in the amount of work, the number of mistakes in his work are also increasing.

To manage this situation, he consulted with Maria Rodriguez who uses WinActor to automate her work.

Let's take a step in the automation using WinActor together with William!



William Lee

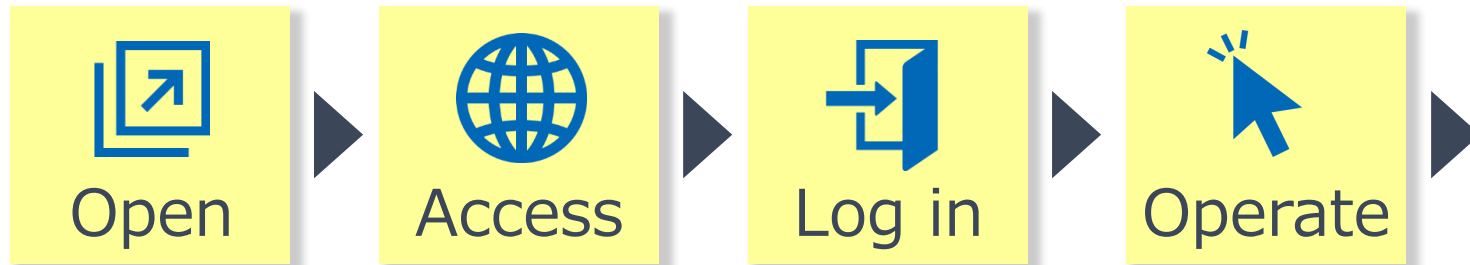
A second-year employee of the procurement department.
He is motivated as he is gradually assigned to a larger task.



Maria Rodriguez

A senior employee in another department who is already using WinActor.
This time, she responds to a request from William and offers to help and teach him.

Basics



**Automation for click and input
on a webpage**

2

Scenario creation - Basics 1 -

Case

William orders items listed in the purchase order book every week by inputting them into the web order system of the supplier.

However, due to the increase in the amount of work, mistakes in his work are also increasing.



"It takes time and effort to register unordered items listed in the purchase order book every week in the web system of the supplier. There are many items, and it will be a problem if I make a mistake in the number of orders. Is it possible to prevent it from happening?"



"Repetitive work such as inputting data to a work system is a work suitable for RPA. You can also automate click-and-input on websites as well. With WinActor, anyone can easily automate operations by simply combining the parts that perform various operations on the window."



"I think I can do that too! If automation is available, I can use the registration time for other tasks, and above all, I'm grateful that I can reduce mistakes in manual entry."



"First, let's take a look at how operations change between manual work and automation using WinActor."

2

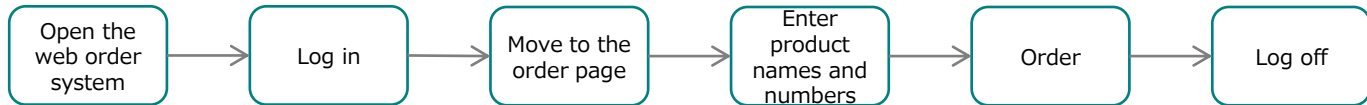
Scenario creation - Basics 1 -



"In automation using WinActor, the operations change as follows."

Manual work

Person

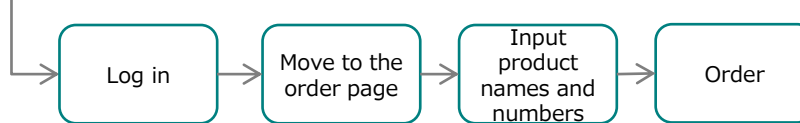


Automation

Person



WinActor



"It saves a lot of manual work. I just need to launch WinActor and log off at the end."

2

Scenario creation - Basics 1 -



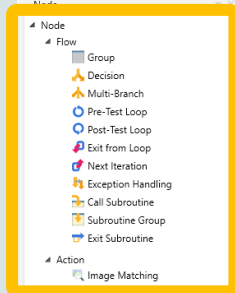
"I mentioned the parts that perform various operations on the window. The parts automate the movement of the mouse and keyboard when you place them on the flowchart."



"On the window of WinActor, where should I look?"

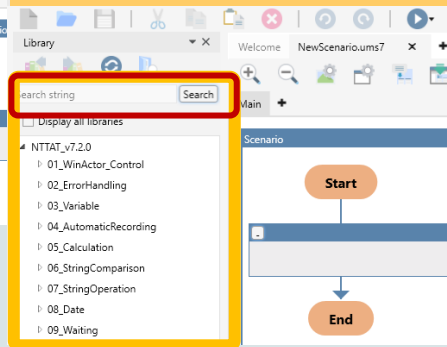
"Available parts are displayed by category in the palette area on the left side of the window. They are divided into the Node palette and Library palette."

Node palette



Library palette

with search function



Point!

"There are some useful operations you can reuse to create various scenarios. Creating a scenario by hand takes some effort, so it will be convenient if you can find the part for the required operation in the Library palette! We will practice it in the following trainings, so keep that in mind!"

2

Scenario creation - Basics 1 -



"The key to the scenario creation this time is a node called Image Matching."



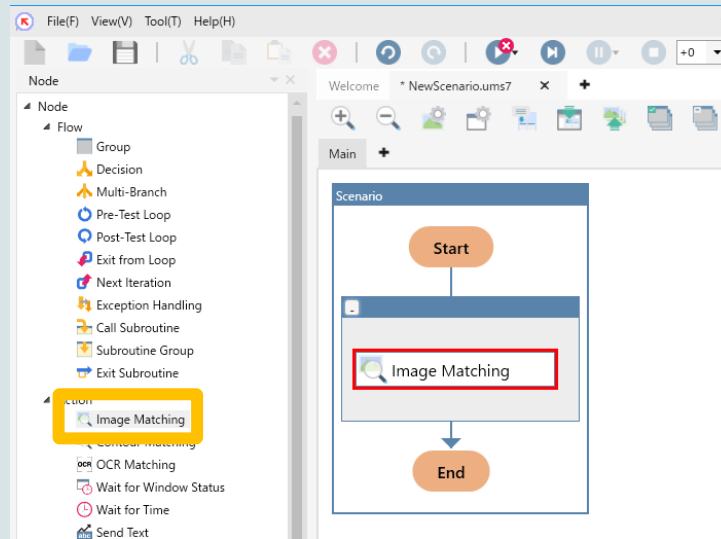
"Image Matching?"

"It is a node that recognizes a browser or mailer displayed on the screen as an image and operates things such as mouse click if there is the image set in advance."

"To be specific, you will be able to do such things, for example, you are looking at the weather forecast page and there is a rain mark, so you click the link button to see the detailed weather forecast."

"Image Matching is an easy-to-use node and can be used in various situations. You should learn to be able to use it!"

Point!

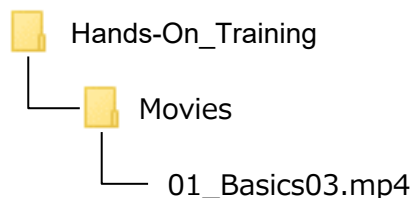


2

Scenario creation - Basics 1 -



"Let's watch the actual movement of WinActor about how Image Matching is used. Double-click the file named 01_Basics03.mp4 in the following folder to play it."



"Now, let's actually create a scenario together!"



"Microsoft Edge is used as a browser in this scenario creation. Google Chrome can be used because the procedure is the same. For Google Chrome users, read the word 'Edge' in the procedure as 'Chrome'."



"First, I will explain the operation using WinActor. At the end of the "3. Automation for click and input on a webpage" starting from the next page, there is an introduction of WinActor for beginners (WinActor Storyboard*). If you find it difficult to create scenarios with WinActor, this WinActor Storyboard might be a better choice for you."

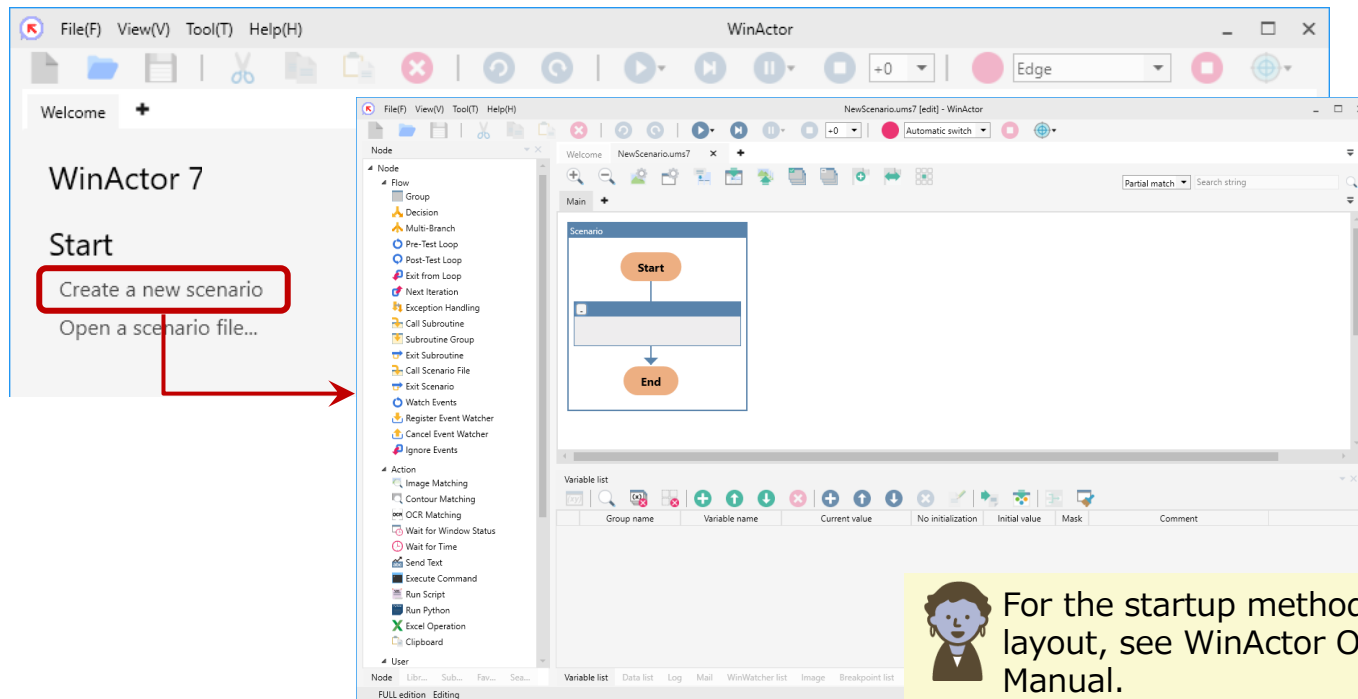
* WinActor Storyboard is available only in Japanese version.

3

Automation for click and input on a webpage

Prep Launching WinActor

- 1 Launch WinActor from the Start menu or with any other startup method.
- 2 Click [Create a new scenario]. The main window of WinActor appears.



For the startup methods and window layout, see WinActor Operation Manual.

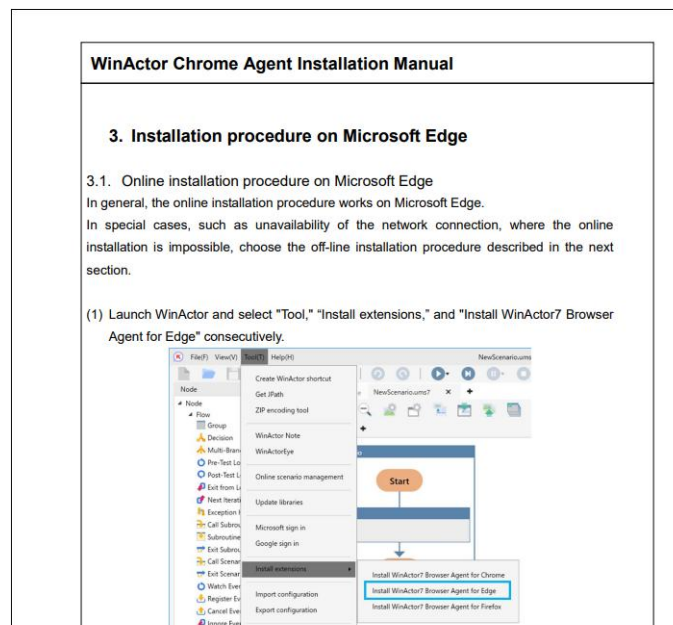
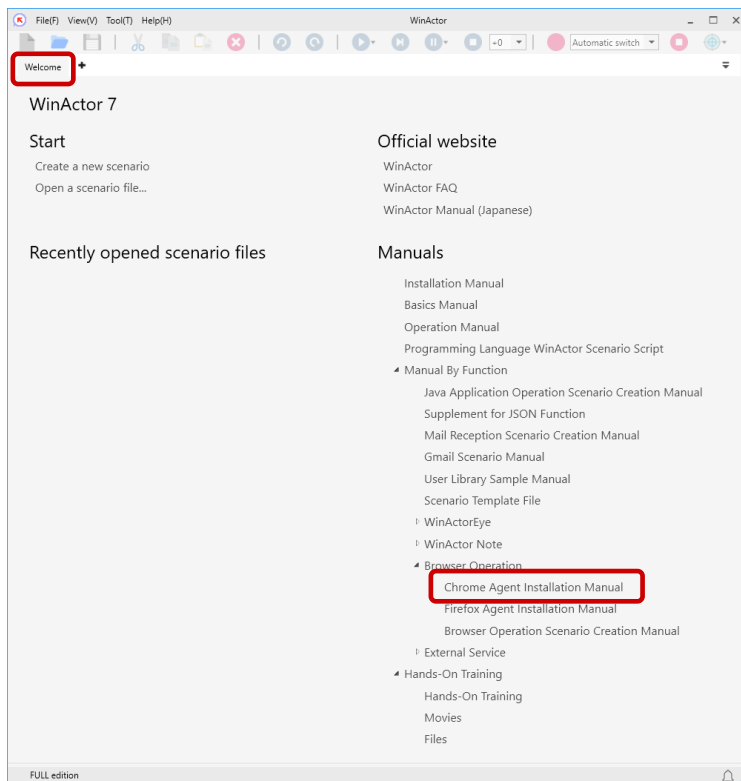
3

Automation for click and input on a webpage

Prep Installing an extension on Microsoft Edge (first time only)

1 From “Manuals” in “Welcome” window, click “Chrome Agent Installation Manual” under “Browser Operation” to open the manual.

2 Referring “3. Installation procedure on Microsoft Edge” in “WinActor Chrome Agent Installation Manual,” install the extension. (first time only)



For Chrome users, refer “2. Installation procedure on Google Chrome,” and install the extension.

3

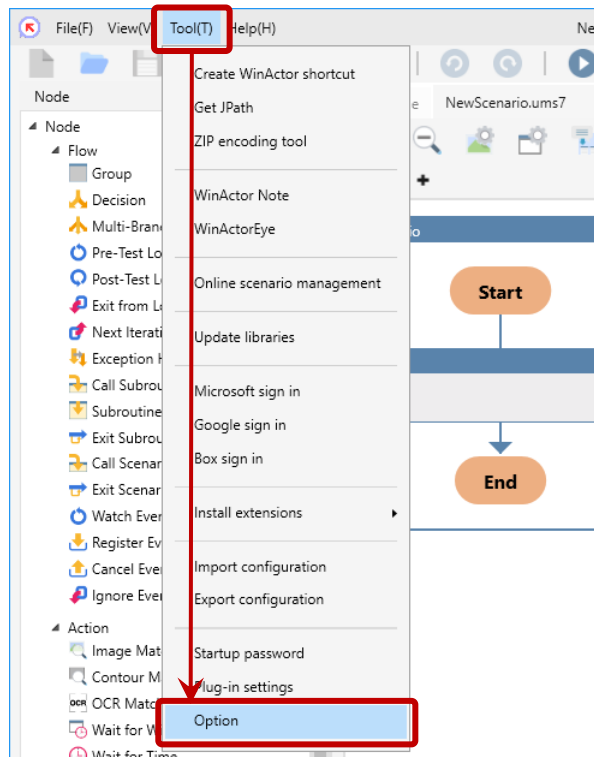
Automation for click and input on a webpage

Prep

Installing an extension on Microsoft Edge (first time only)

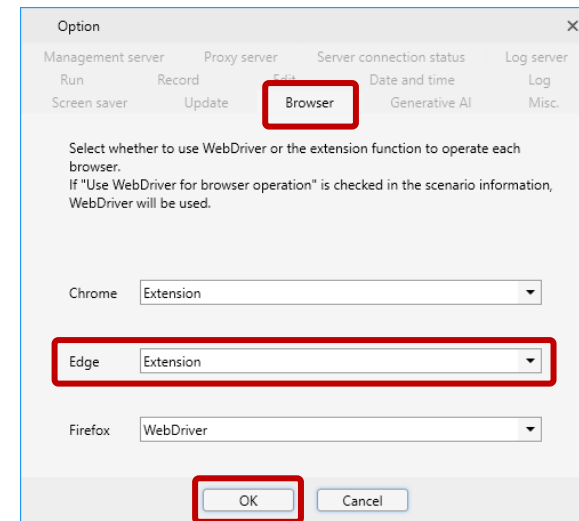
3

From the menu bar, select 'Tool,' and 'Option' consecutively.



4

Click the 'Browser' tab in the "Option" dialog and select 'Extension' from the dropdown of 'Edge.' (first time only)



5

Click the [OK] button.



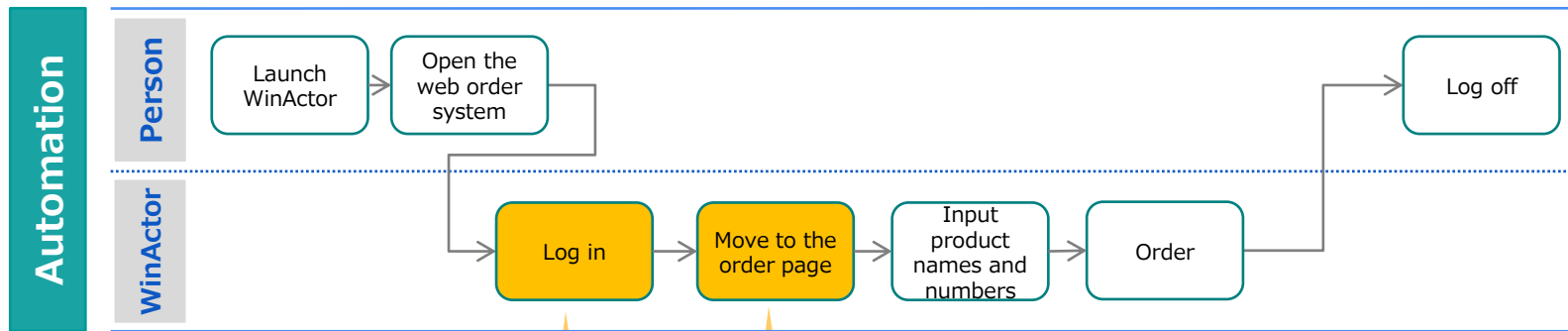
For Chrome users, select 'Extension' from the dropdown of 'Chrome.'

3

Automation for click and input on a webpage



"From here, we will create a scenario for the following operations."



Prep Displaying the login page

3-1 Moving the cursor to the User ID text box

3-2 Inputting data into the User ID text box

3-3 Inputting data into the Password text box

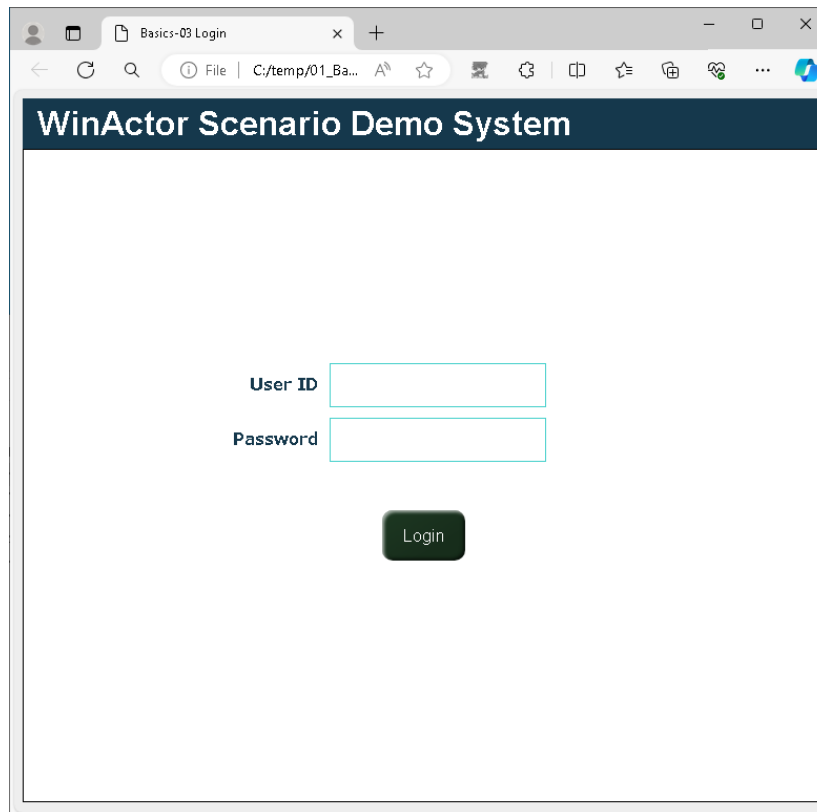
3-4 Clicking the Login button

3

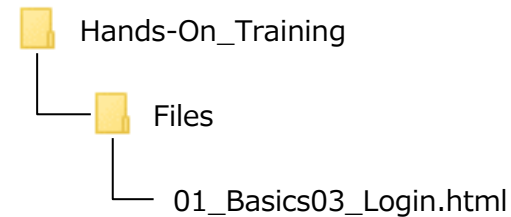
Automation for click and input on a webpage

Prep Displaying the login page

- 1 Right-click "01_Basics03_Login.html" and select 'Microsoft Edge' from 'Open with.'



File to be used



Be sure to use Edge or Chrome as the browser to start the demo system.

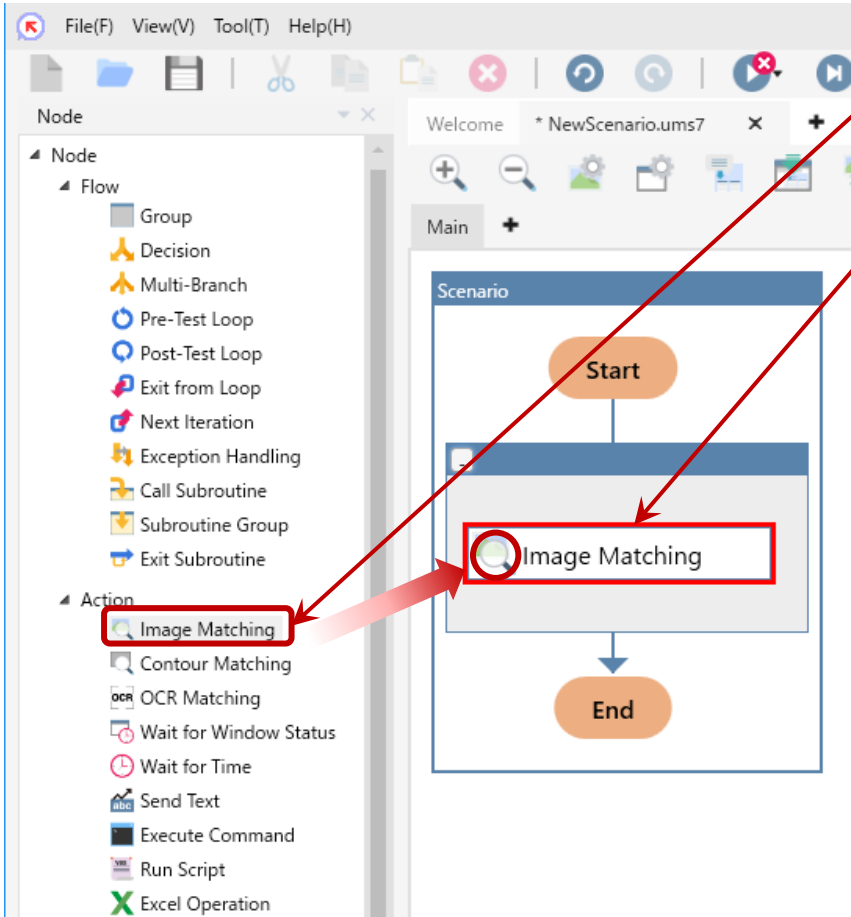


For Chrome users, select 'Google Chrome' from 'Open with.'

3

Automation for click and input on a webpage

3-1 Moving the cursor to the User ID text box



1 Drag the 'Image Matching' node and drop it into the scenario edit area.

2 Double-click the placed node. (Displaying the property)

This time, we use the 'Image Matching' node to move the cursor.



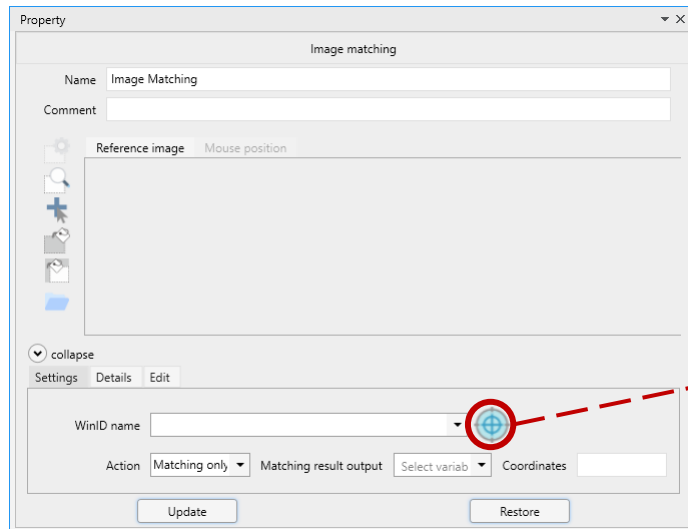
You can also use the 'Click' or 'Emulation' libraries to move the cursor.

3

Automation for click and input on a webpage

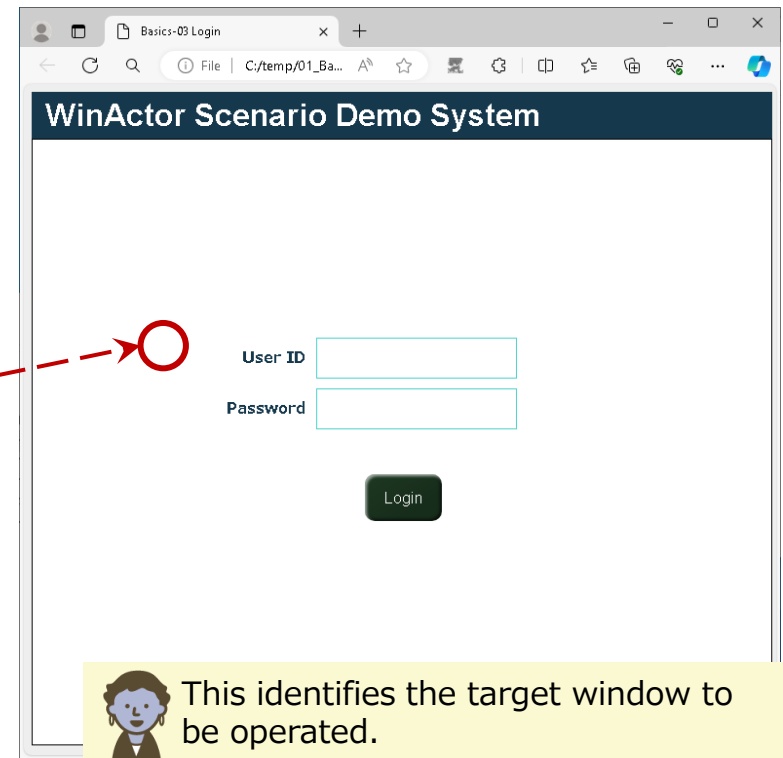
3-1 Moving the cursor to the User ID text box

3 Click the blue scope button for [WinID name].



Use the blue scope button to specify which window to be operated.

4 Move the mouse cursor on a page you want to input data, and click the page.

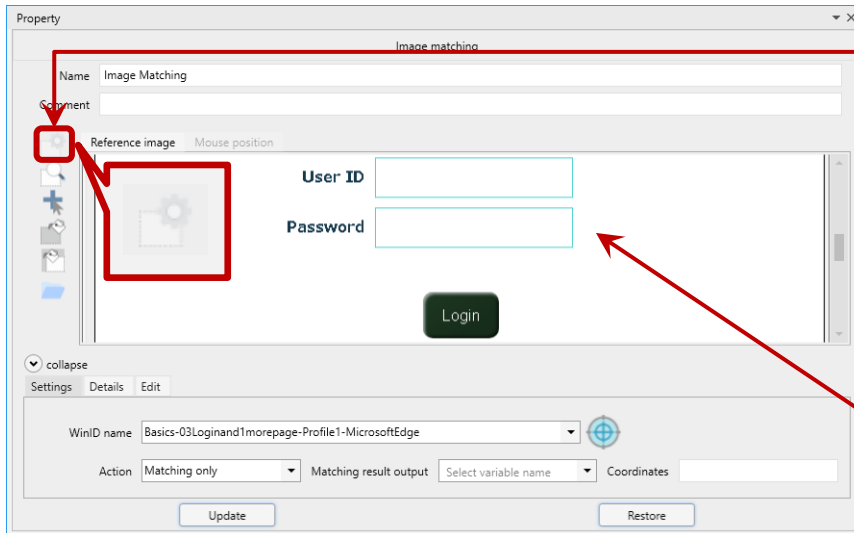


This identifies the target window to be operated.

3

Automation for click and input on a webpage

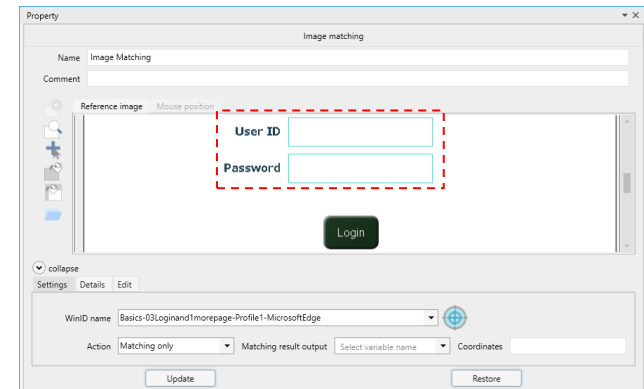
3-1 Moving the cursor to the User ID text box



5 Click the 'Match range' button.

In the page captured earlier, specify a range where the text box exists by enclosing it in a red frame..

6

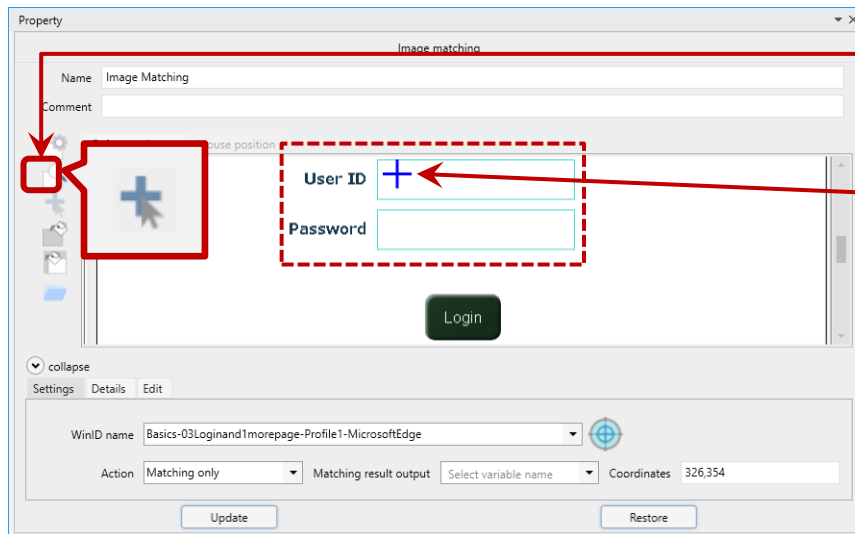


You do not need to click the 'Match range' button if the button has already been in the clicked state.

3

Automation for click and input on a webpage

3-1 Moving the cursor to the User ID text box



7

Click the 'Mouse operation coordinates' button.

8

In the page captured earlier, click at the position of the "User ID" text box.

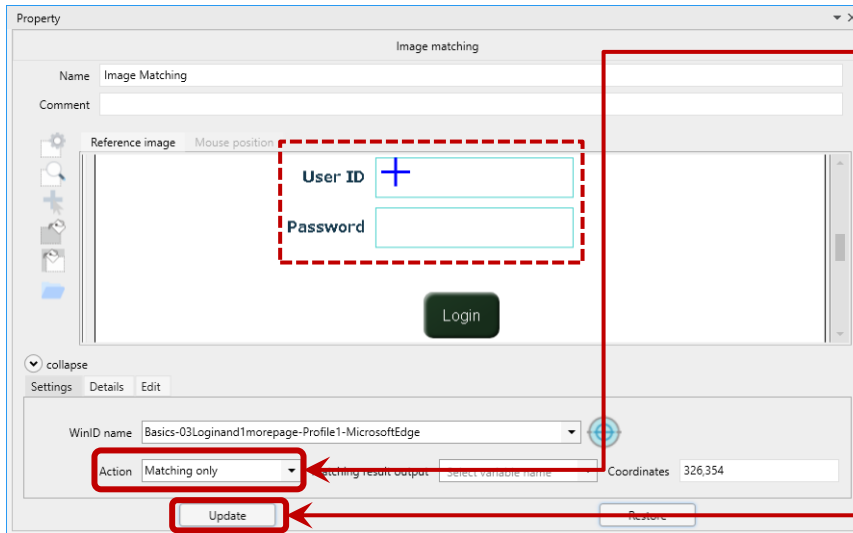


"Match range" specifies a range of the target image in the captured page.
"Mouse operation coordinates" specifies a position where a specific action will be taken.

3

Automation for click and input on a webpage

3-1 Moving the cursor to the User ID text box



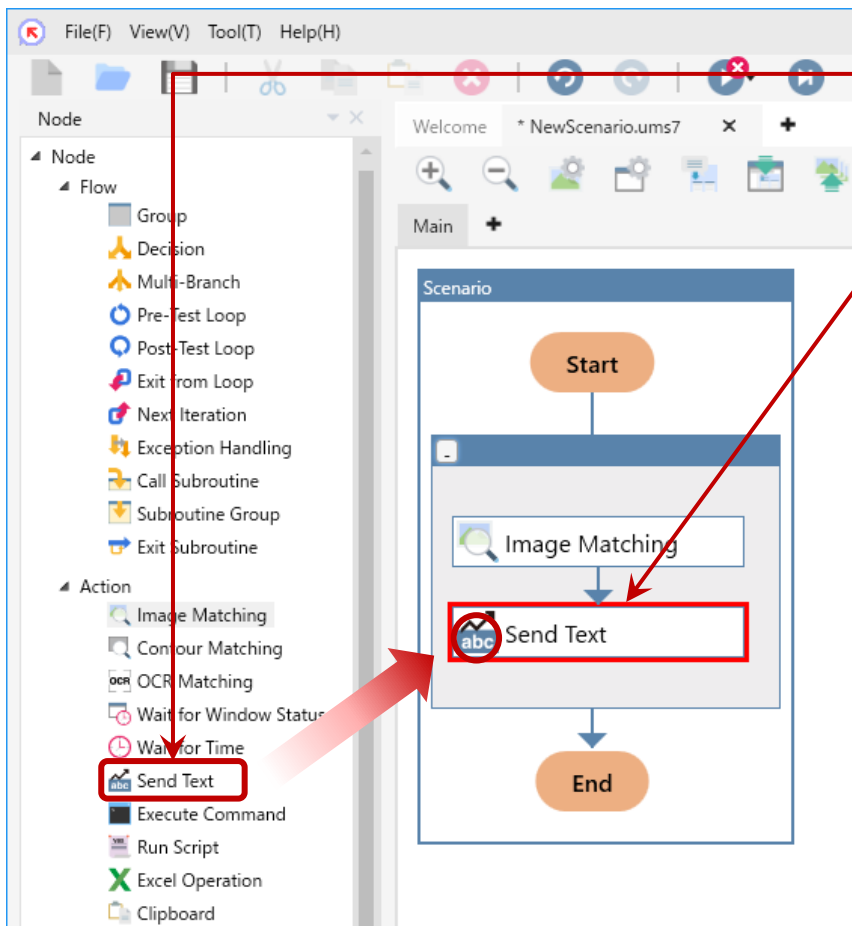
9 For [Action], select 'Left button click' from the pull-down list.

10 Click the [Update] button.

3

Automation for click and input on a webpage

3-2 Inputting data into the User ID text box



1 Drag the 'Send Text' node and drop it into the scenario edit area.

2 Double-click the placed node. (Displaying the property)



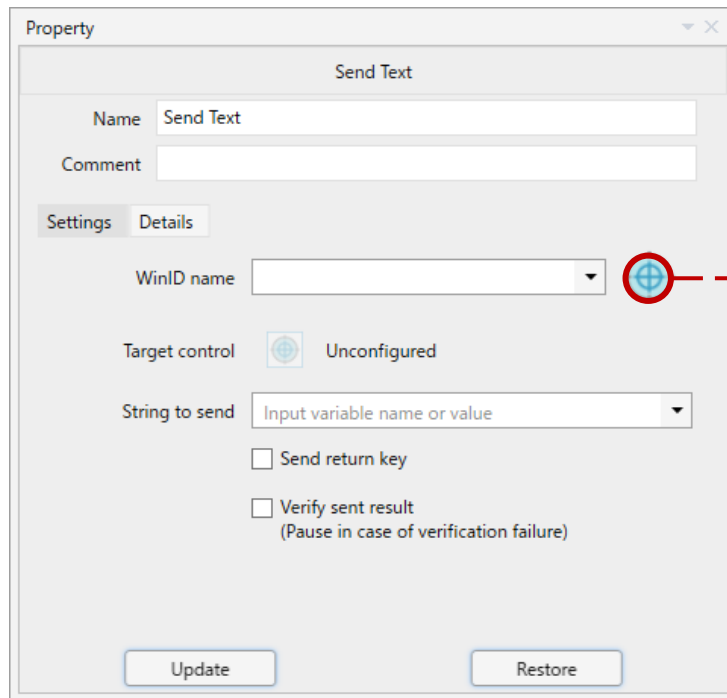
There are several methods to set a text within a scenario. We use 'Send Text' this time.

3

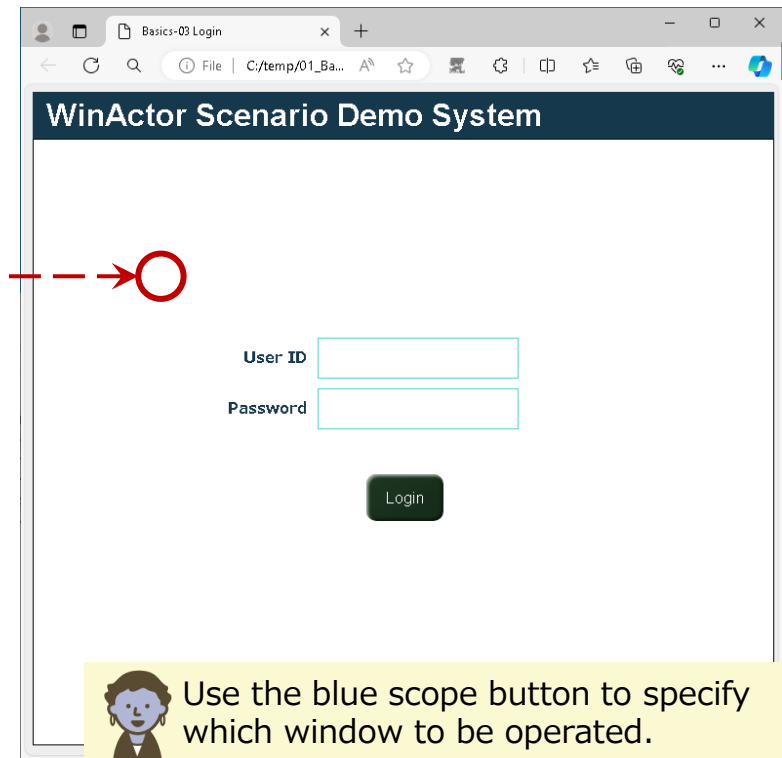
Automation for click and input on a webpage

3-2 Inputting data into the User ID text box

3 Click the blue scope button for [WinID name].



4 Move the mouse cursor on a page you want to input data, and click the page.



3

Automation for click and input on a webpage

3-2 Inputting data into the User ID text box

Property

Send Text

Name: Send Text

Comment:

Settings Details

WinID name: Basics-03Login-InternetExplorer

Target control: Configured

String to send: Input variable name or value

☐ Send return key

☐ Verify sent result (Pause in case of verification failure)

Update Restore

5

For [String to send], select "Value=>" from the pull-down list and enter "User01" after "Value=>."

6

Click the [Update] button.

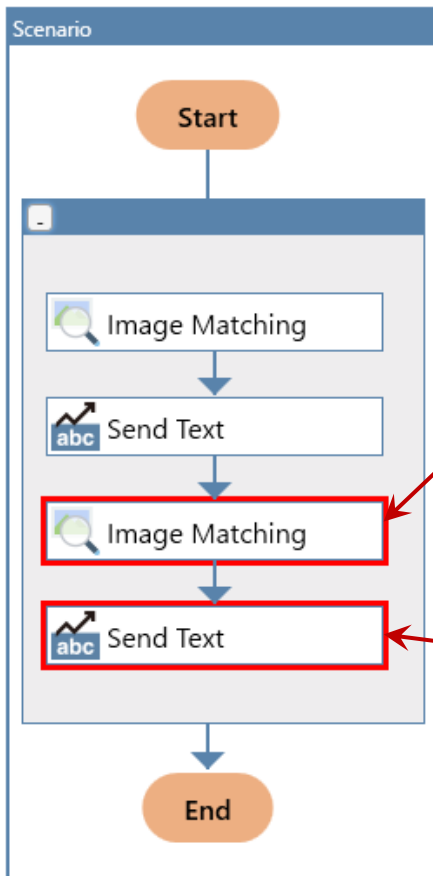


The value entered in [String to send] will be input.

3

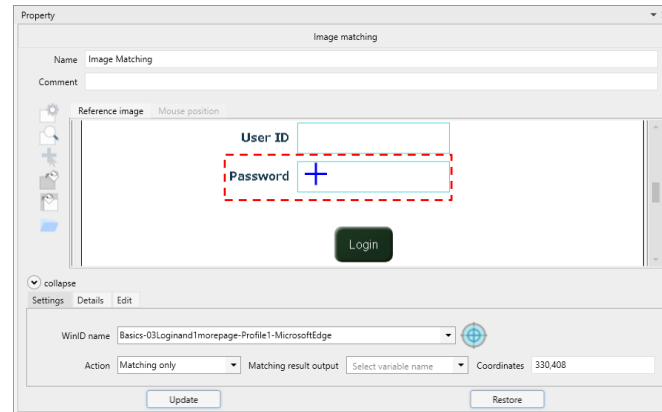
Automation for click and input on a webpage

3-3 Inputting data into the Password text box



1 Follow the same steps as 3-1 for Image Matching and 3-2 for Send Text.

1.1 For Image Matching, specify the "Password" text box.



1.2 For Send Text, enter "Password."

With the above settings, the operation of inputting the following information is completed.

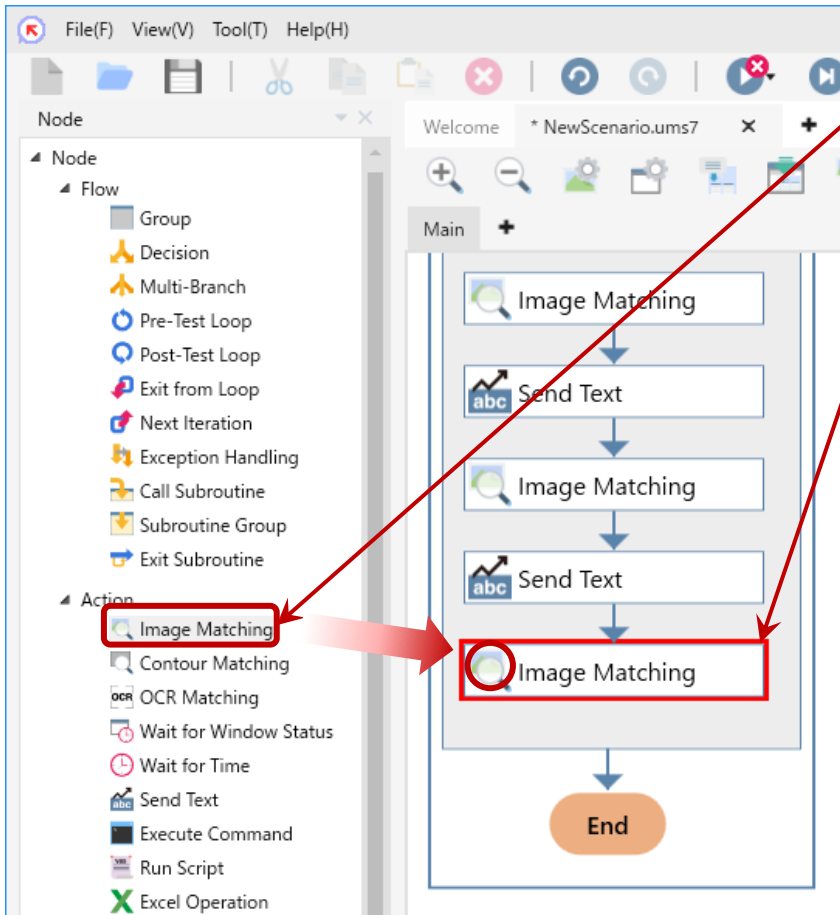


User ID: User01
Password: Password

3

Automation for click and input on a webpage

3-4 Clicking the Login button



1

Drag the 'Image Matching' node and drop it into the scenario edit area.

2

Double-click the placed node. (Displaying the property)



'Image Matching' can be used not only for clicking the text box, but also for clicking buttons such as the login button.

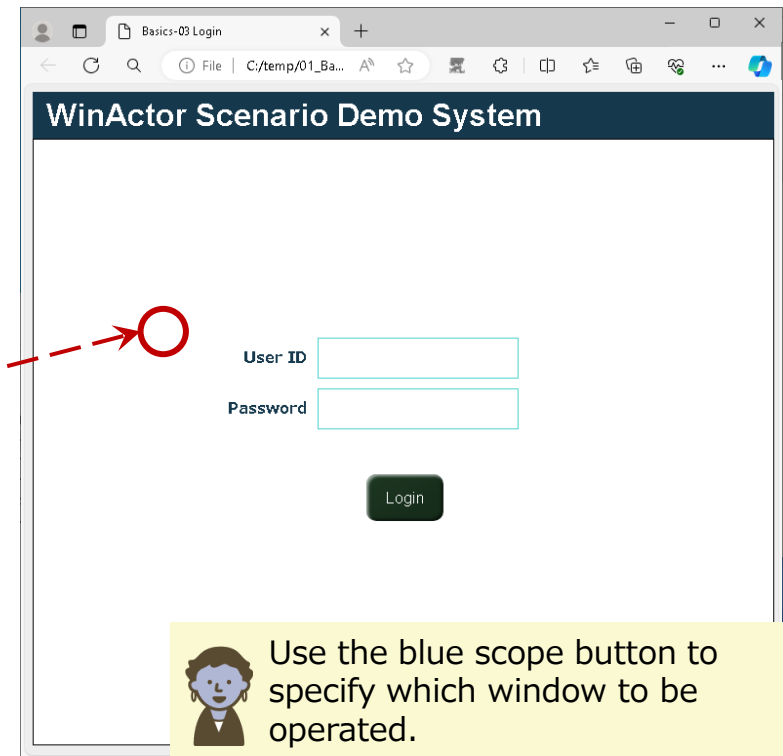
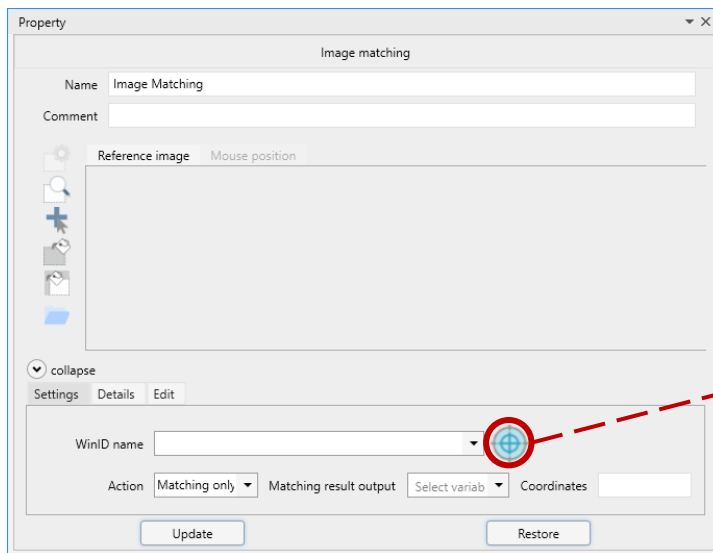
3

Automation for click and input on a webpage

3-4 Clicking the Login button

3 Click the blue scope button for [WinID name].

4 Move the mouse cursor on a page you want to capture, and click the page.

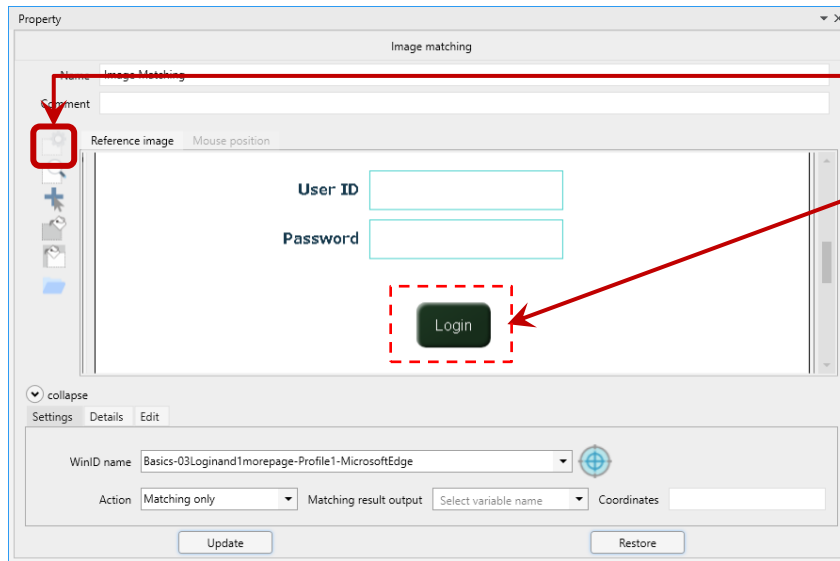


Use the blue scope button to specify which window to be operated.

3

Automation for click and input on a webpage

3-4 Clicking the Login button



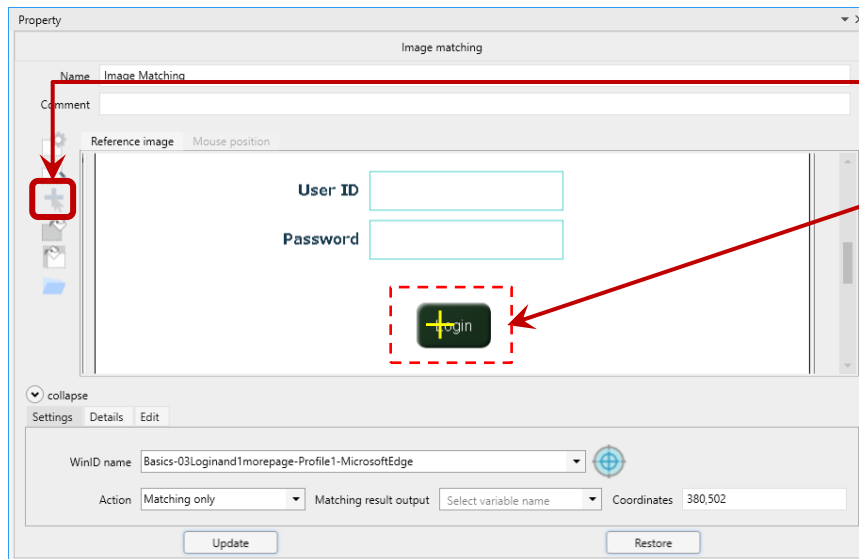
5 Click the 'Match range' button.

6 In the page captured earlier, specify a range where the 'Login' button exists.

3

Automation for click and input on a webpage

3-4 Clicking the Login button



7

Click the 'Mouse operation coordinates' button.

8

In the page captured earlier, click at the position of the 'Login' button.

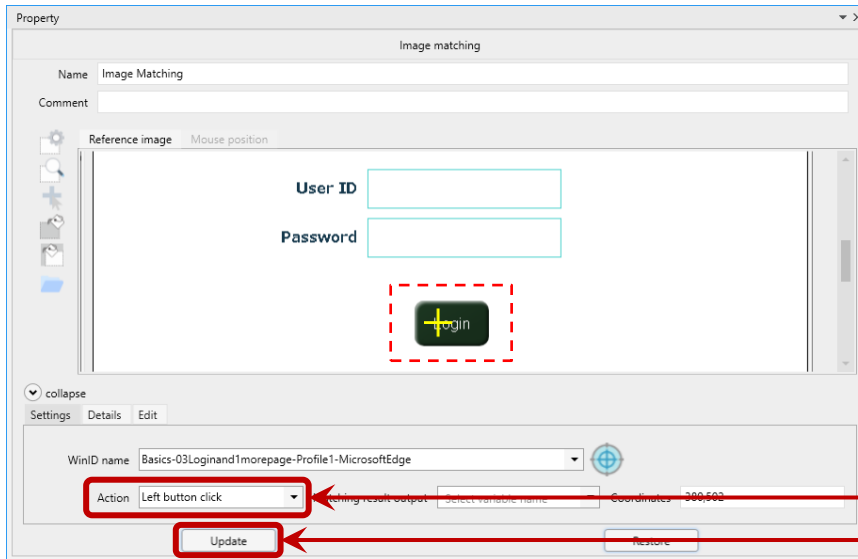


This time, the purpose is to click the 'Login' button, so "Mouse operation coordinates" should point at the 'Login' button.

3

Automation for click and input on a webpage

3-4 Clicking the Login button



9

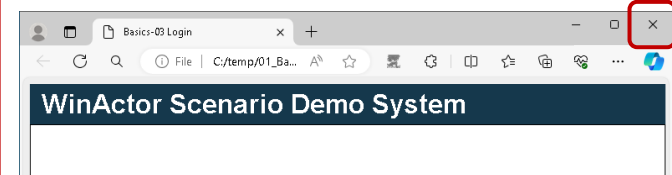
For [Action], select 'Left button click' from the pull-down list.

10

Click the [Update] button.

11

Click the [Close] button of Edge.

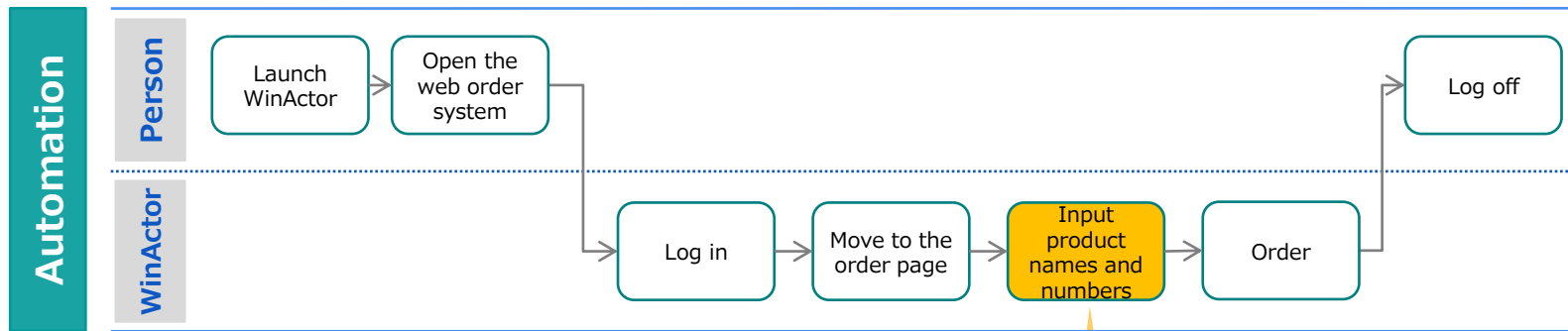


3

Automation for click and input on a webpage



"From here, we will create a scenario for the following operation."



3-5 Displaying the Add Purchase Order page

3-6 Inputting a P/O date

3-7 Inputting a supplier code and registrant code

3-8 Selecting a product code

3

Automation for click and input on a webpage

3-5 Displaying the Add Purchase Order page

- 1 Right-click "02_Basics03_Add_Purchase_Order.html" and select 'Microsoft Edge' from 'Open with.'

WinActor Scenario Demo System

Menu Add P/O Search P/O Add to Inventory Register Payment

Add Purchase Order

P/O date 9 July 2020

Supplier code 123456 Supplier name

Registrant code WA011 Registrant name

Product code	Product name	Quantity	Price
-			
-			
-			

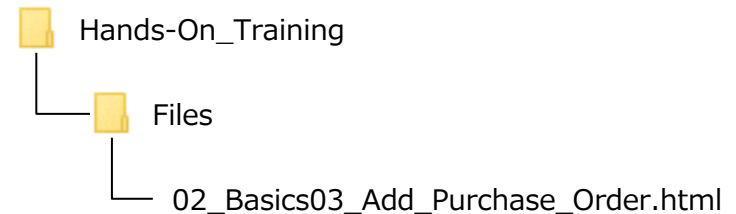
Save Order

Subtotal

Tax (10%)

Total

File to be used



Be sure to use Edge or Chrome as the browser to start the demo system.



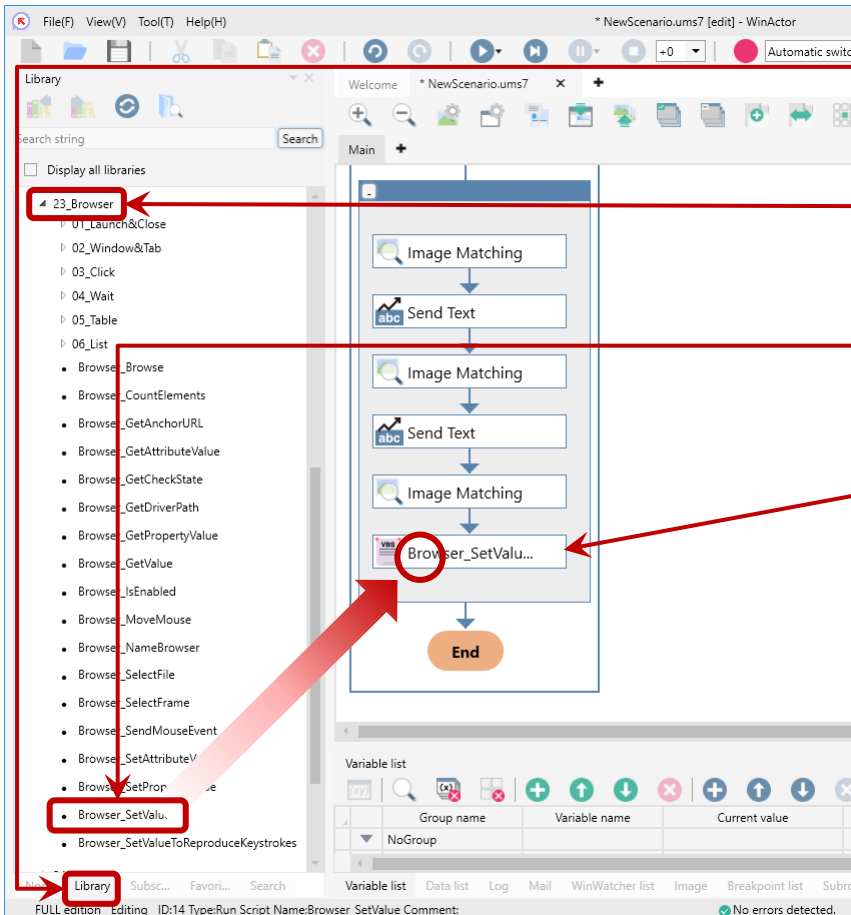
For Chrome users, select 'Google Chrome' from 'Open with.'

3

Automation for click and input on a webpage

3-6

Inputting a P/O date



1 Click the [Library] tab.

2 Double-click '23_Browser' and expand the list of libraries.

3 Drag the 'Browser_SetValue' library and drop it into the scenario edit area.

4 Double-click the placed library. (Displaying the property)

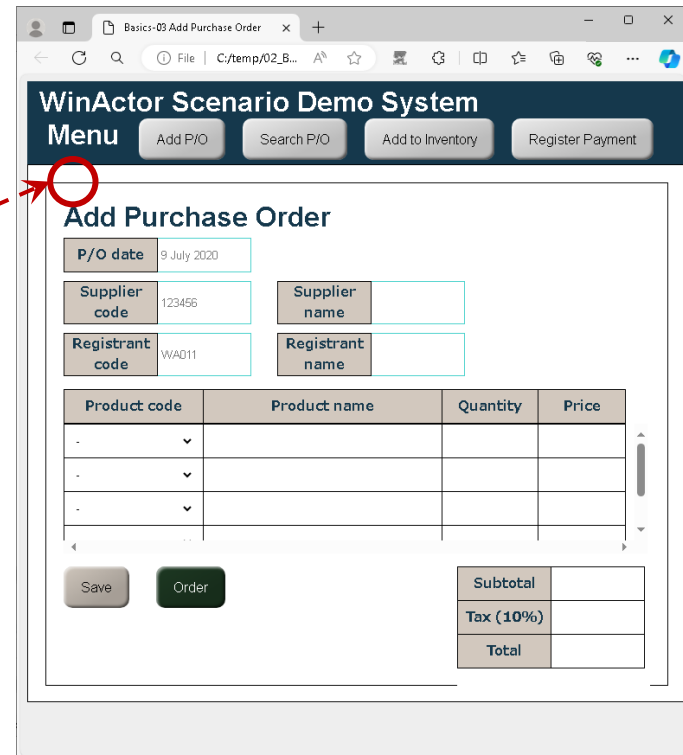
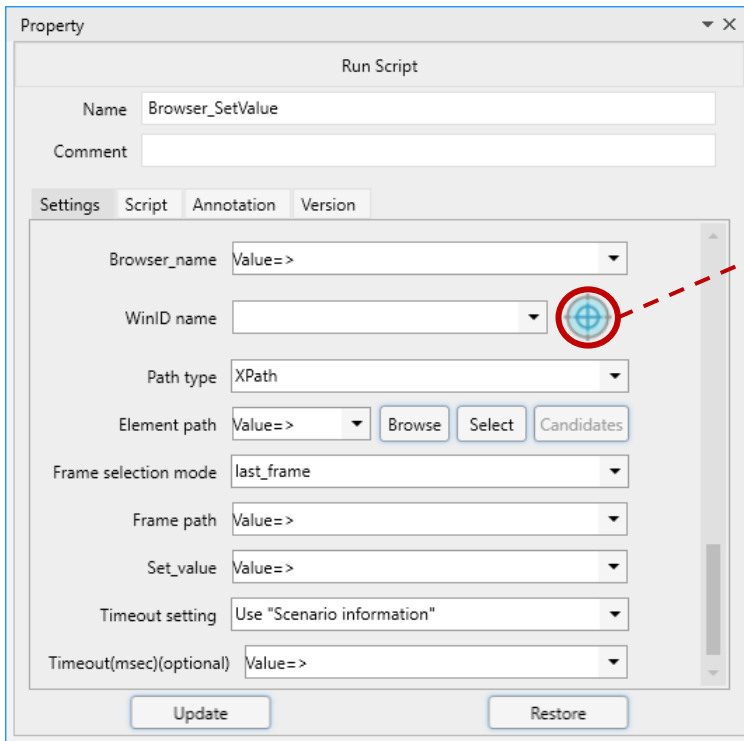
3

Automation for click and input on a webpage

3-6 Inputting a P/O date

5 Click the blue scope button for [WinID name].

6 Move the mouse cursor on a page you want to input data, and click the page.



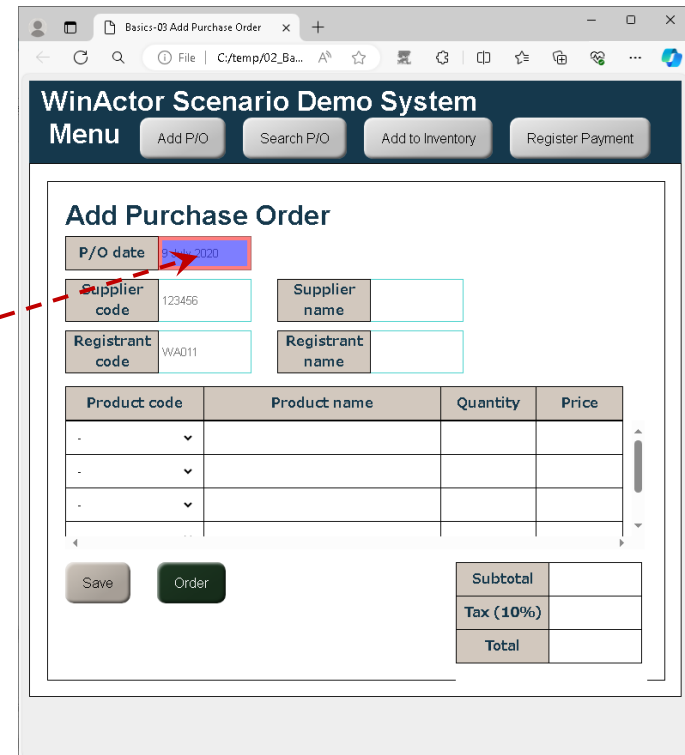
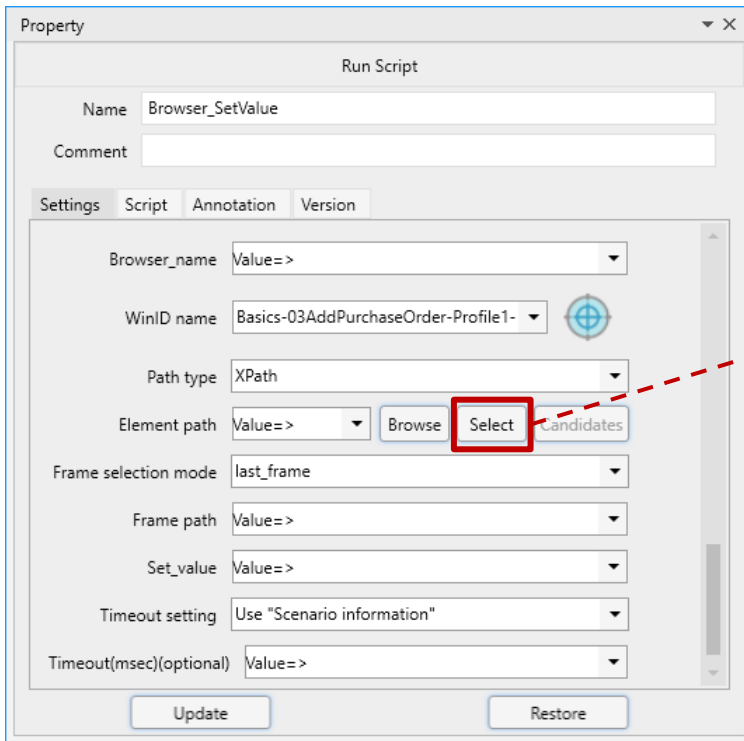
3

Automation for click and input on a webpage

3-6 Inputting a P/O date

7 Click the [Select] button in [Element path].

8 Move mouse cursor over the "P/O date" text box, wait for the color to change, and click it.



3

Automation for click and input on a webpage

3-6 Inputting a P/O date

Property

Run Script

Name: Browser_SetValue

Comment:

Settings Script Annotation Version

Browser_name: Value=>

WinID name: Basics-03AddPurchaseOrder-Profile1-

Path type: XPath

Element path: Value=> //*[☐] Browse Select Candidates

Frame selection mode: top_frame

Frame path: Value=>

Set_value: Value=> 20 December 2019

Timeout setting: Use "Scenario information"

Timeout(msec)(optional): Value=>

Update Restore

9

For [Set_value], enter "Value=>20 December 2019."

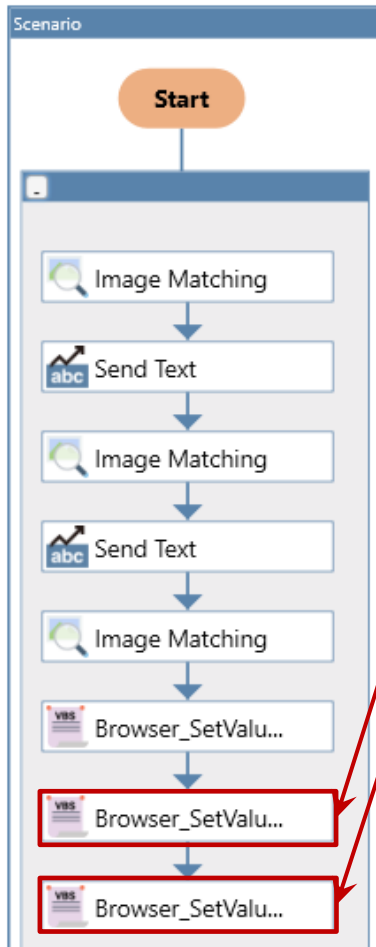
10

Click the [Update] button.

3

Automation for click and input on a webpage

3-7 Inputting a supplier code and registrant code



1 Follow the same steps as 3-6.

1.1 For "Supplier code," enter "123456."

1.2 For "Registrant code," enter "WA011."

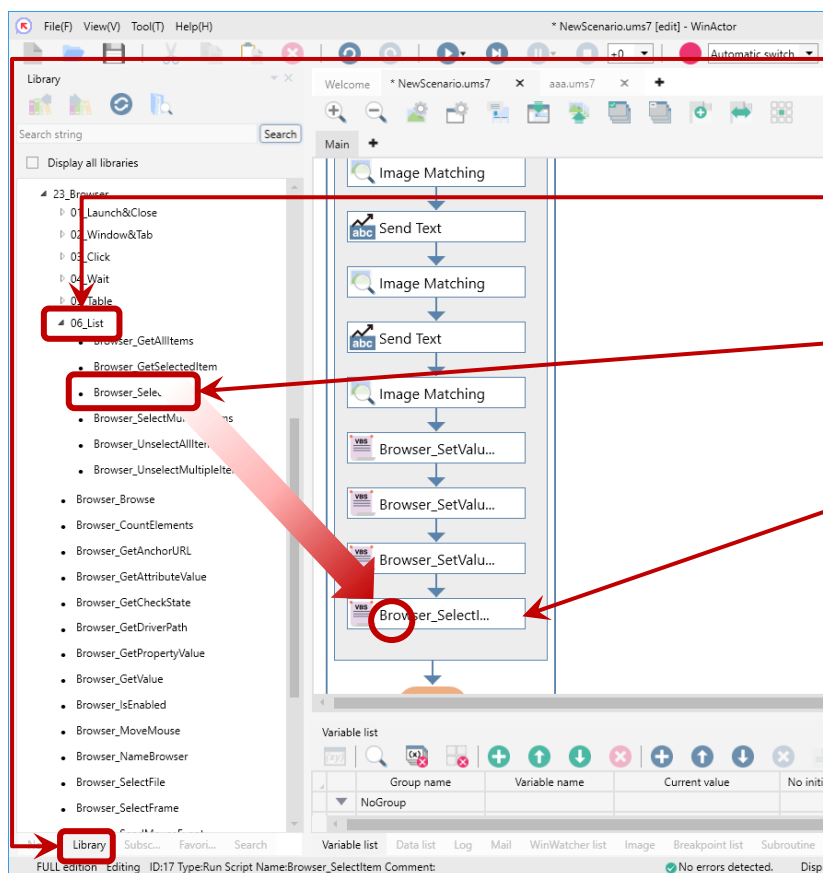


With the above settings, the operation of inputting the P/O date, supplier code, and registrant code is completed.

3

Automation for click and input on a webpage

3-8 Selecting a product code



1 Click the [Library] tab.

2 Double-click '06_List' and expand the list of libraries.

3 Drag the 'Browser_SelectItem' library and drop it into the scenario edit area.

4 Double-click the placed library. (Displaying the property)

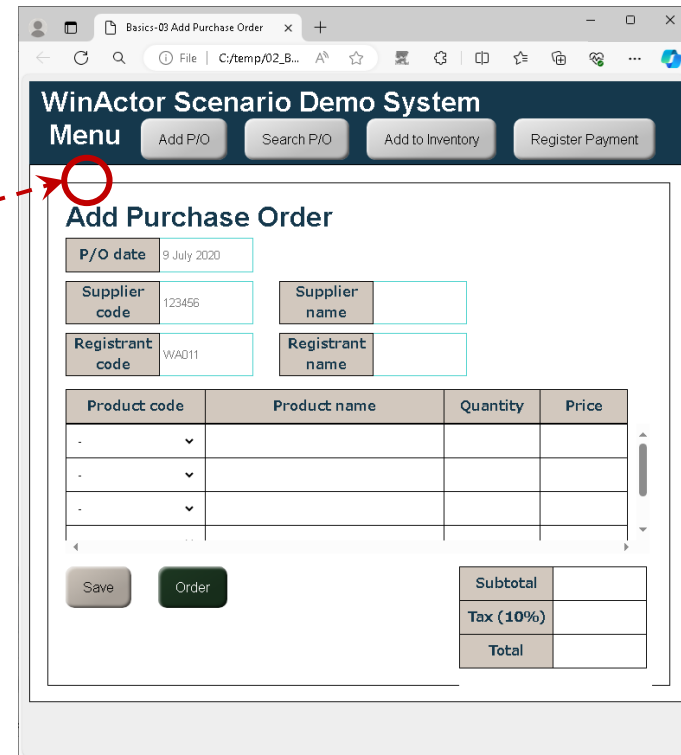
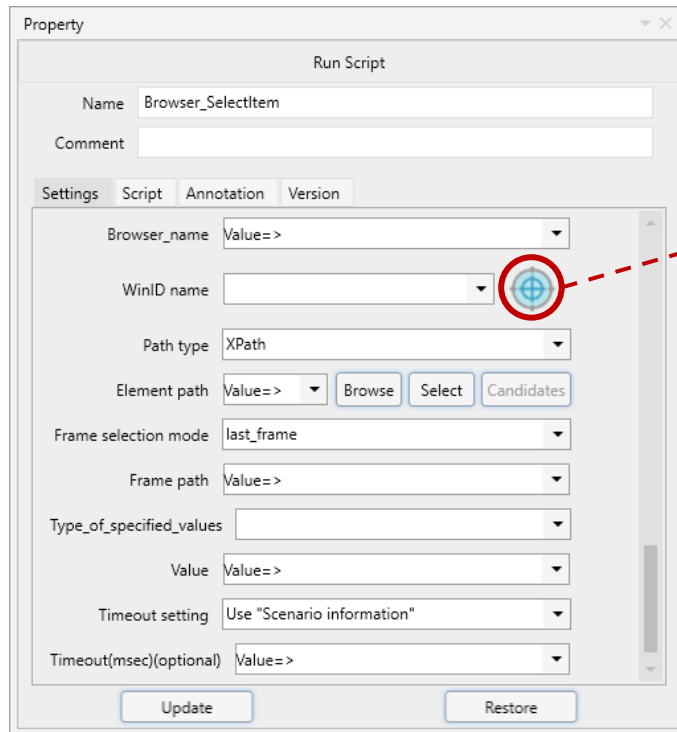
3

Automation for click and input on a webpage

3-8 Selecting a product code

5 Click the blue scope button for [WinID name].

6 Move the mouse cursor on a page you want to input data, and click the page.



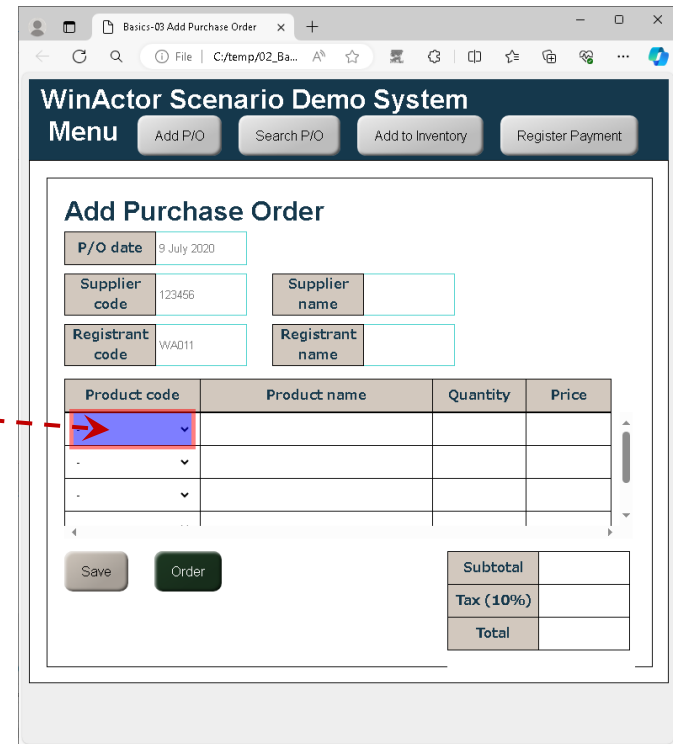
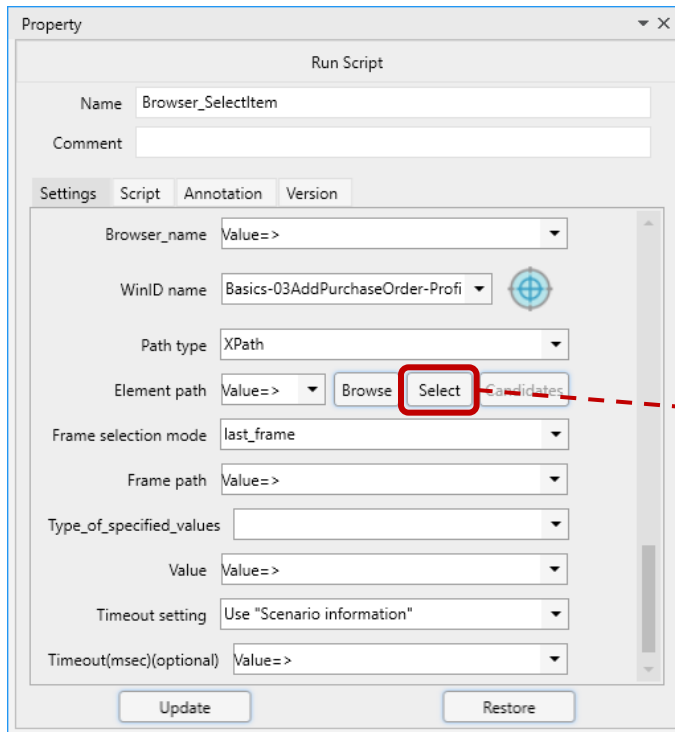
3

Automation for click and input on a webpage

3-8 Selecting a product code

7 Click the [Select] button in [Element path].

8 Move mouse cursor over the "Product code" list, wait for the color to change, and click it.



3

Automation for click and input on a webpage

3-8 Selecting a product code

The screenshot shows the 'Property' dialog box with the 'Script' tab selected. The 'Name' field is 'Browser_SelectItem'. The 'Settings' tab is active, showing various configuration options. The 'Type_of_specified_values' dropdown is set to 'value', and the 'Value' dropdown is set to 'Value=> P001'. The 'Update' button is highlighted with a red box. A red arrow points from the 'Run Script' button to the 'Update' button.

9 For [Type_of_specified_values] and [Value], enter 'value' and "Value=>P001" respectively.

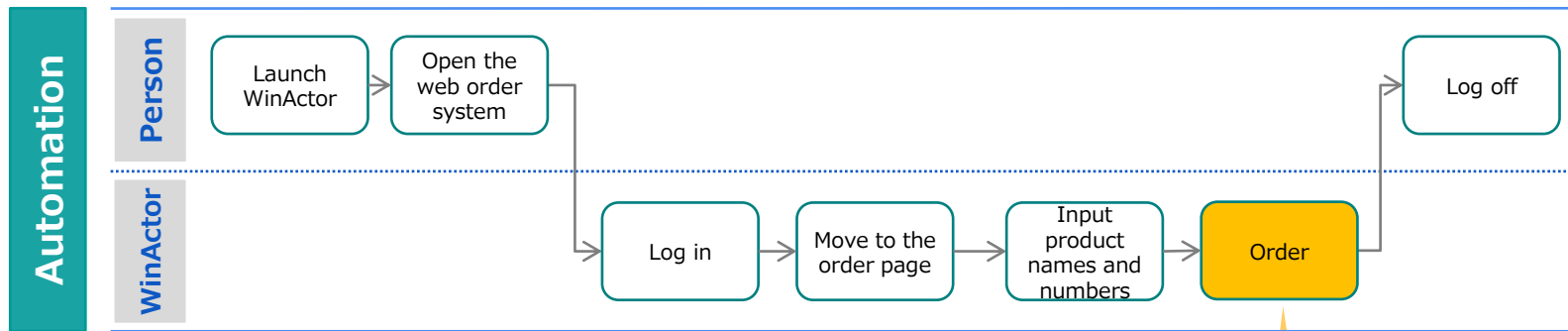
10 Click the [Update] button.

3

Automation for click and input on a webpage



"From here, we will create a scenario for the following operation."



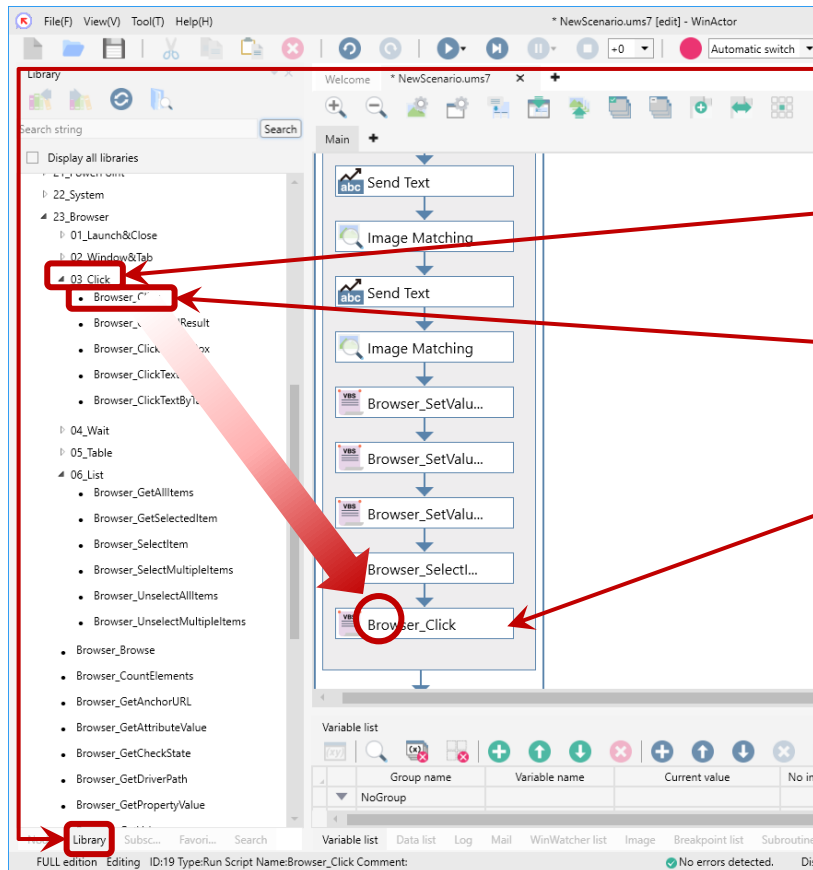
3-9

Clicking the Order button

3

Automation for click and input on a webpage

3-9 Clicking the Order button



1 Click the [Library] tab.

2 Double-click '03_Click' and expand the list of libraries.

3 Drag the 'Browser_Click' library and drop it into the scenario edit area.

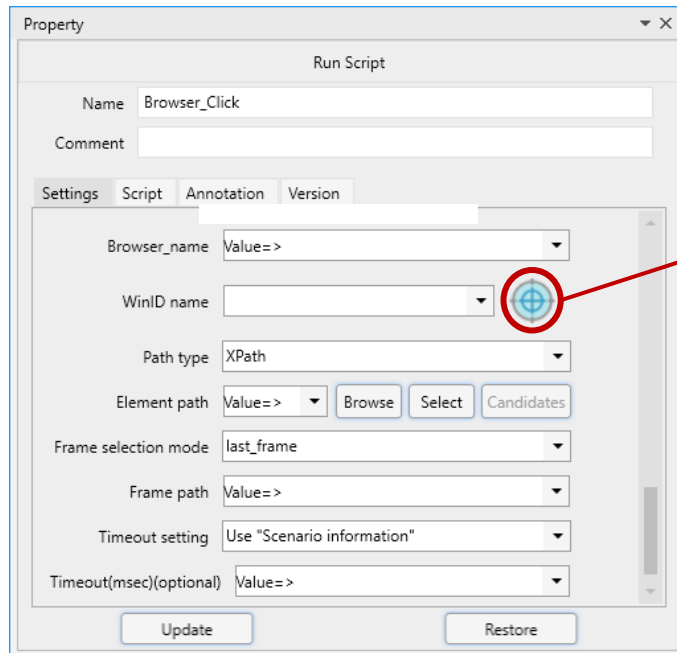
4 Double-click the placed library. (Displaying the property)

3

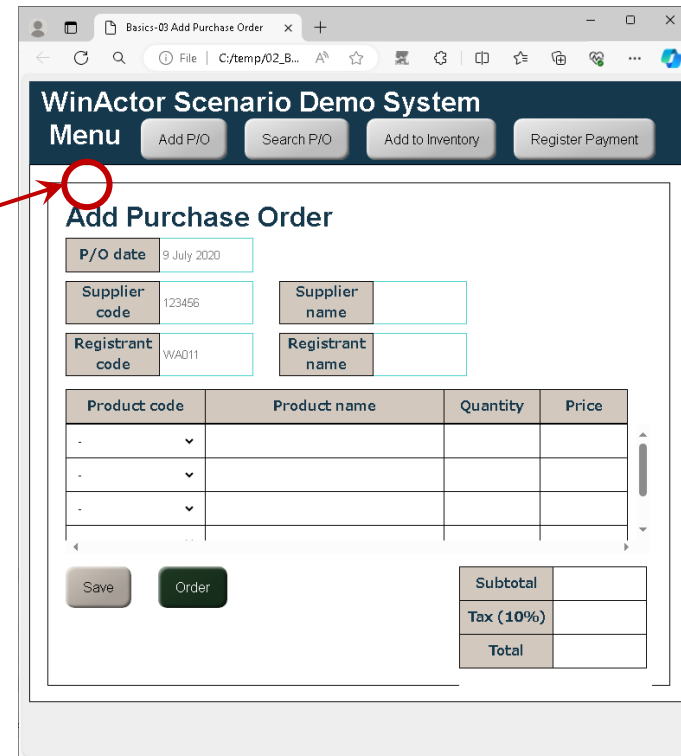
Automation for click and input on a webpage

3-9 Clicking the Order button

5 Click the blue scope button for [WinID name].



6 Move the mouse cursor on a page you want to capture, and click the page.

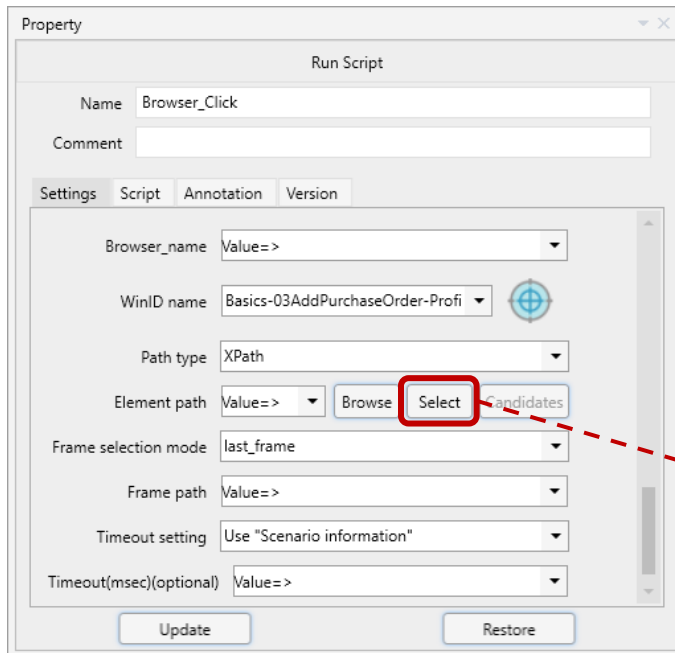


3

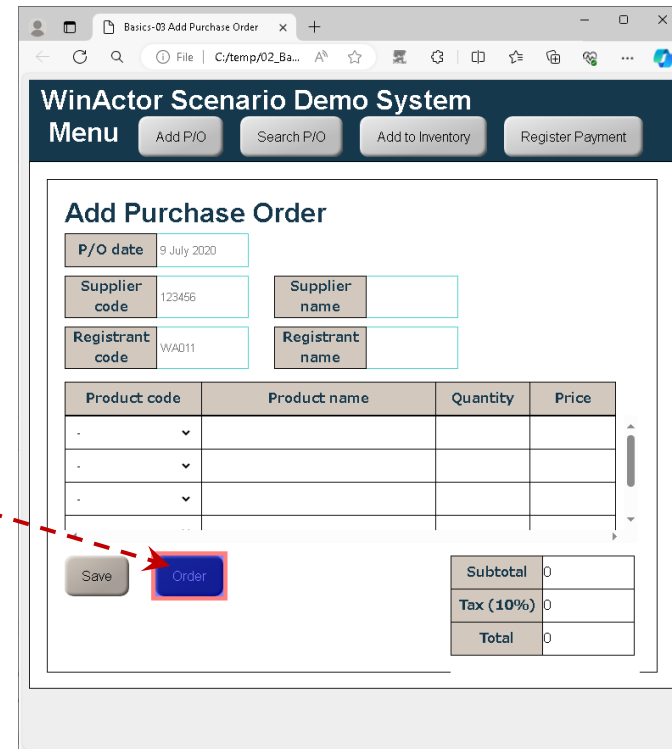
Automation for click and input on a webpage

3-9 Clicking the Order button

7 Click the [Select] button in [Element path].



8 Move mouse cursor over the 'Order' button, wait for the color to change, and click it.

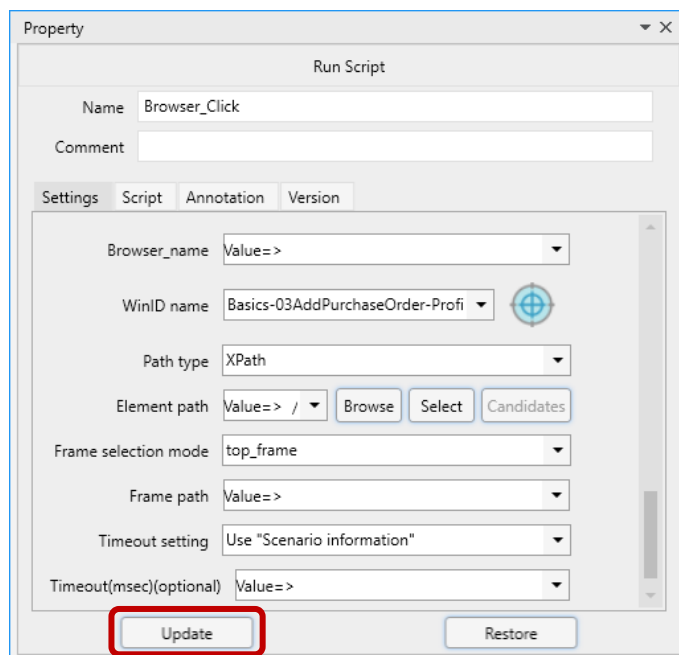


3

Automation for click and input on a webpage

3-9 Clicking the Order button

9 Click the [Update] button.

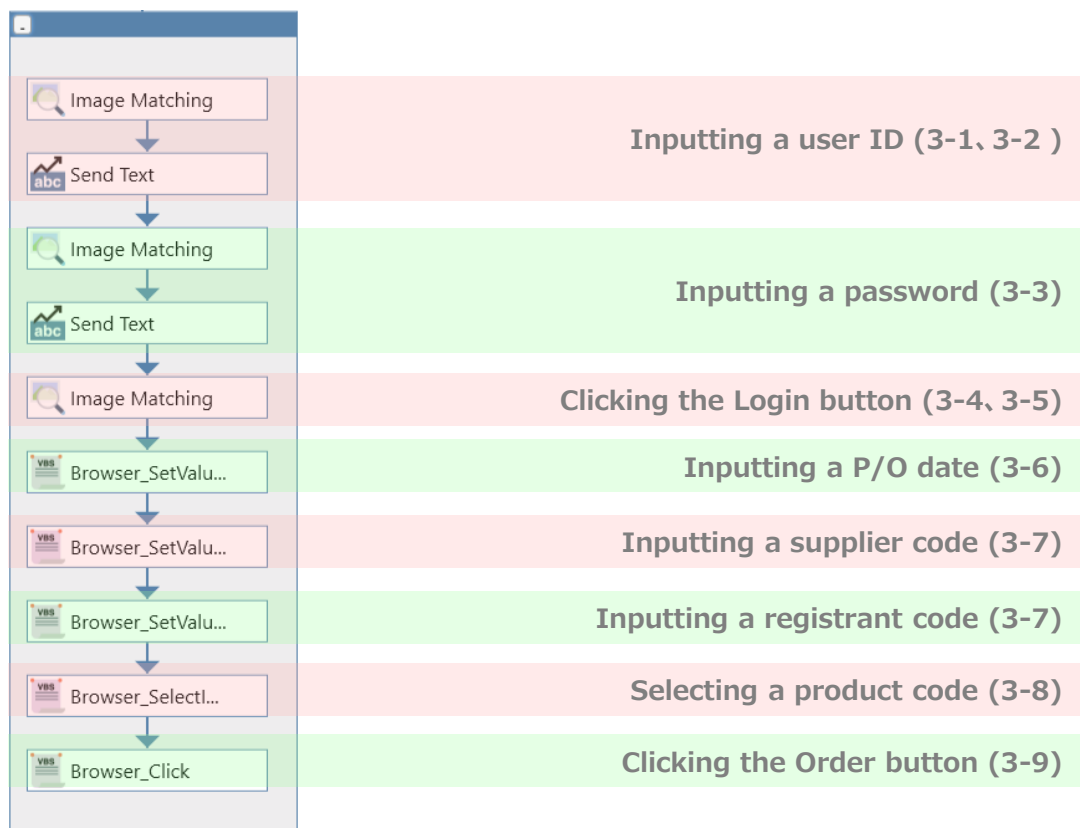


3

Automation for click and input on a webpage

3-10 Checking the entire scenario

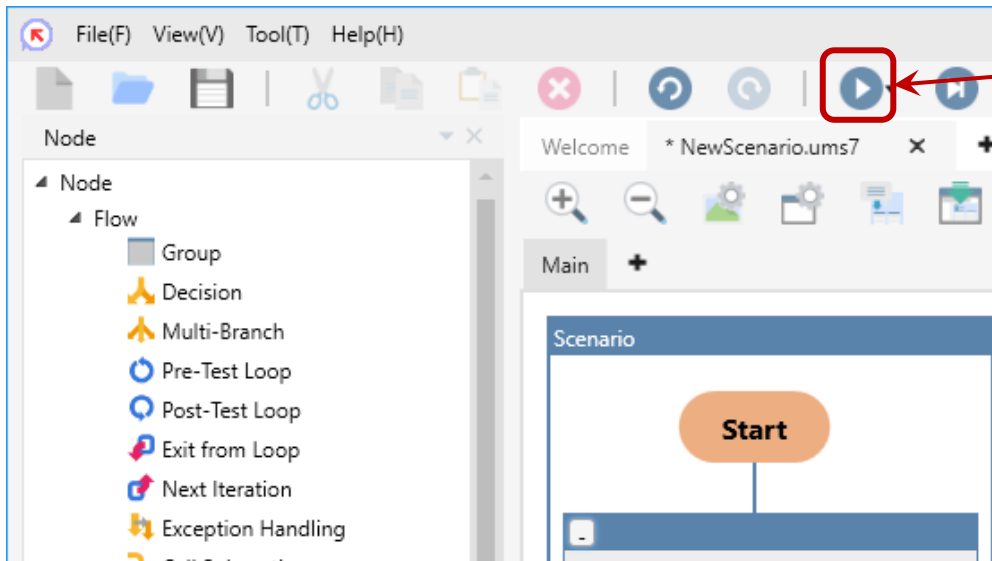
1 Confirm that the created scenario is as follows.



3

Automation for click and input on a webpage

3-11 Running the scenario



1 Click the 'Run scenario' button and check if the scenario runs without error.

2 If an error occurs, check the error message and review the settings of the property and the like.

3

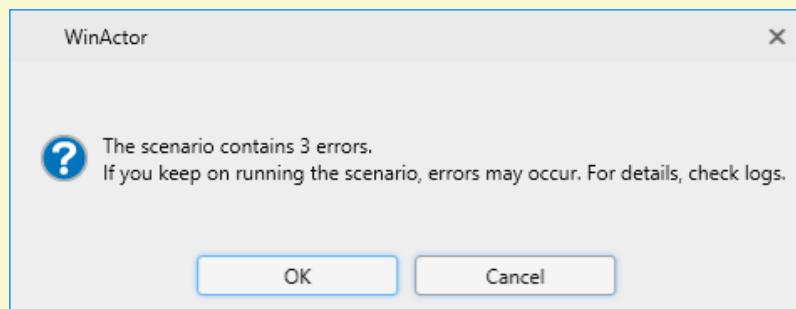
Automation for click and input on a webpage

3-11 Running the scenario

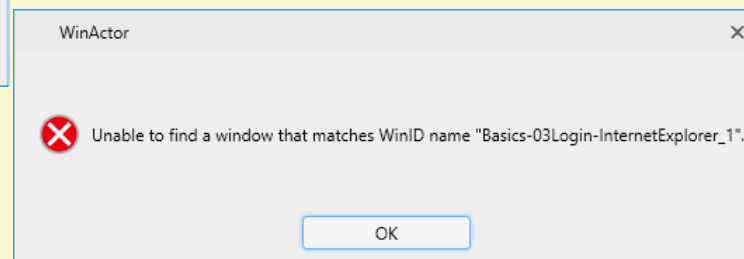
Error messages



A run scenario confirmation dialog as shown below will be displayed if there are any errors in the scenario when you click the 'Run scenario' button. As the created scenario will not be broken, you can click [OK] if you want to check the scenario operations. When the scenario progresses to the location with an error, an error dialog as shown below will be displayed again. Check the message and use it as a clue to find the cause of the error.



Run scenario
confirmation dialog

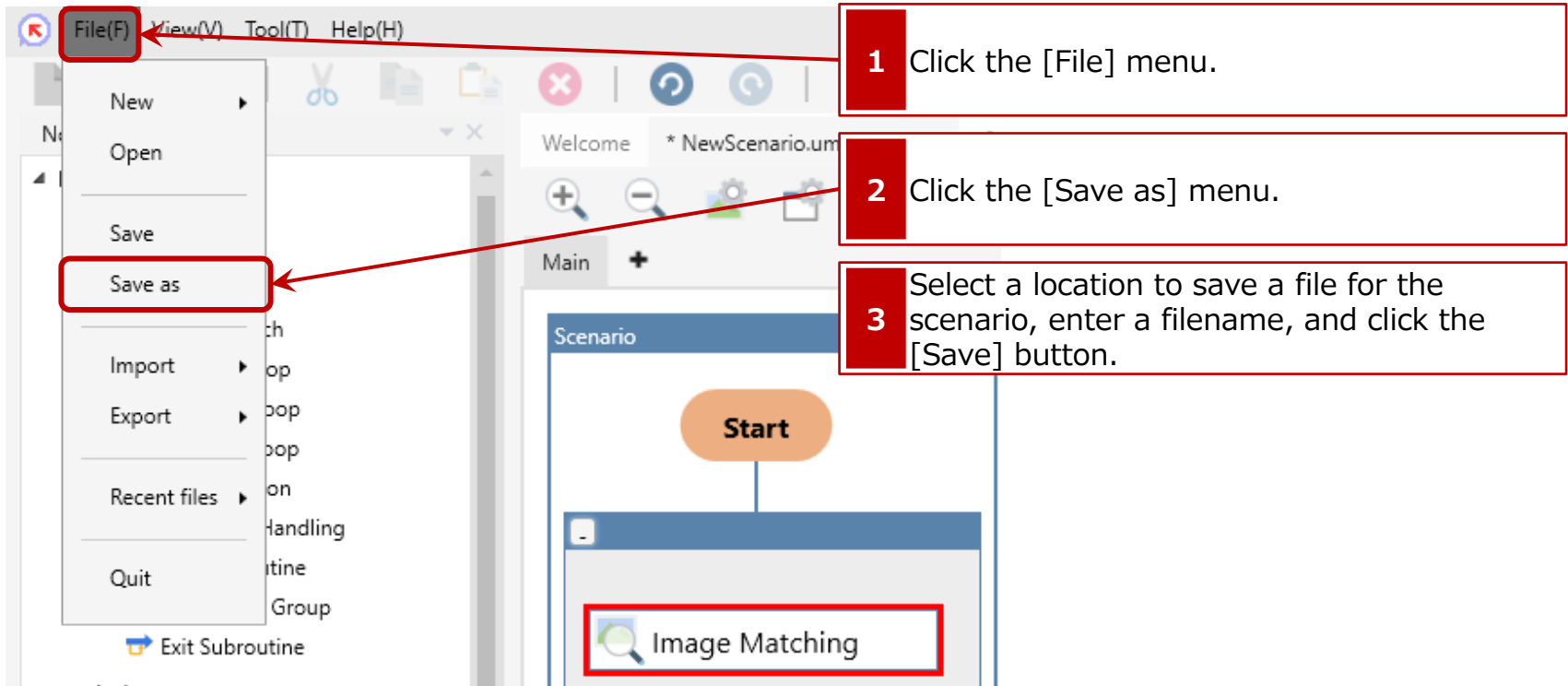


Error dialog

3

Automation for click and input on a webpage

3-12 Saving the scenario



The screenshot shows the software interface with the File menu open. The menu options are: New, Open, Save, Save as, Import, Export, Recent files, and Quit. The 'Save as' option is highlighted with a red box. A red arrow points from the 'File(F)' menu button to the 'Save as' option. Another red arrow points from the 'Save as' option to the 'Image Matching' button in the scenario diagram. The scenario diagram shows a 'Start' button connected to an 'Image Matching' button. The 'Image Matching' button is also highlighted with a red box.

- 1 Click the [File] menu.
- 2 Click the [Save as] menu.
- 3 Select a location to save a file for the scenario, enter a filename, and click the [Save] button.



For a scenario that has already been saved, you can use the [Save] menu.

3

Automation for click and input on a webpage



"How do you think of using WinActor? Do you feel like you can use it as a solution to your problems?"



"Yes, my manual work is automated as it is, and I really think that manual work and typo will be reduced!"



"Okay, let's proceed with the scenario creation."

3 Introducing scenario creation 'with guidance'

Tips If you find it difficult to create scenarios ...

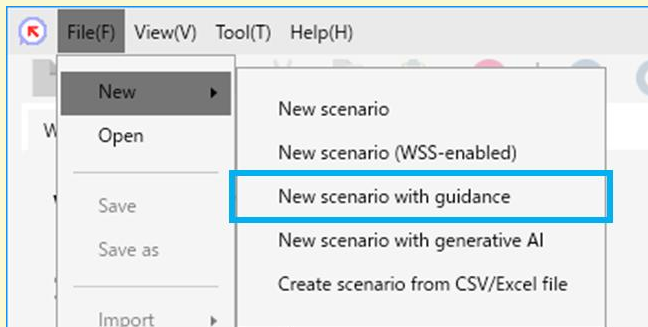


Guidance might be a better choice for beginners .

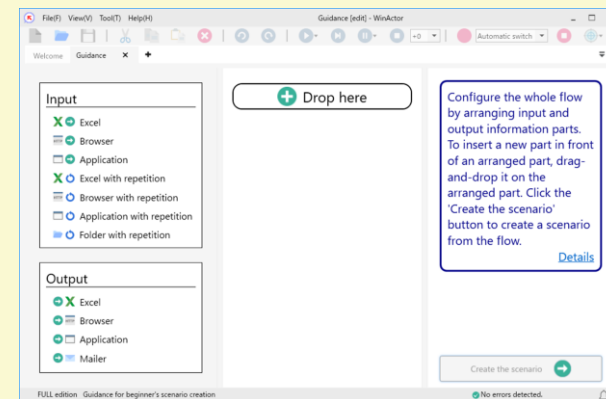
WinActor scenarios may be created easier 'with guidance.' If you find it difficult to directly create scenarios of WinActor, try creating scenario 'with guidance.'

To create 'with guidance,' Click 'File(F),' and select 'New' > 'New scenario with guidance' consecutively on the menu bar of WinActor.

For detailed usage, see "Scenario creation with guidance" in "WinActor Operation Manual."

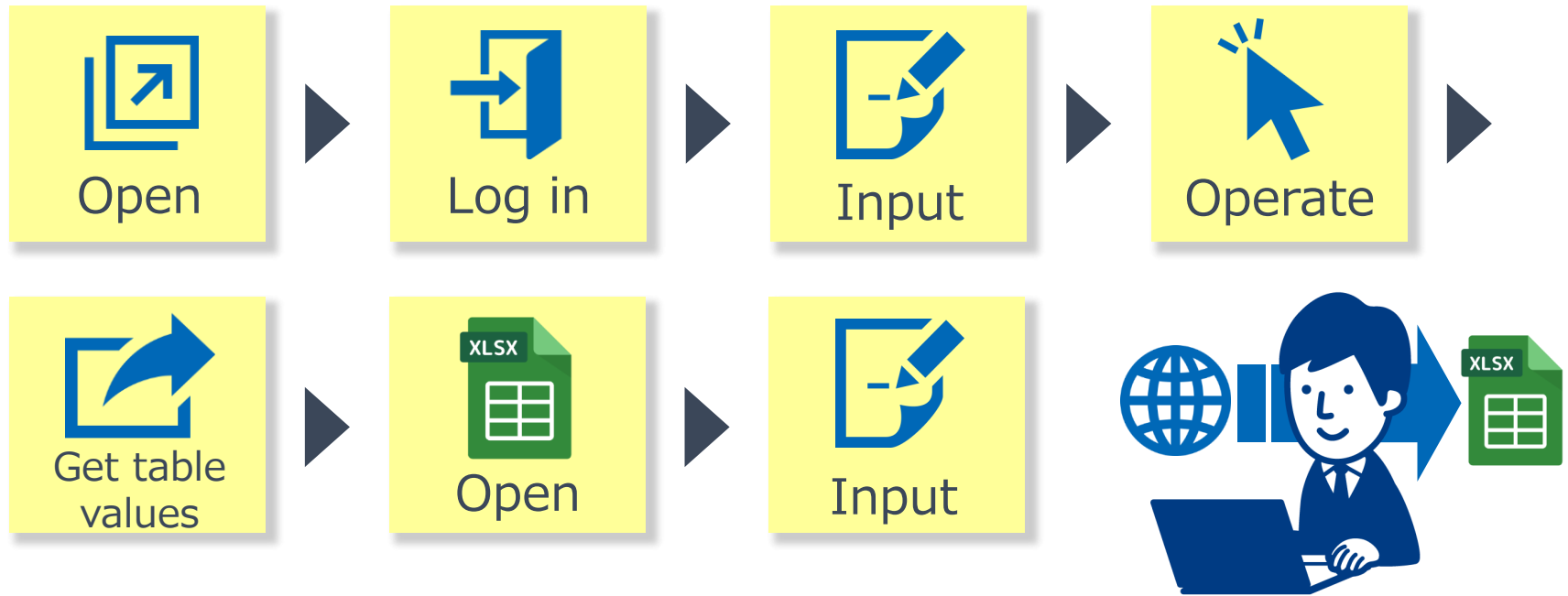


Opening scenario creation 'with guidance'



Scenario creation 'with guidance' tab

Basics



**Automation for data transfer from
a webpage to Excel**

4

Scenario creation - Basics 2 -

Case

William was relieved to be able to automate the registration to the web order system successfully.

However, this time, it has become a hassle to post the order status of the ordered items to the inventories of his company.



"Although I was able to automate the ordering successfully, now I feel that it is a hassle to display and check the status after each order..."



"WinActor is also good at automating the data transfer work from a webpage to Excel. You can easily automate the operations by simply combining the existing parts this time as well."



"It's nice that I can use WinActor with Excel as well. It's really helpful if it can write the status directly to the Excel book!"



"Again, let's take a look at how operations change between manual work and automation using WinActor."

4

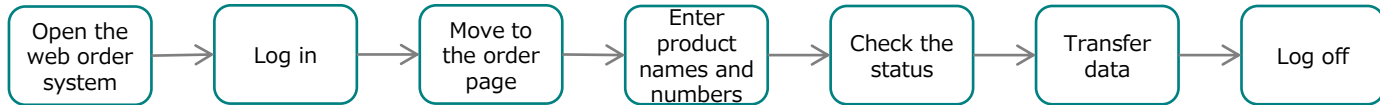
Scenario creation - Basics 2 -



"In automation using WinActor, the operations change as follows."

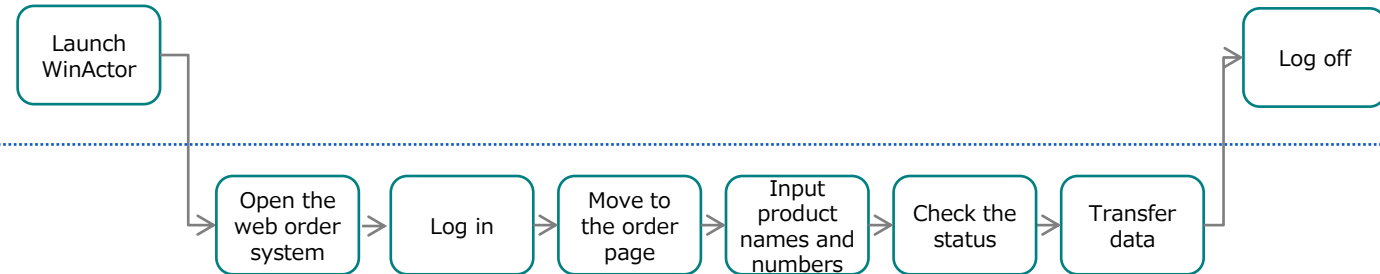
Manual
work

Person



Automation

Person



"It saves a lot of manual work in this case, too."

4

Scenario creation - Basics 2 -



"This time, we will use a node called **Browser_GetValueInTable**."



"I guess that it loads a table."

"That's right. As you read, it is a **node that gets a table displayed in a browser**."

No.	Order date	Approval date	Department	Requester
1	25 December 2019	25 December 2019	Accounting Department	Michael Brown
2	25 December 2019	25 December 2019	Accounting Department	Catherine Landis
3				
4				
5				
6				

Point!



"Once you become able to use **Browser_GetValueInTable**, you can get web contents such as stock price listings, product listings, weather information, etc. that are expressed in tables. You can expand the range of applications of WinActor, so let's use it!"

4

Scenario creation - Basics 2 -

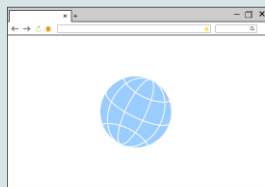


"In addition, we will use a node called **Excel Operation** this time."



"I think that it makes Excel to be used with WinActor."

"That's right. Just like the previous one, as you read, it is a **node that operates Excel**. With this node, you can **write data to an Excel file, load an Excel file, and run an Excel macro**."



"There are other ways to operate Excel with WinActor. This time, let's write data to an Excel file using the Excel Operation node!"

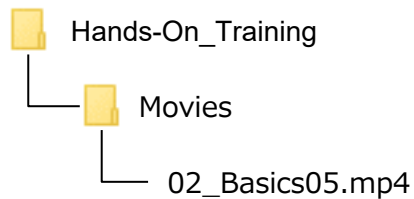
"If you can use Excel with WinActor, you can further expand the range of applications of WinActor!"

4

Scenario creation - Basics 2 -



"Let's watch the actual movement of WinActor. Double-click the file named 02_Basics05.mp4 in the following folder to play it."



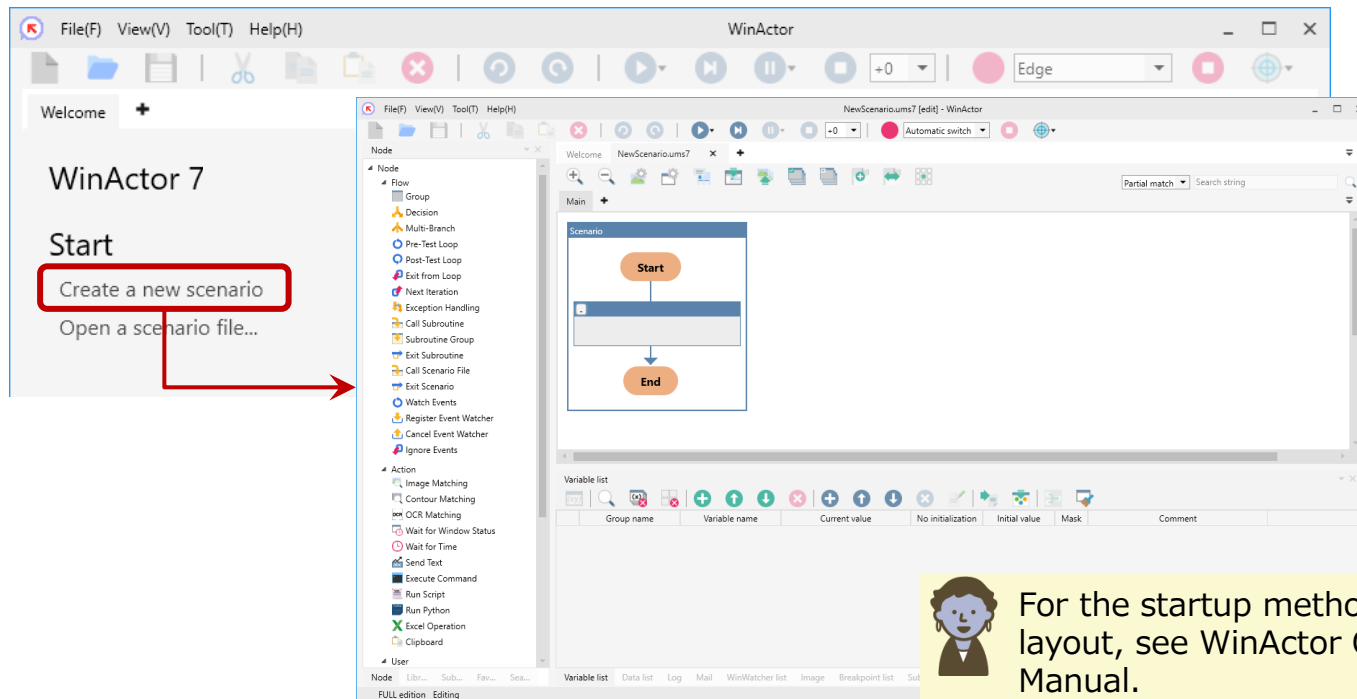
"Now, let's actually create a scenario together!"

5

Automation for data transfer from a webpage to Excel

Prep Launching WinActor

- 1 Launch WinActor from the Start menu or with any other startup method.
- 2 Click [Create a new scenario]. The main window of WinActor appears.



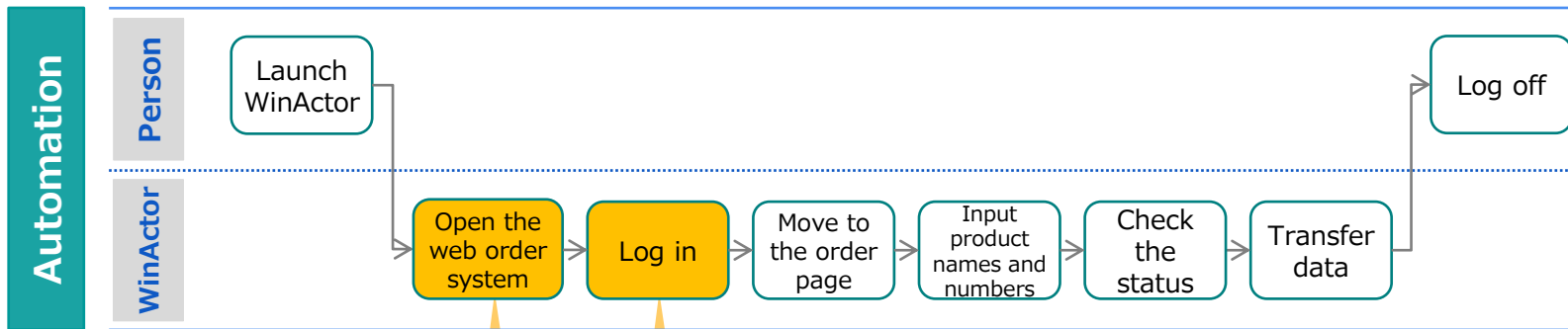
For the startup methods and window layout, see WinActor Operation Manual.

5

Automation for data transfer from a webpage to Excel



"From here, we will create a scenario for the following operation."

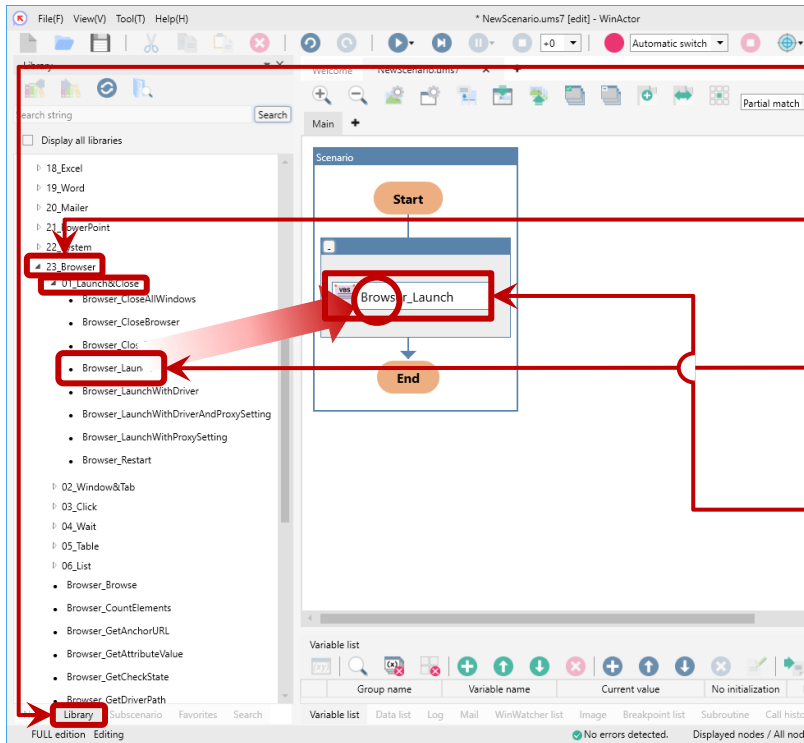


5-1 Opening and logging into the webpage

5

Automation for data transfer from a webpage to Excel

5-1 Opening and logging into the webpage



1 Click the [Library] tab.

2 Double-click '23_Browser,' expand the list of libraries, and double-click '01_Launch&Close.'

3 Drag the 'Browser_Launch' library and drop it into the scenario edit area.

4 Double-click the placed library. (Displaying the property)

5

Automation for data transfer from a webpage to Excel

5-1 Opening and logging into the webpage

The screenshot shows the 'Run Script' dialog box with the following fields and buttons:

- Name: Browser_Launch
- Comment: (empty)
- Settings tab selected, showing:
 - Browser_name: Value=> edge01
 - Browser_type: edge
 - Timeout setting: Use "Scenario information"
 - Timeout(msec)(optional): Value=>
- Buttons: Update, Restore

Red arrows point from the numbered instructions to the corresponding fields and buttons in the dialog box.

5 Enter "Value=>edge01" for [Browser_name].

6 Select 'edge' for [Browser_type].

7 Click the [Update] button.

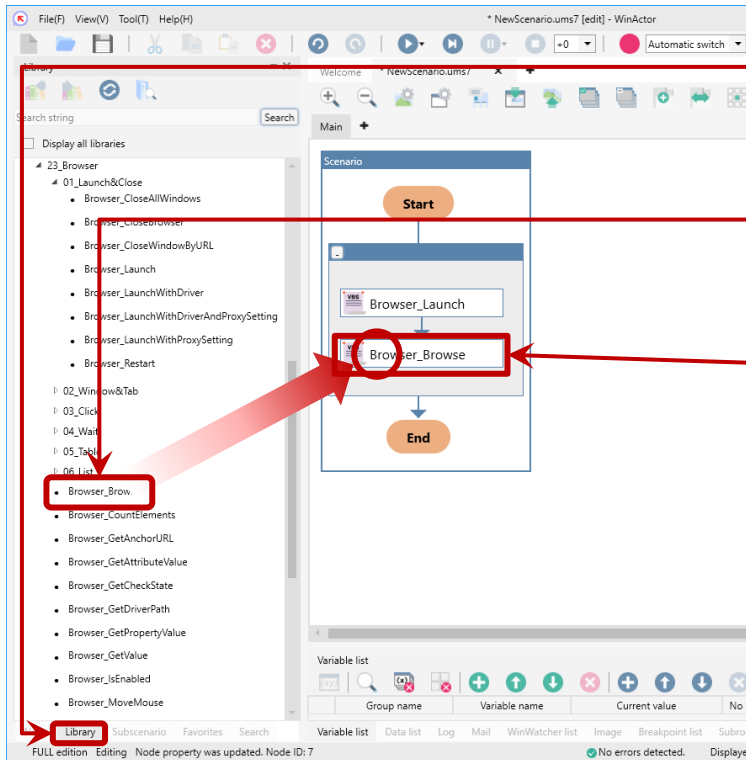


For Chrome users, select 'Chrome' from the dropdown of 'Browser_type.'

5

Automation for data transfer from a webpage to Excel

5-1 Opening and logging into the webpage



8 Click the [Library] tab.

9 Drag the 'Browser_Browse' library and drop it into the scenario edit area.

10 Double-click the placed library. (Displaying the property)

5

Automation for data transfer from a webpage to Excel

5-1 Opening and logging into the webpage

The screenshot shows the 'Run Script' property window for a script named 'Browser_Browse'. The 'Settings' tab is selected. The 'URL' field is highlighted with a red box and contains the value 'C:/temp/01_Basics03_Logir'. A red arrow points from the 'Update' button to the 'URL' field. Another red arrow points from the 'Update' button to the 'Update' button itself.

11 Enter '01_Basics03_Login.html' for [URL].

12 Click the [Update] button.

For the setting of a file path, you can drag and drop the file as described above instead of typing the file path manually.

When you want to set a path of a file in a folder displayed on the desktop to a node or library, the setting with drag and drop is convenient. It reduces typos when setting the file path and speeds up scenario creation.



The screenshot shows the 'Excel Operation' property window. The 'Operation' is set to 'Set value'. The 'Value/Variable' is set to 'status'. The 'Destination' is set to 'Filename'. The 'Filename' field contains the value 'C:/temp/01_Basics03_Login.html'. A red arrow points from the 'Update' button to the 'Filename' field. Another red arrow points from the 'Update' button to the 'Update' button itself.

Drag and drop

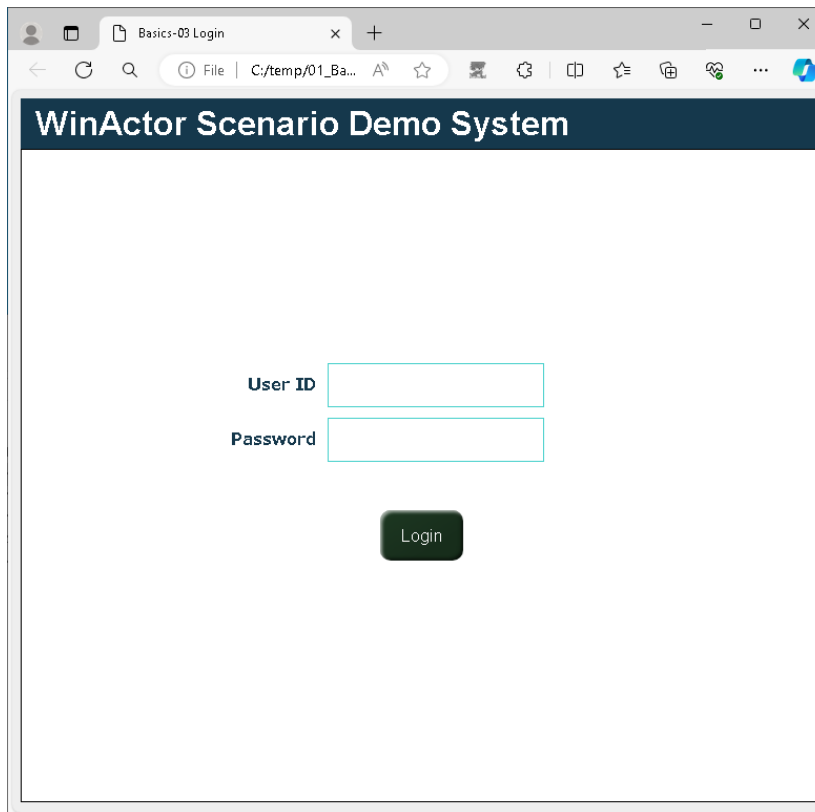


5

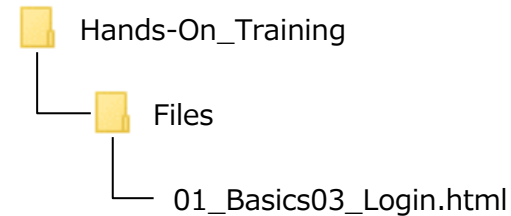
Automation for data transfer from a webpage to Excel

5-1 Opening and logging into the webpage

13 Right-click "01_Basics03_Login.html" and select 'Microsoft Edge' from 'Open with.'



File to be used



Be sure to use Edge or Chrome as the browser to start the demo system.

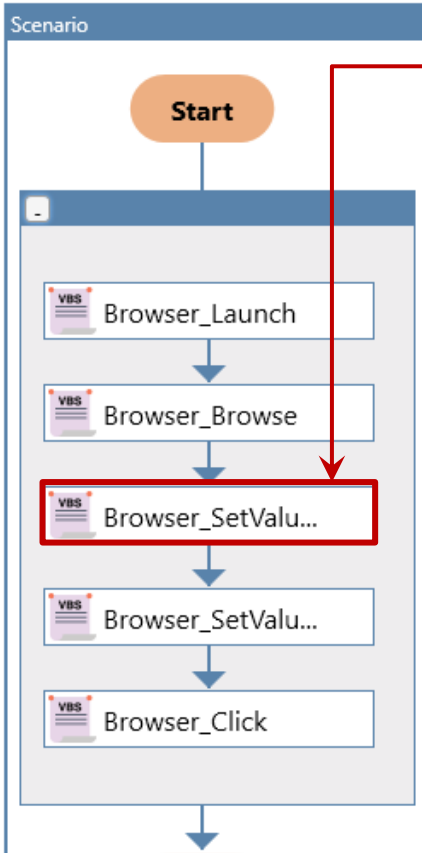


For Chrome users, select 'Google Chrome' from 'Open with.'

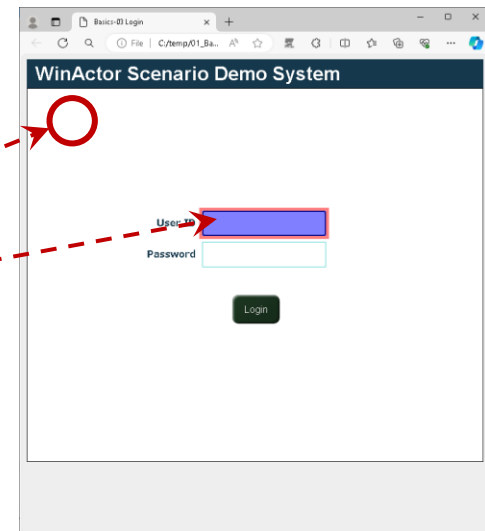
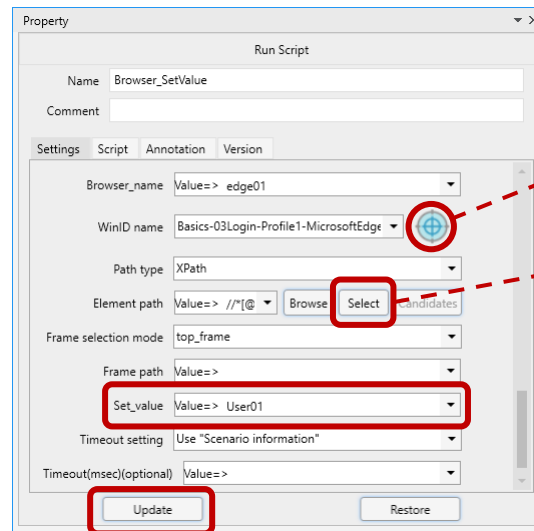
5

Automation for data transfer from a webpage to Excel

5-1 Opening and logging into the webpage



14 Place the 'Browser_SetValue' library to set up the target window. Set [Element path] by selecting the "User ID" text box so that the value is set into the "User ID."



15 Enter "Value=>User01" for [Set_value], and click the [Update] button.

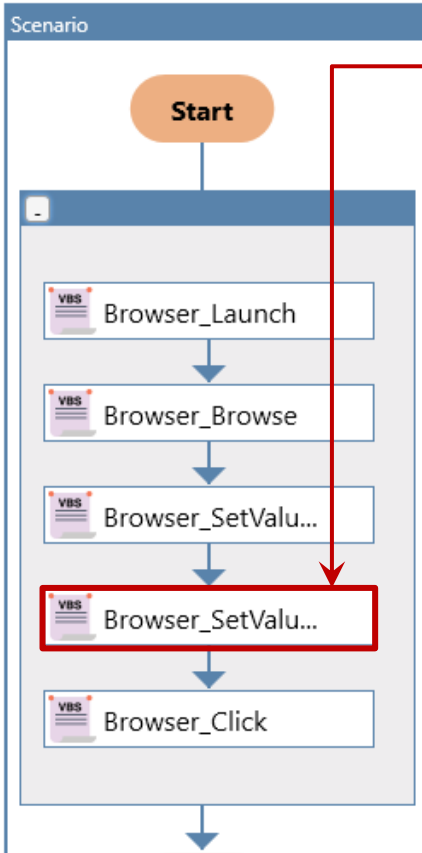


For the settings of 'Browser_SetValue,' see 3-6 in the "3 Automation of click-and input on a webpage."

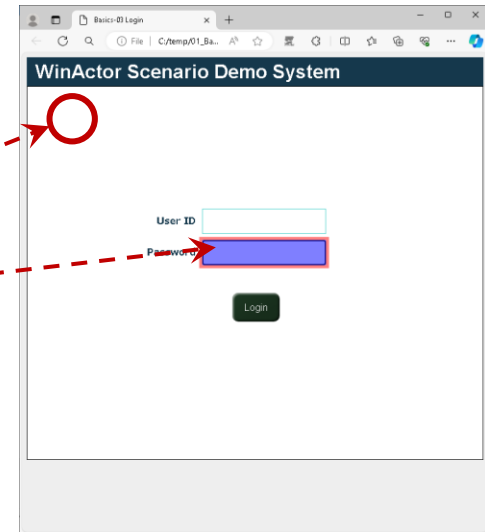
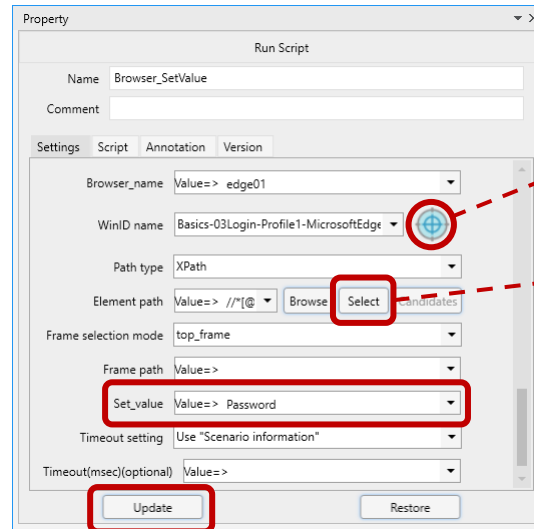
5

Automation for data transfer from a webpage to Excel

5-1 Opening and logging into the webpage



16 Place the 'Browser_SetValue' library to set up the target window. Set [Element path] by selecting the "Password" text box so that the value is set into the "Password."



17 Enter "Value=>Password" for [Set_value], and click the [Update] button.

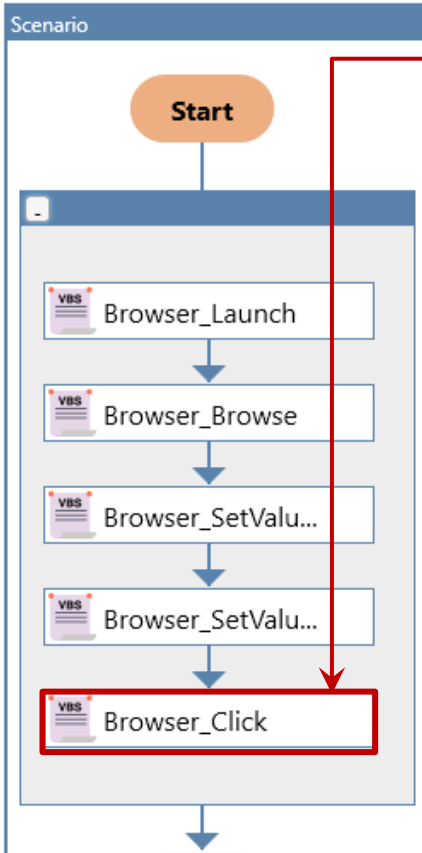


For the settings of 'Browser_SetValue,' see 3-6 in the "3 Automation of click-and input on a webpage."

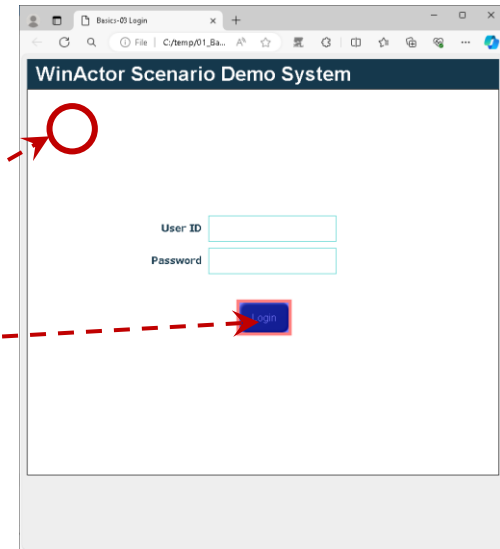
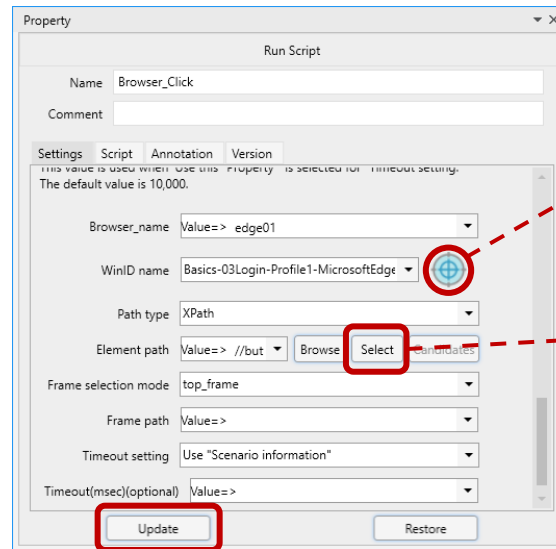
5

Automation for data transfer from a webpage to Excel

5-1 Opening and logging into the webpage



18 Place the 'Browser_click' library to set up the target window. Set [Element path] by selecting the 'Login' button so as to log in.



19 Click the [Update] button.



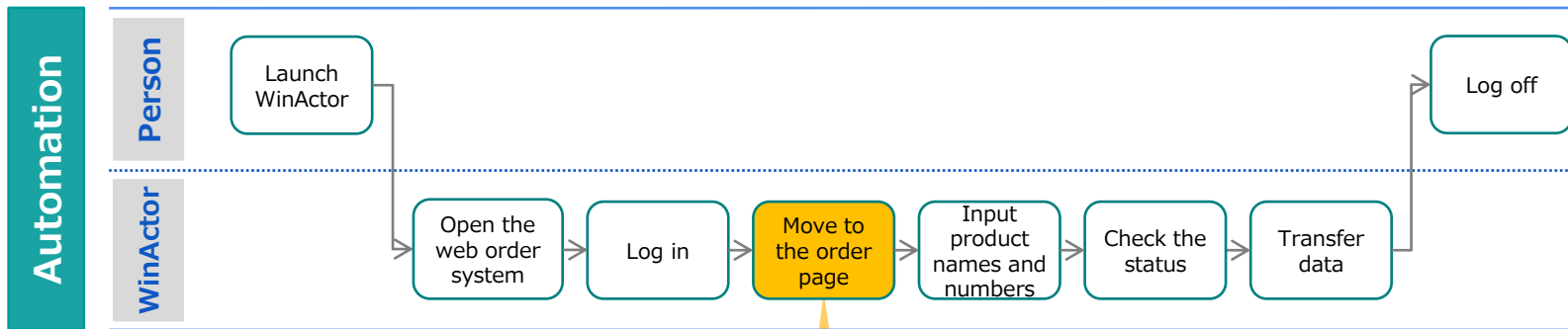
For the settings of 'Browser_Click,' see 3-9 in the "3 Automation of click-and input on a webpage."

5

Automation for data transfer from a webpage to Excel



"From here, we will create a scenario for the following operation."



5-2

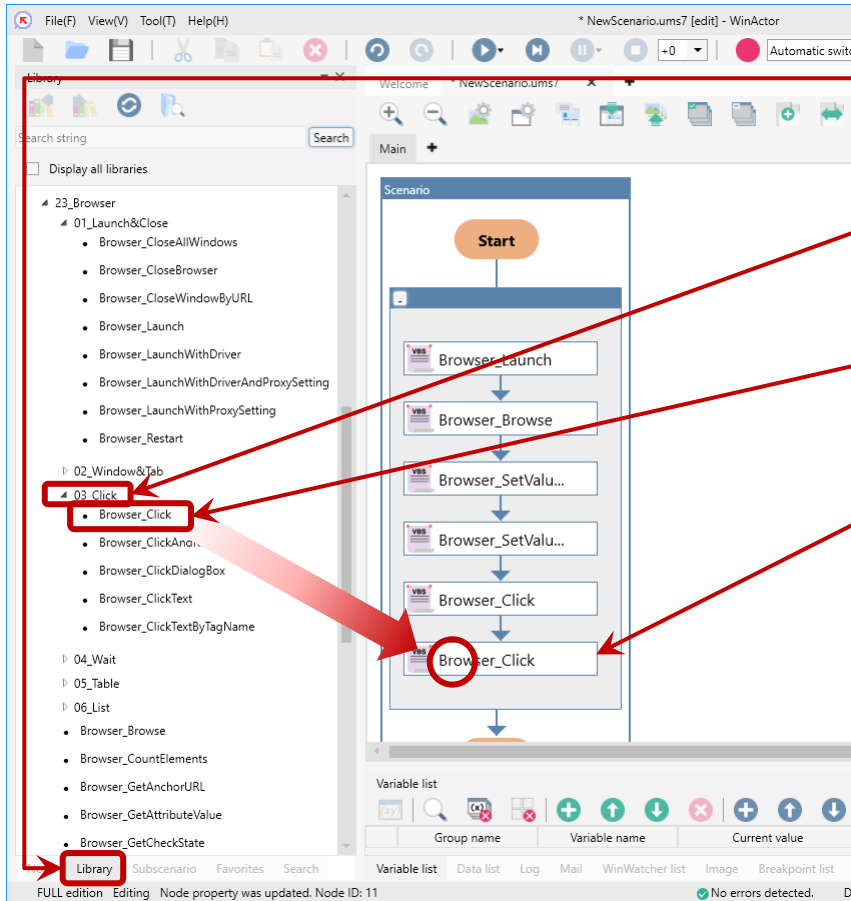
Moving to the Search Purchase Order page

5

Automation for data transfer from a webpage to Excel

5-2

Moving to the Search Purchase Order page



1 Click the [Library] tab.

2 Double-click '03_Click' and expand the list of libraries.

3 Drag the 'Browser_Click' library and drop it into the scenario edit area.

4 Double-click the placed library. (Displaying the property)

5

Automation for data transfer from a webpage to Excel

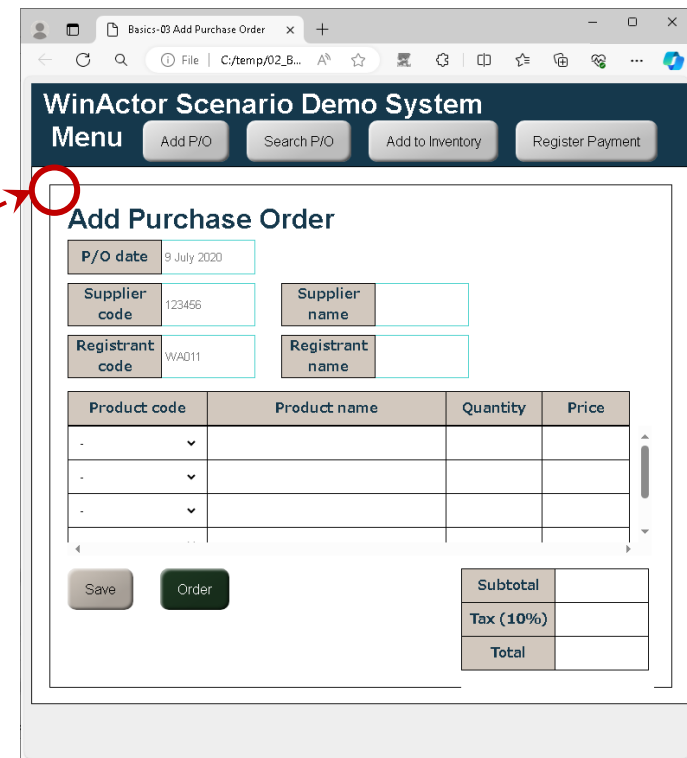
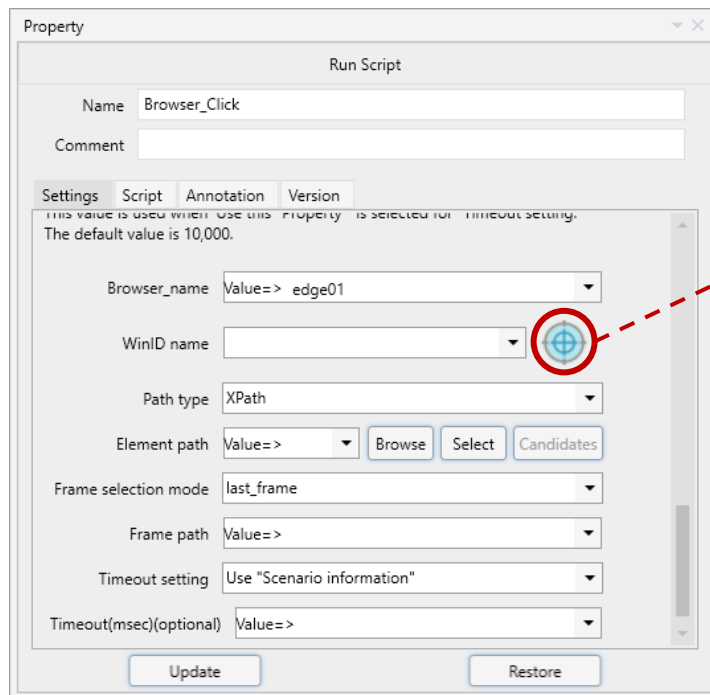
5-2

Moving to the Search Purchase Order page

5 Click the blue scope button for [WinID name].

6

Move the mouse cursor on a page you want to capture, and click the page.



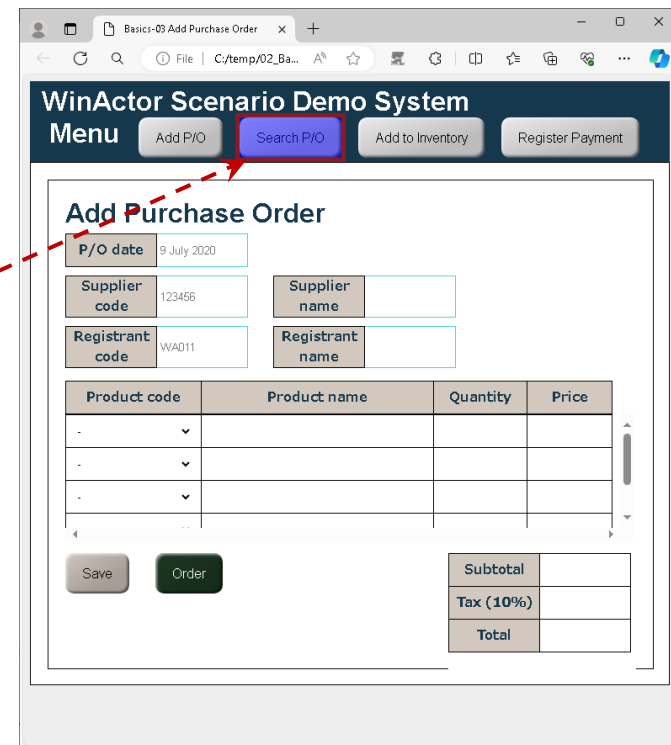
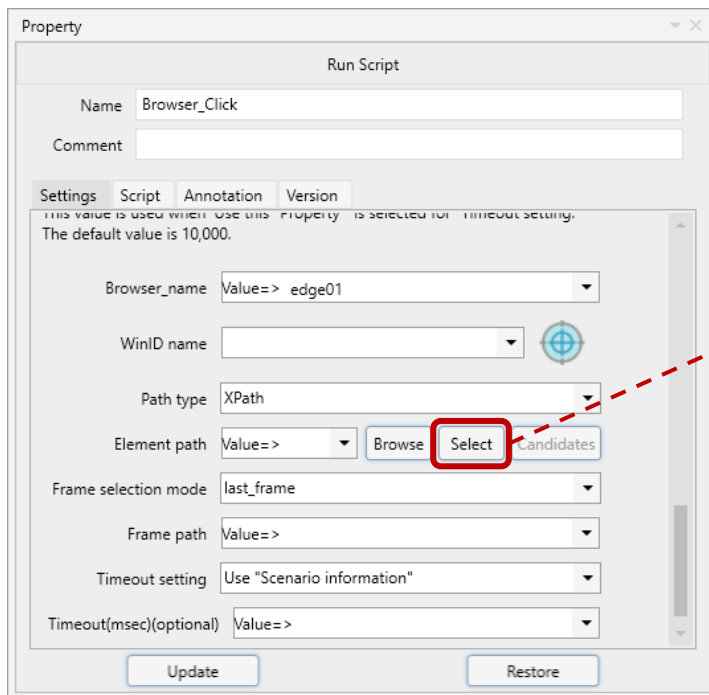
5

Automation for data transfer from a webpage to Excel

5-2 Moving to the Search Purchase Order page

7 Click the [Select] button in [Element path].

8 Move mouse cursor over the 'Search P/O' button, wait for the color to change, and click it.

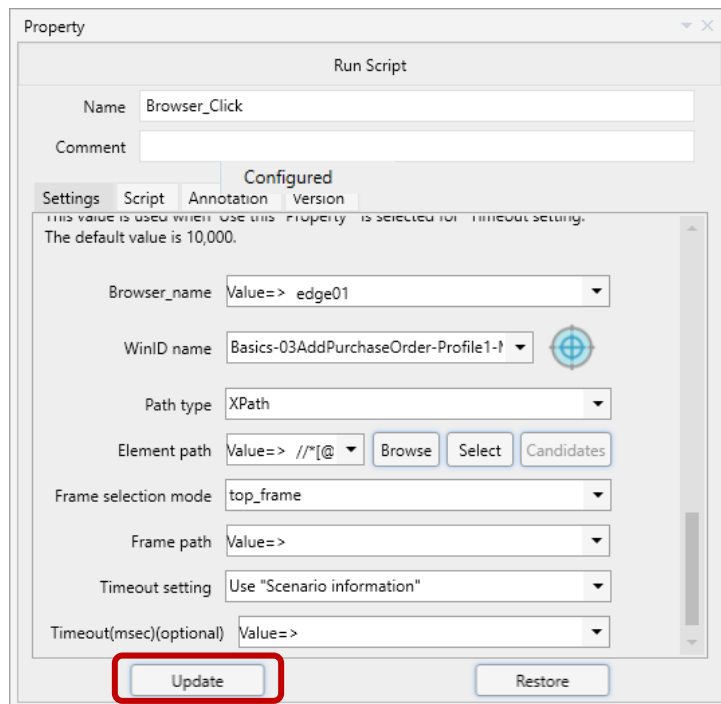


5

Automation for data transfer from a webpage to Excel

5-2 Moving to the Search Purchase Order page

9 Click the [Update] button.

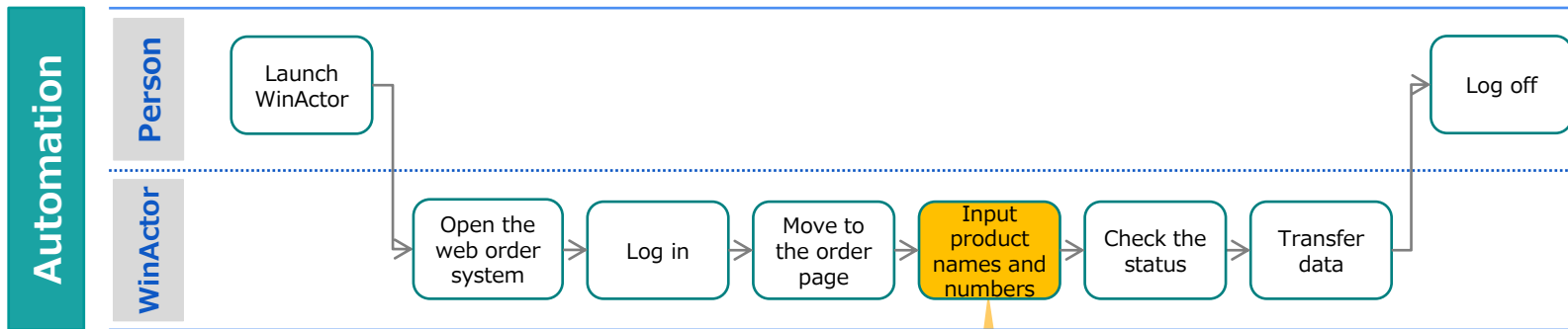


5

Automation for data transfer from a webpage to Excel



"From here, we will create a scenario for the following operation."



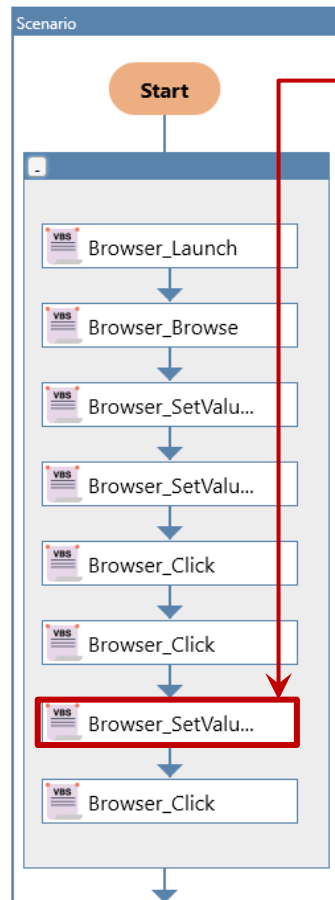
5-3

Searching products in the Search Purchase Order page

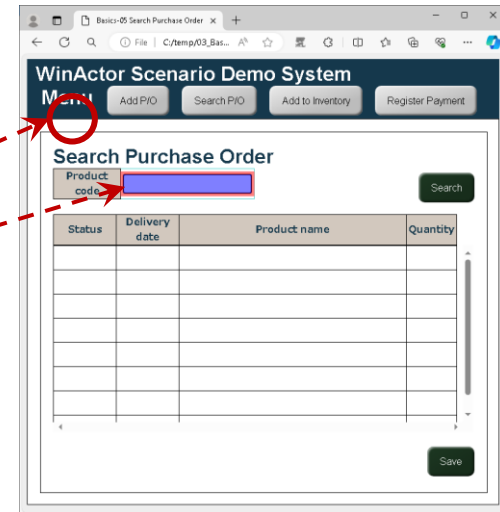
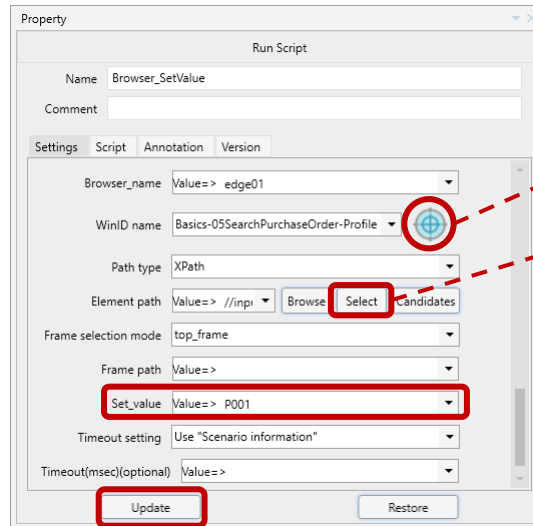
5

Automation for data transfer from a webpage to Excel

5-3 Searching products in the Search Purchase Order page



1 Set the webpage to be operated in the same way as for other properties.
Set [Element path] by selecting the "Product code" text box so that the value is set into the "Product code."



2 Enter "Value=>P001" for [Set_value], and click the [Update] button.

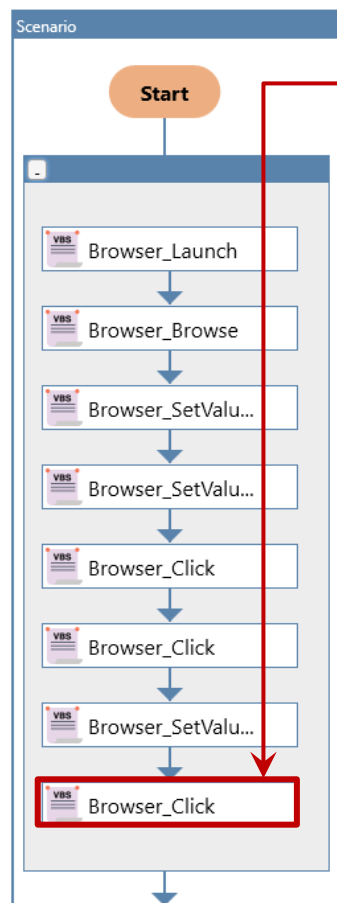


For the settings of 'Browser_SetValue,' see 3-6 in the "3 Automation of click-and input on a webpage."

5

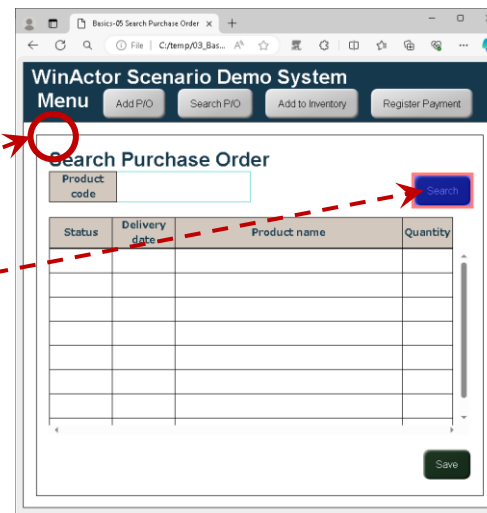
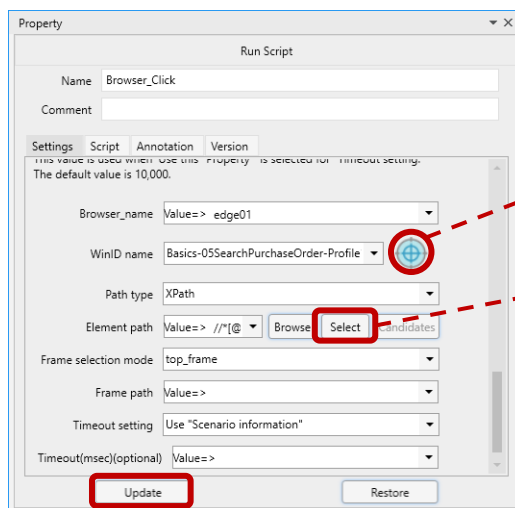
Automation for data transfer from a webpage to Excel

5-3 Searching products in the Search Purchase Order page



3

Set the webpage to be operated in the same way as for other properties. Set [Element path] by selecting the 'Search' button so as to log in.



4

Click the [Update] button.



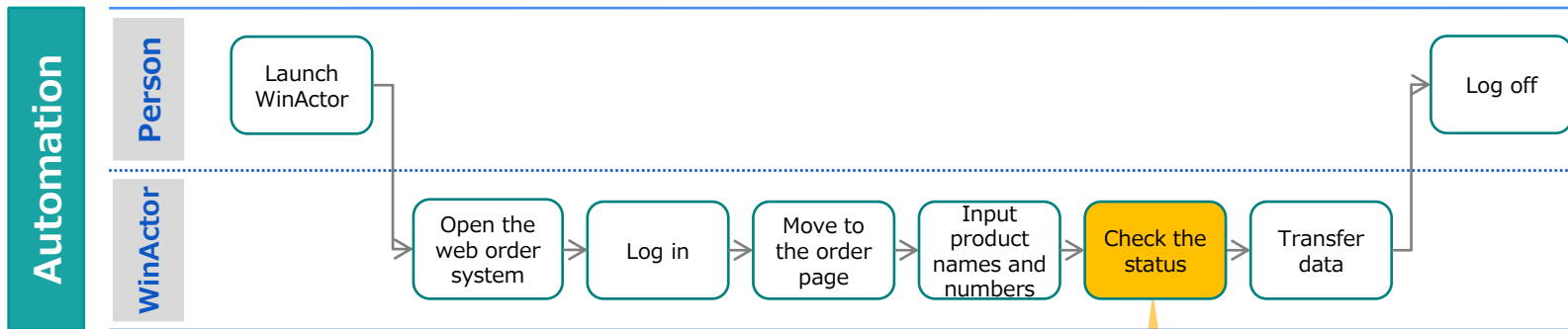
For the settings of 'Browser_Click,' see 3-9 in the "3 Automation of click-and input on a webpage."

5

Automation for data transfer from a webpage to Excel



"From here, we will create a scenario for the following operation."



5-4

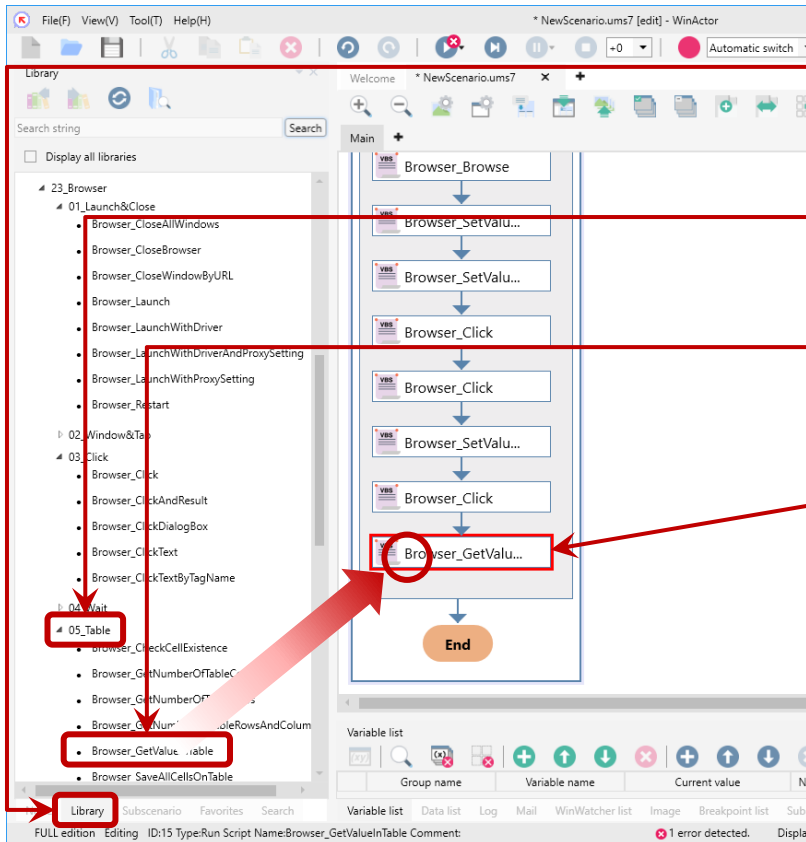
Getting the status of Search Purchase Order

5

Automation for data transfer from a webpage to Excel

5-4

Getting the status of Search Purchase Order



1 Click the [Library] tab.

2 Double-click '05_Table' and expand the list of libraries.

3 Drag the 'Browser_GetValueInTable' library and drop it into the scenario edit area.

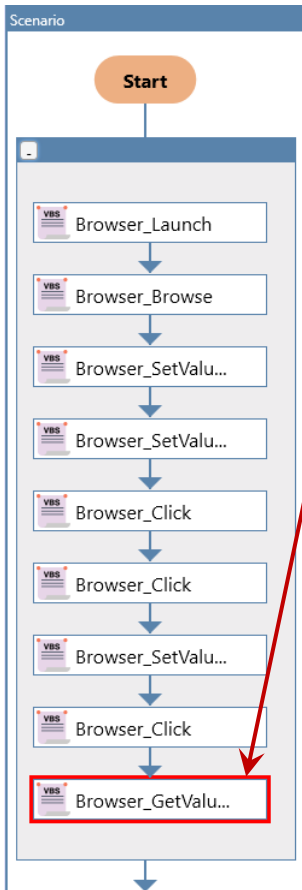
4 Double-click the placed library. (Displaying the property)

5

Automation for data transfer from a webpage to Excel

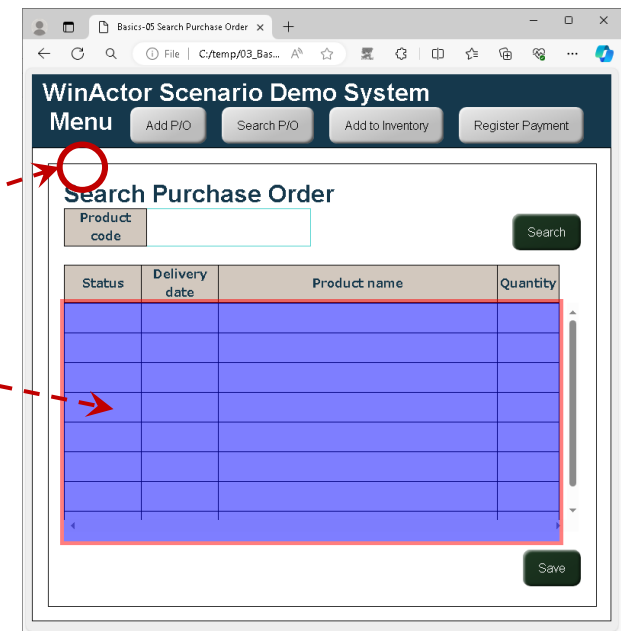
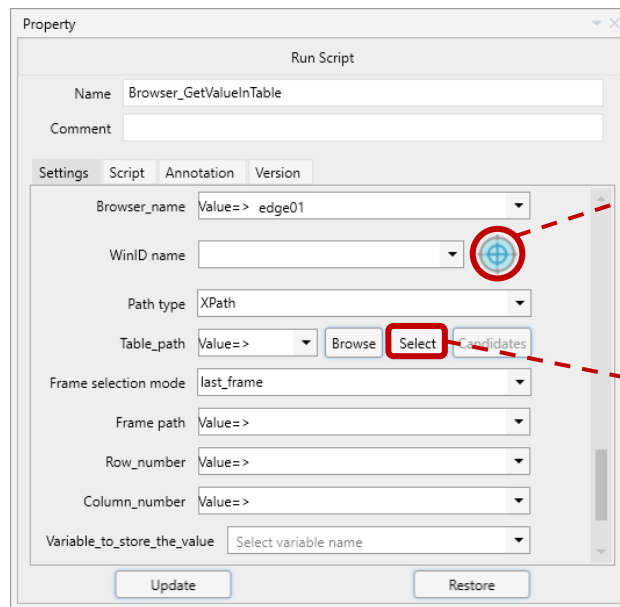
5-4

Getting the status of Search Purchase Order



5

Set the webpage to be operated in the same way as for other properties. Set [Table_path] by selecting the table on the webpage.

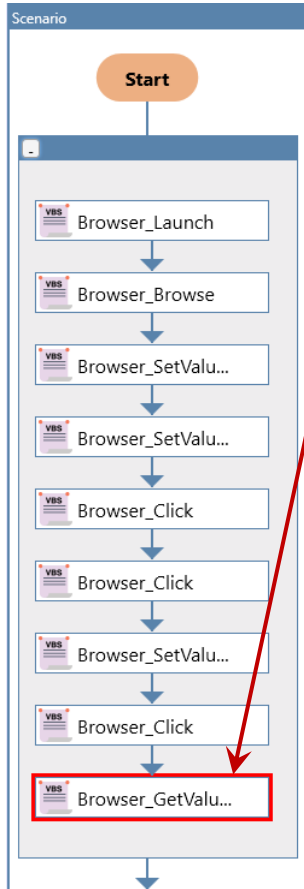


5

Automation for data transfer from a webpage to Excel

5-4

Getting the status of Search Purchase Order



6 Set the remaining property items of 'Browser_GetValueInTable' as follows.

Property

Run Script

Name: Browser_GetValueInTable

Comment:

Settings Script Annotation Version

Browser_name: Value=> edge01

WinID name: Basics-05SearchPurchaseOrder-Profile

Path type: XPath

Table_path: Value=> //*[6] Browse Select Candidates

Frame selection mode: top_frame

Frame path: Value=>

Row_number: Value=> 1

Column_number: Value=> 1

Variable_to_store_the_value: Status

Update

6.1 For both [Row_number] and [Column_number], enter "Value=> 1."

6.2 For [Variable_to_store_the_value], enter "Status."

6.3 Click the [Update] button. If the variable confirmation dialog appears, click [Yes].

WinActor

? Variable "Status" does not exist in Variable list. Do you want to add a new variable?

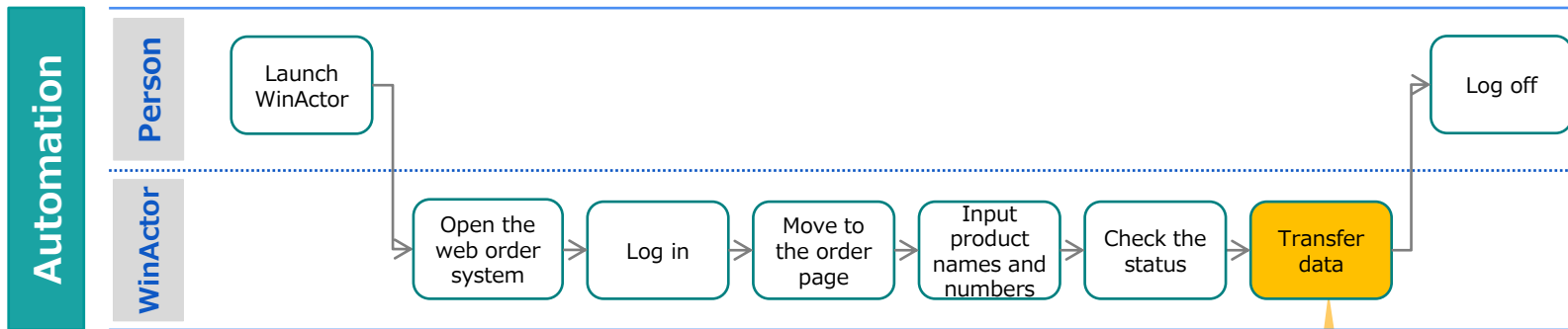
Yes No

5

Automation for data transfer from a webpage to Excel



"From here, we will create a scenario for the following operation."



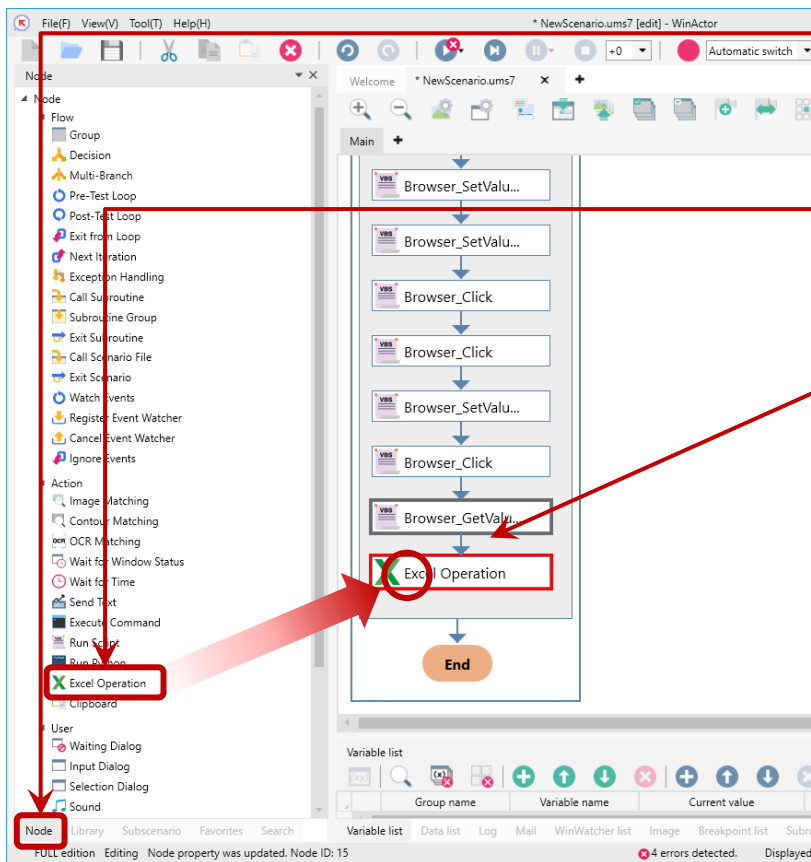
5-5

Inputting the status into Excel

5

Automation for data transfer from a webpage to Excel

5-5 Inputting the status into Excel



1 Click the [Node] tab.

2 Drag the 'Excel Operation' node and drop it into the scenario edit area.

3 Double-click the placed node. (Displaying the property)

5

Automation for data transfer from a webpage to Excel

5-5 Inputting the status into Excel

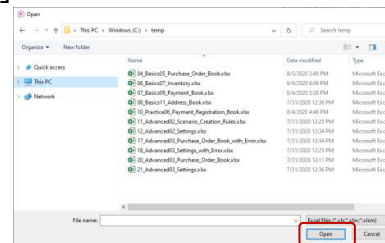
The screenshot shows the 'Excel Operation' dialog box with the following fields and annotations:

- Name:** Excel Operation
- Comment:** (empty)
- Operation:** Set value (annotated with a red box and arrow 4)
- Value/Variable:** Status (annotated with a red box and arrow 5)
- Destination:**
 - Filename:** Value=> C:\temp\04_Basics05_Purchase_Order_Book.xlsx (annotated with a red box and arrow 6)
 - Sheet name:** Value=> Sheet1 (annotated with a red box and arrow 7)
 - Cell position:** Value=> J5 (annotated with a red box and arrow 7)
- Buttons:** Update (annotated with a red box and arrow 8) and Restore.

4 For [Operation], select 'Set value.'

5 For [Value/Variable], select 'Status.'

6 Click the [...] button for [Filename], and Explorer opens. Specify the file named "04_Basics05_Purchase_Order_Book.xlsx" and click [Open].



7 For [Sheet name], enter "Value=>Sheet1."
(You can also use the [...] button.)
For [Cell position], specify "Value=>J5."

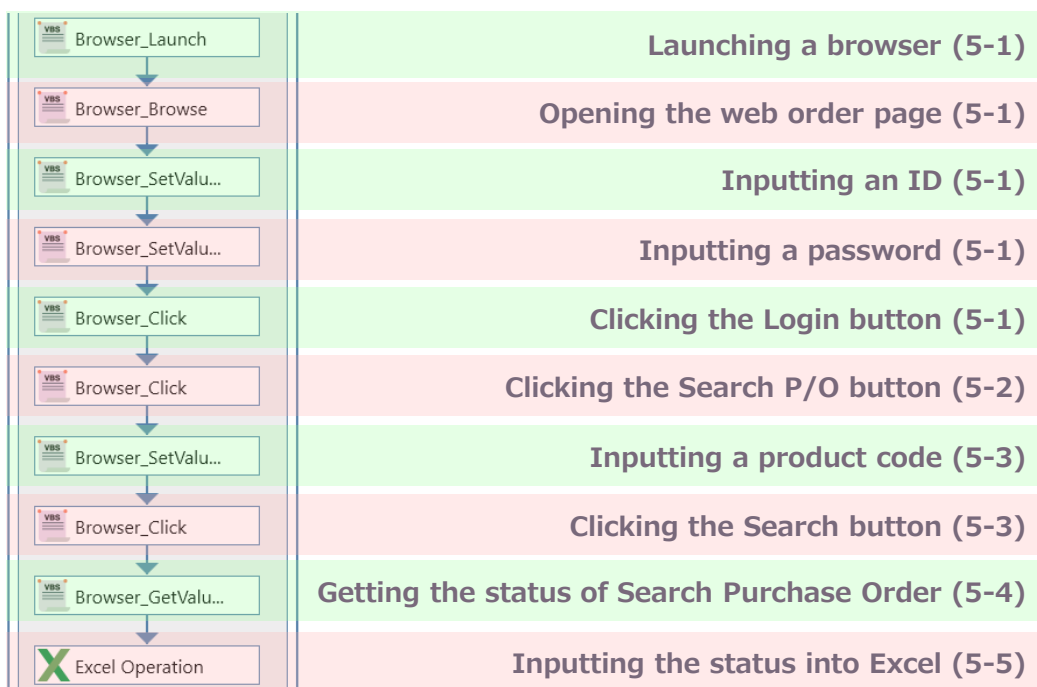
8 Click the [Update] button.

5

Automation for data transfer from a webpage to Excel

5-6 Checking the entire scenario

1 Confirm that the created scenario is as follows.



You can run and save the scenario in the same way as in 3-11 and 3-12 in the “3 Automation for click and input on a webpage.”

5-7 Running the scenario

5-8 Saving the scenario

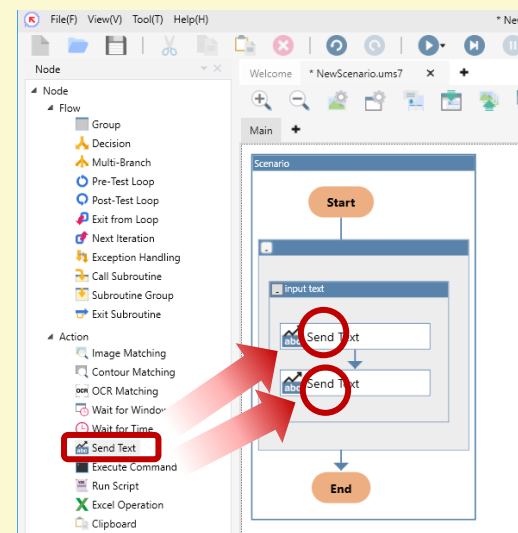
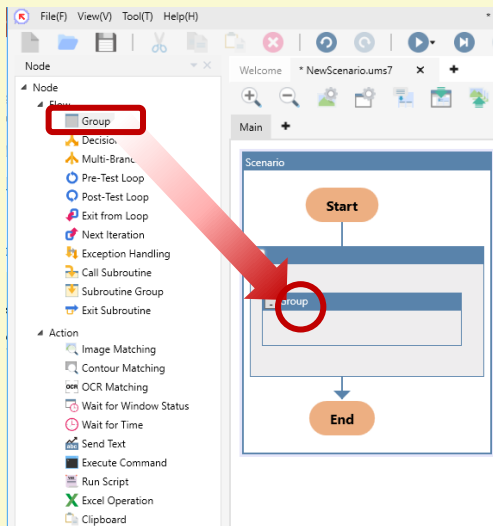
Automation for data transfer from a webpage to Excel

Tips Using 'Group' (node)

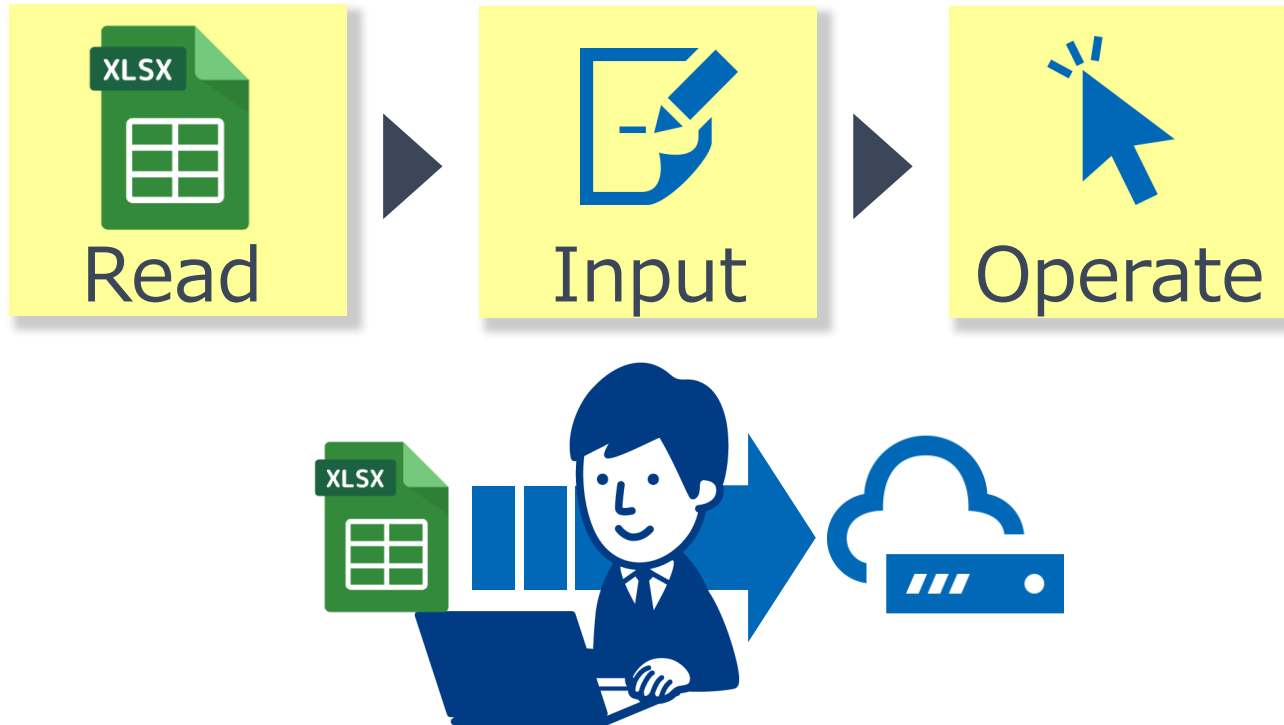


Using 'Group' (node) makes the scenario easier to understand.

If similar nodes and libraries are lined up in a scenario, you can use the 'Group' node to make the scenario composition easier to understand. You can place nodes and libraries in 'Group' to make them grouped by a meaningful unit. With the 'Group' node, you can make a scenario easier for other co-developers to understand.



Basics



**Automation for data transfer from
Excel to an in-house system**

6

Scenario creation - Basics 3 -

Case

William was relieved to be able to automate the operations to transfer the order status data to the Excel book as well.

Now, he is trying to automate the operations to transfer the inventory information to the in-house system.



"I have automated the work using the web system and Excel, and it seems that the same can be done for transferring data to the company's in-house system."



"Of course, WinActor can be used not only for applications such as browsers and Excel but also for in-house systems. You can automate the operations by combining the existing parts this time as well."



"It's hard to use our in-house system, so it would be very helpful if it could be automated!"



"Again, let's take a look at how operations change between manual work and automation using WinActor."

6

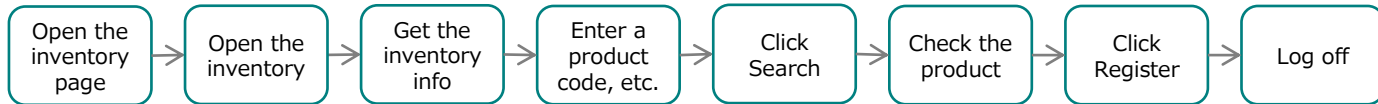
Scenario creation - Basics 3 -



"In automation using WinActor, the operations change as follows."

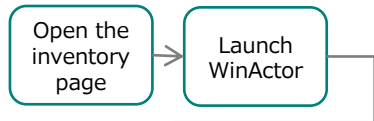
Manual work

Person

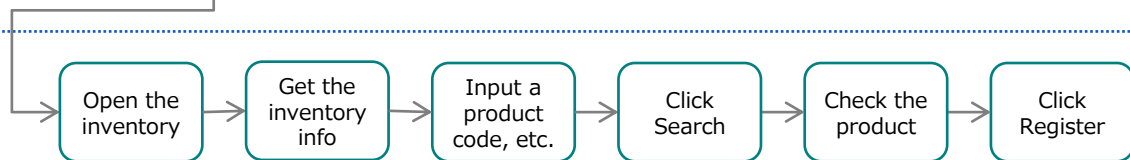


Automation

Person



WinActor



Log off



"Basically, the flow is the same as the last time."

6

Scenario creation - Basics 3 -

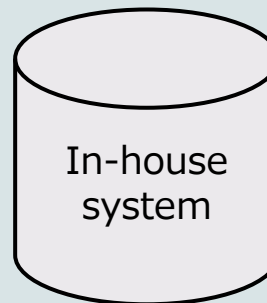


"We will again use a node called **Excel Operation** this time."



"How do we use it this time?"

"This time, we will use it to **open the Excel file, get the values, and transfer them to the in-house system!**"



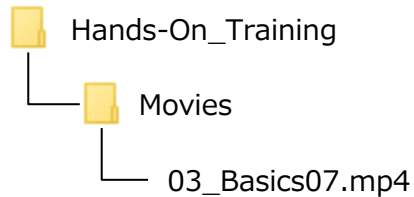
"Last time, I mentioned that the Excel Operation node can be used for reading as well as writing. In actual work, it often happens that information is transferred from the book shared in the department to the in-house system. Here, let's learn how to set and use the acquired value!"

6

Scenario creation - Basics 3 -



"Let's watch the actual movement of WinActor. Double-click the file named 03_Basics07.mp4 in the following folder to play it."



"Now, let's actually create a scenario together!"

7

Automation for data transfer from Excel to an in-house system

Prep Displaying the in-house system page

- 1 Right-click "05_Basics07_Add_Item_to_Inventory.html" and select 'Microsoft Edge' from 'Open with.'

WinActor Scenario Demo System

Menu Add P/O Search P/O Add to Inventory Register Payment

Add Item to Inventory

Registration date 9 July 2020

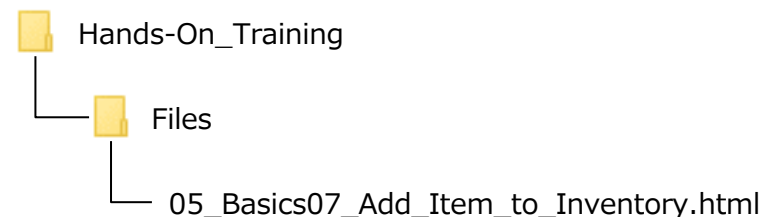
Storehouse code 0001 Storehouse name

Product code Product name Search

<input type="checkbox"/>	Status	Product name	Quantity
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			

Register

File to be used



Be sure to use Edge or Chrome as the browser to start the demo system.



For Chrome users, select 'Google Chrome' from 'Open with.'

7

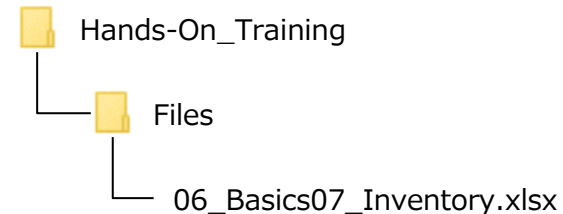
Automation for data transfer from Excel to an in-house system

Prep

Checking the inventory

Number	Registration date	Storehouse code	Department	Requester name	Product code	Name
1	25 December 2019	0001	Accounting Department	Michael Brown	P001	
2	25 December 2019	0002	Accounting Department	Catherine Landis	P001	
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

File to be checked



Check the inventory that is the source for transferring data. You may be familiar with it as you are using it for your daily work. However, when creating a scenario, the positions (rows and columns) of sheet cells that you usually do not pay much attention to become important.

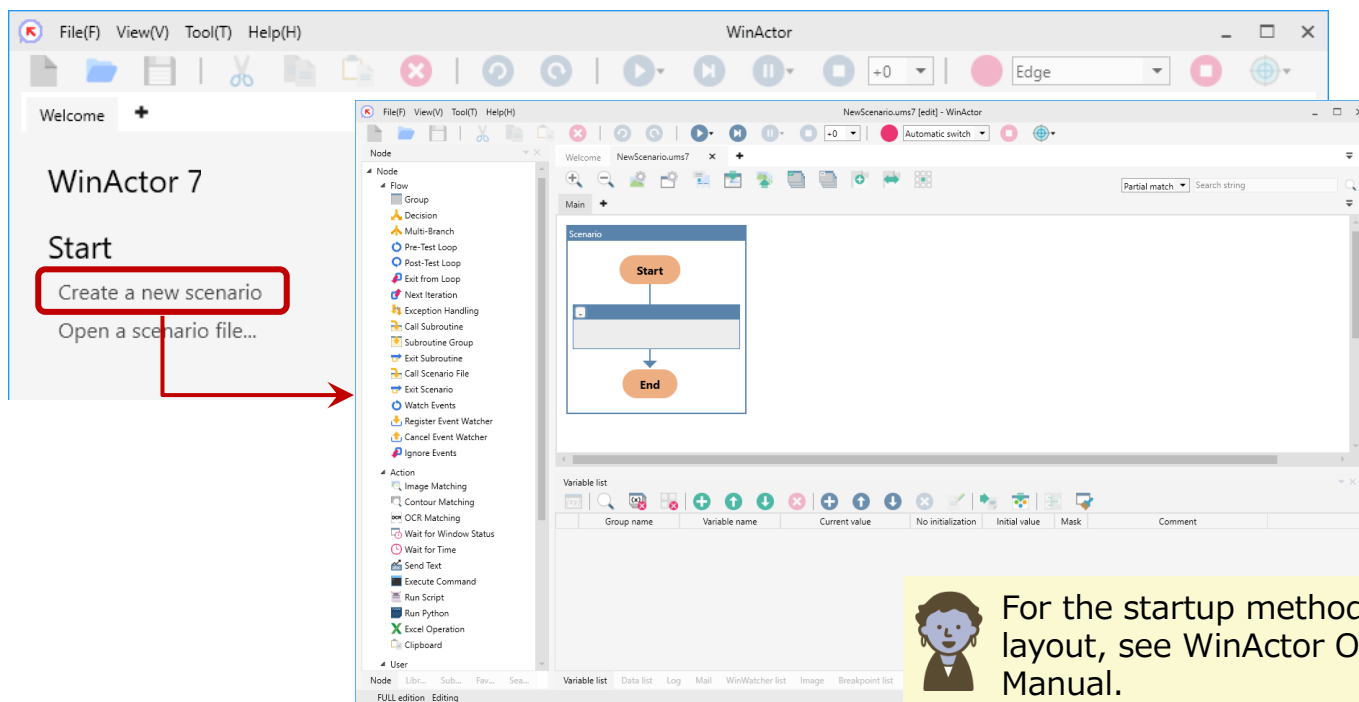


7

Automation for data transfer from Excel to an in-house system

Prep Launching WinActor

- 1 Launch WinActor from the Start menu or with any other startup method.
- 2 Click [Create a new scenario]. The main window of WinActor appears.



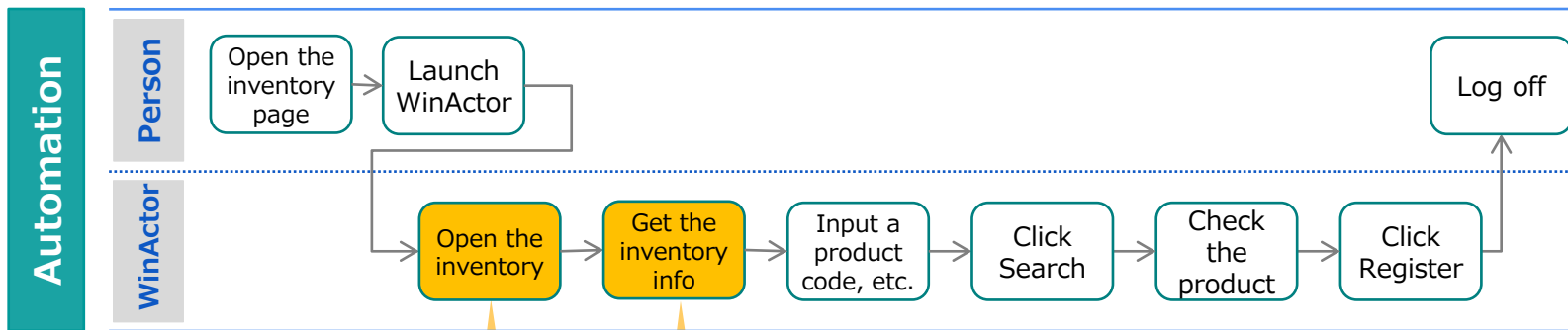
For the startup methods and window layout, see WinActor Operation Manual.

7

Automation for data transfer from Excel to an in-house system



"From here, we will create a scenario for the following operations."



7-1

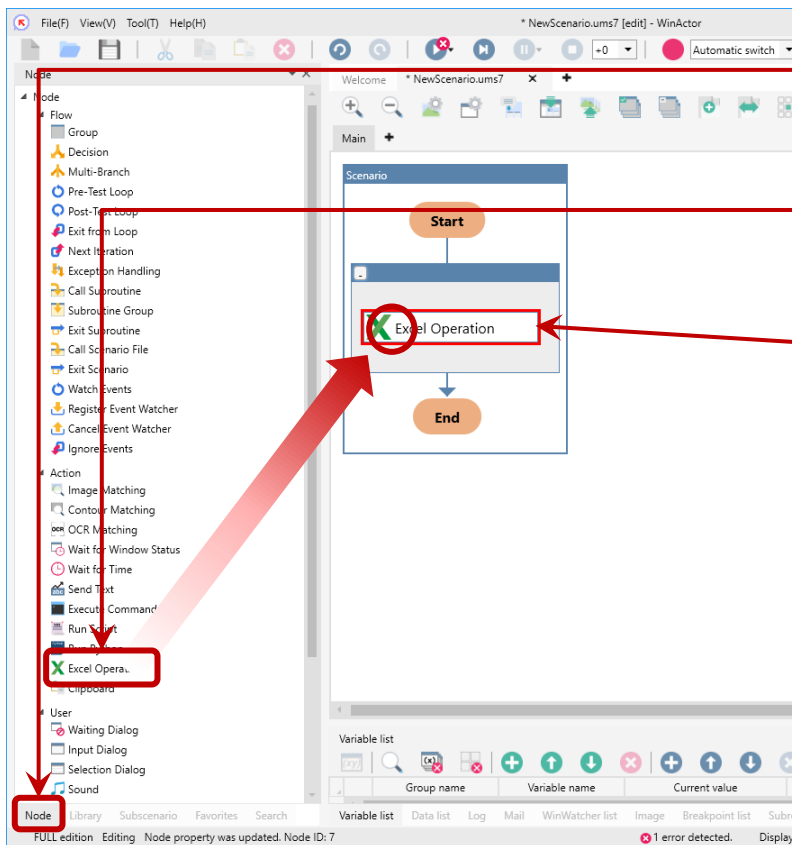
Reading values from Excel (using the Excel Operation node)

7

Automation for data transfer from Excel to an in-house system

7-1

Reading values from Excel (using the Excel Operation node)



1 Click the [Node] tab.

2 Drag the 'Excel Operation' node and drop it into the scenario edit area.

3 Double-click the placed node. (Displaying the property)

7

Automation for data transfer from Excel to an in-house system

7-1 Reading values from Excel (using the Excel Operation node)

Excel Operation

Name: Excel Operation

Comment:

Operation: Get value

Source

Filename: Value=> C:\temp\06_Basics07_Inventory.xlsx

Sheet name: Value=> Sheet1

Cell position: Value=> C5

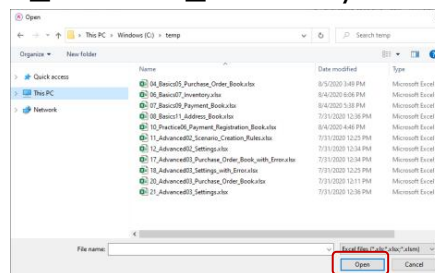
Destination

Variable: Registration_date

Update Restore

4 From the pull-down list of [Operation], select 'Get value.'

5 Click the [...] button for [Filename], and Explorer opens. Specify the file named "06_Basics07_Inventory.xlsx" and click [Open].



6 For [Sheet name], enter "Value=>Sheet1." (You can also use the [...] button.)
For [Cell position], specify "Value=>C5."

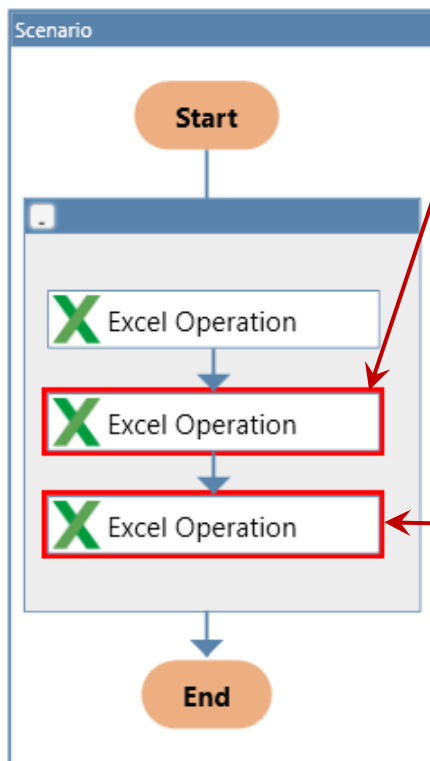
7 For [Variable], enter "Registration_date."

8 Click the [Update]. If the variable confirmation dialog appears, click [Yes].

7

Automation for data transfer from Excel to an in-house system

7-1 Reading values from Excel (using the Excel Operation node)



9 To read a value of the storehouse code from the inventory, place the 'Excel Operation' node and set the property items as follows. (Enter "Value=>D5" for [Cell position] and "Storehouse_code" for [Variable].)

Excel Operation

Name: Excel Operation

Comment:

Operation: Get value

Source:

Filename: Value=> C:\temp\06_Basics07_Inventory.xlsx

Sheet name: Value=> Sheet1

Cell position: Value=> D5

Destination:

Variable: Storehouse_code

10 To read a value of the product code from the inventory, place the 'Excel Operation' node and set the property items as follows. (Enter "Value=>G5" for [Cell position] and "Product_code" for [Variable].)

Excel Operation

Name: Excel Operation

Comment:

Operation: Get value

Source:

Filename: Value=> C:\temp\06_Basics07_Inventory.xlsx

Sheet name: Value=> Sheet1

Cell position: Value=> G5

Destination:

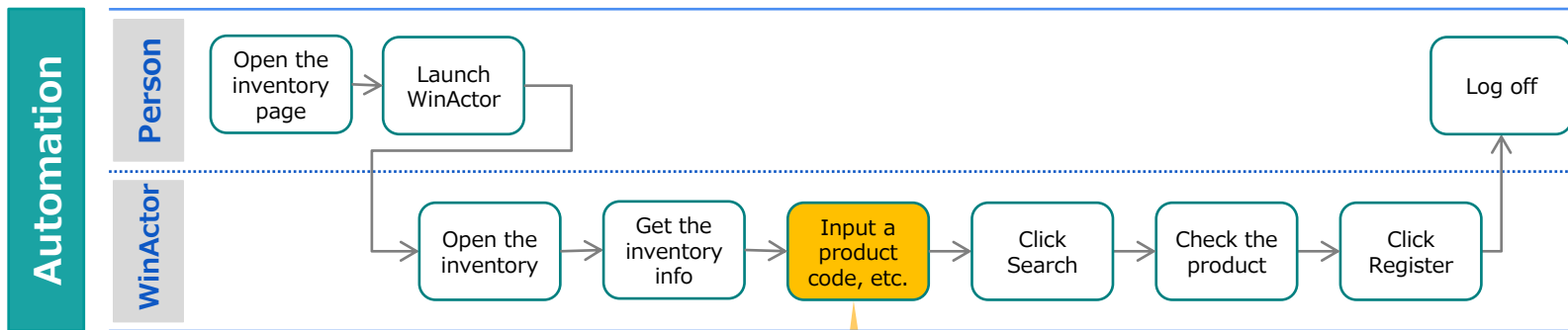
Variable: Product_code

7

Automation for data transfer from Excel to an in-house system



"From here, we will create a scenario for the following operation."



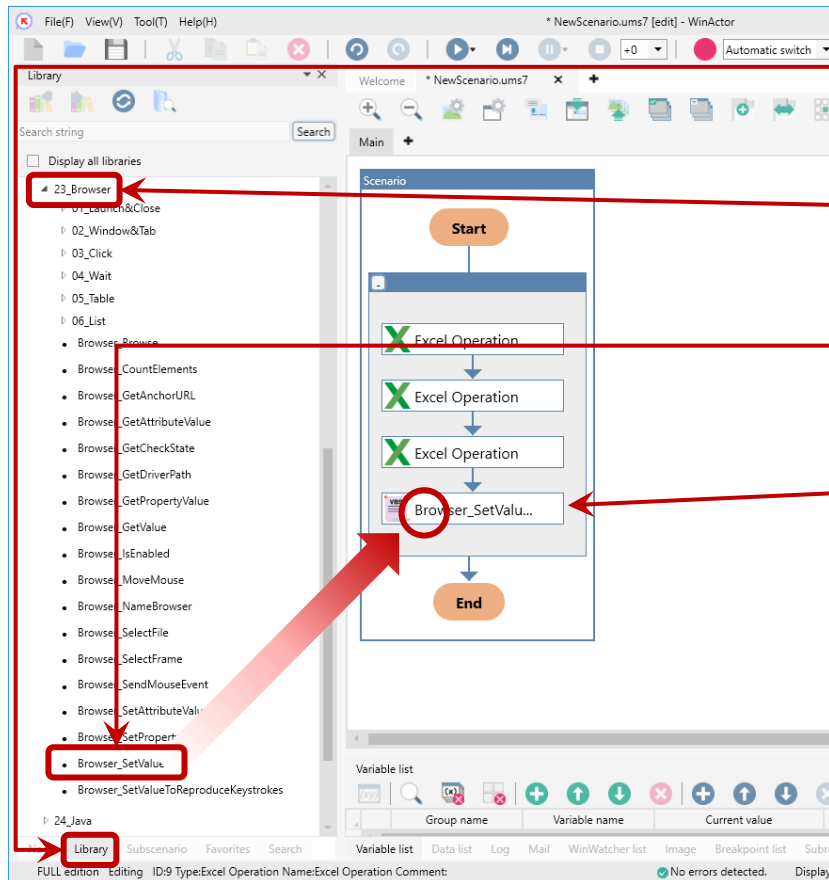
7-2

Inputting data into the Add Item to Inventory page

7

Automation for data transfer from Excel to an in-house system

7-2 Inputting data into the Add Item to Inventory page



1 Click the [Library] tab.

2 Double-click the '23_Browser' and expand the list of libraries.

3 Drag the 'Browser_SetValue' library and drop it into the scenario edit area.

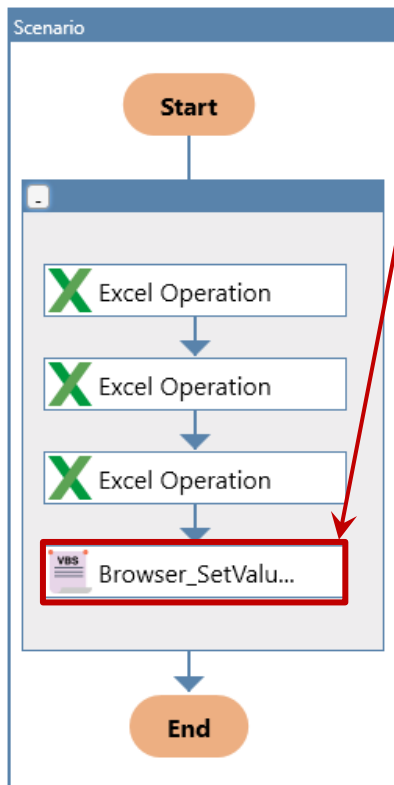
4 Double-click the placed library. (Displaying the property)

7

Automation for data transfer from Excel to an in-house system

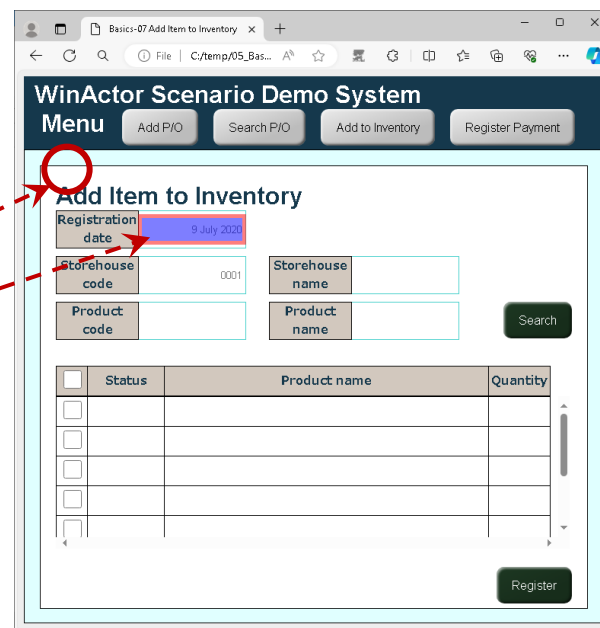
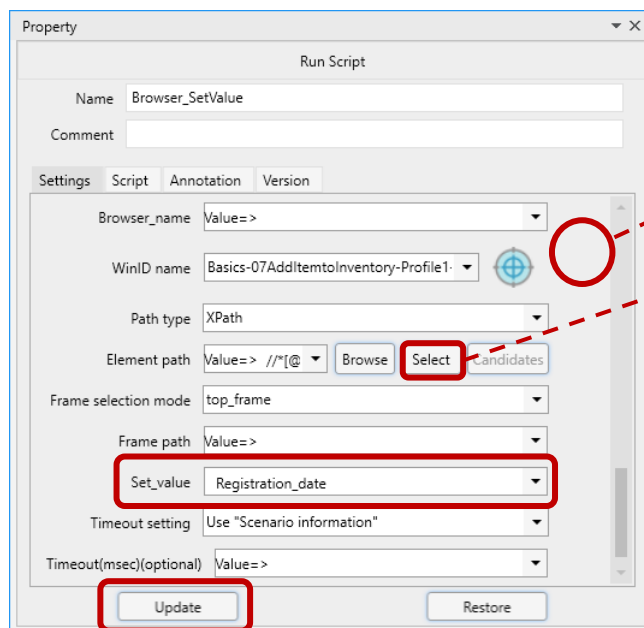
7-2

Inputting data into the Add Item to Inventory page



5

Set the webpage to be operated.
Set [Element path] by selecting the "Registration date" text box.



6

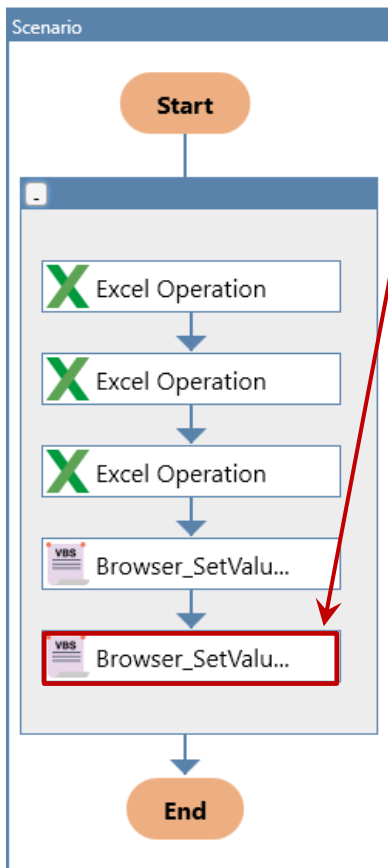
Select 'Registration_date' from the pull-down list of [Set_value], and click the [Update] button.

7

Automation for data transfer from Excel to an in-house system

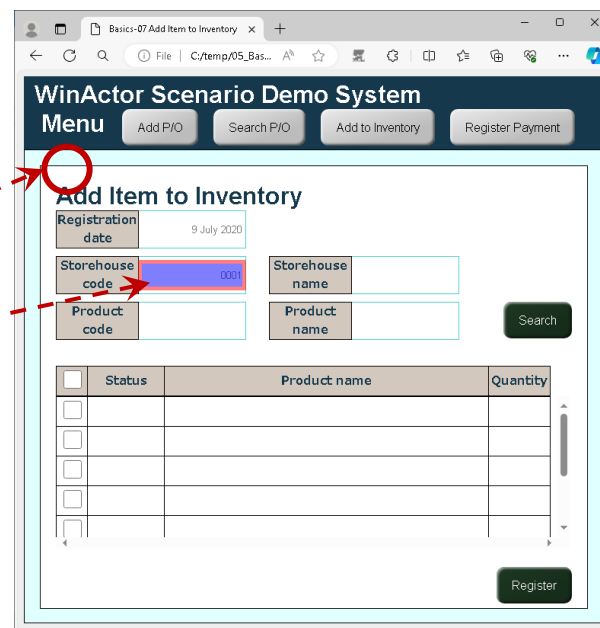
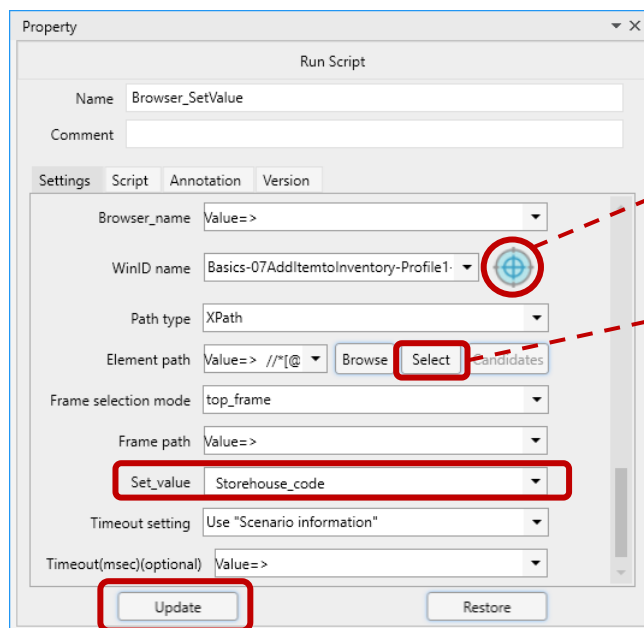
7-2

Inputting data into the Add Item to Inventory page



7

Set the webpage to be operated.
Set [Element path] by selecting the "Storehouse code" text box.



8

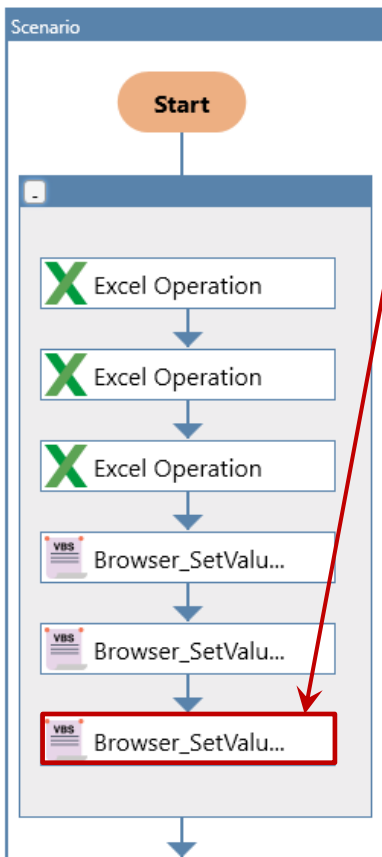
Select 'Storehouse_code' from the pull-down list of [Set_value], and click the [Update] button.

7

Automation for data transfer from Excel to an in-house system

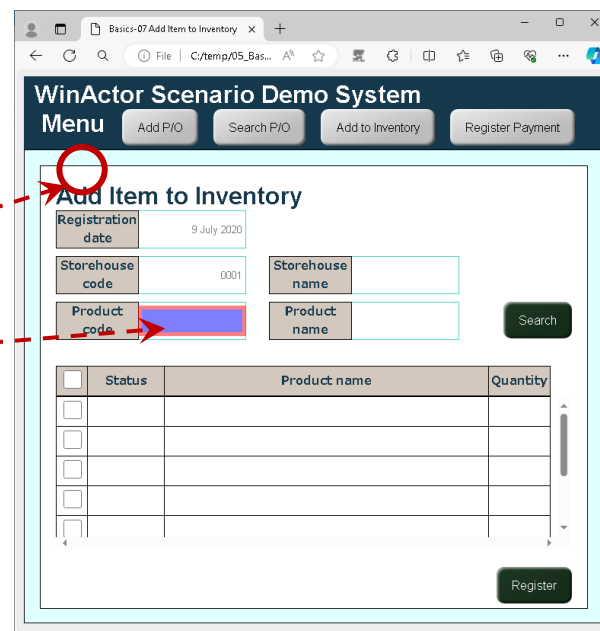
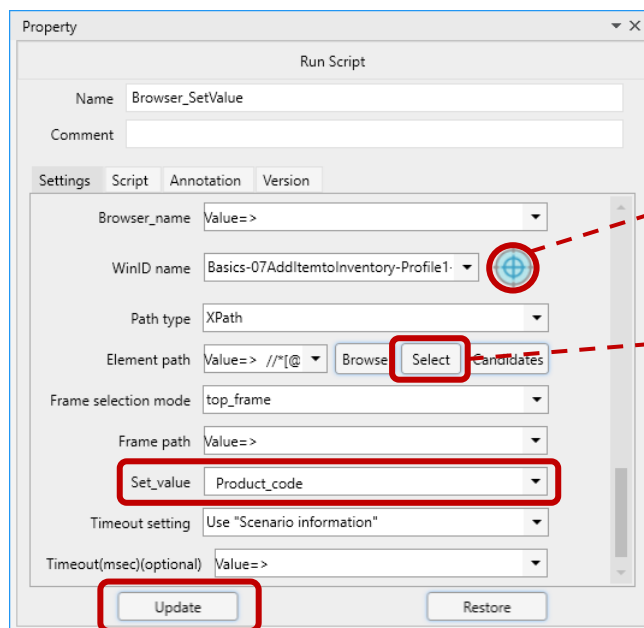
7-2

Inputting data into the Add Item to Inventory page



9

Set the webpage to be operated.
Set [Element path] by selecting the "Product code" text box.



10

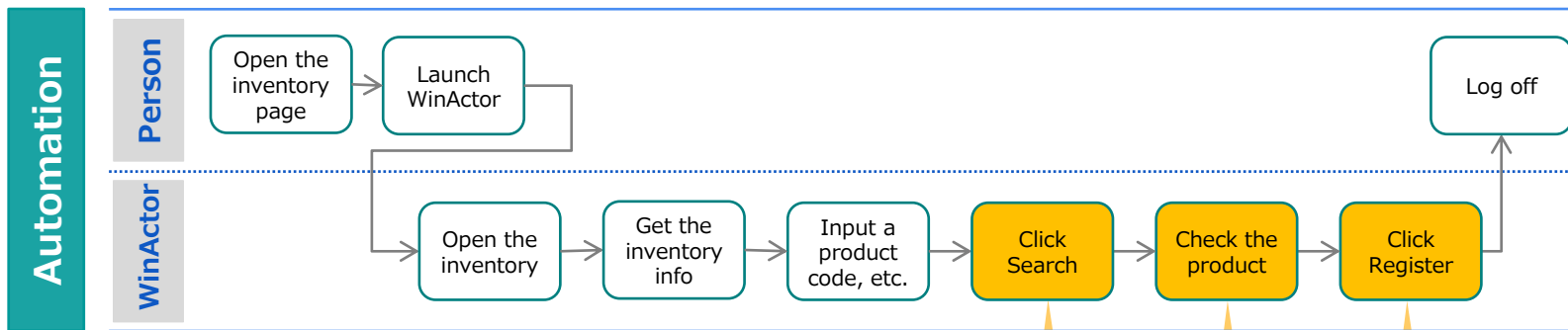
Select 'Product_code' from the pull-down list of [Set_value], and click the [Update] button.

7

Automation for data transfer from Excel to an in-house system



"From here, we will create a scenario for the following operations."



7-3

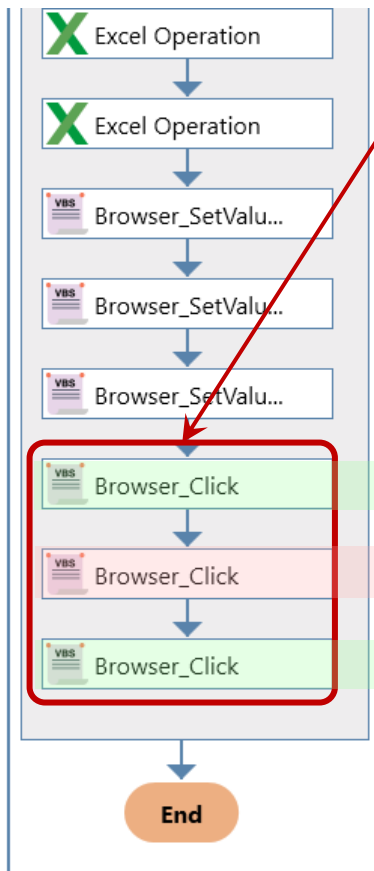
Searching and registering products in the Add Item to Inventory page

7

Automation for data transfer from Excel to an in-house system

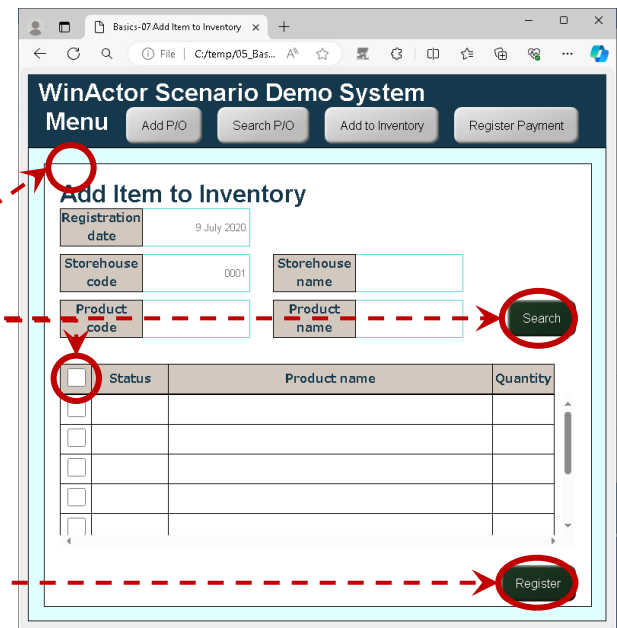
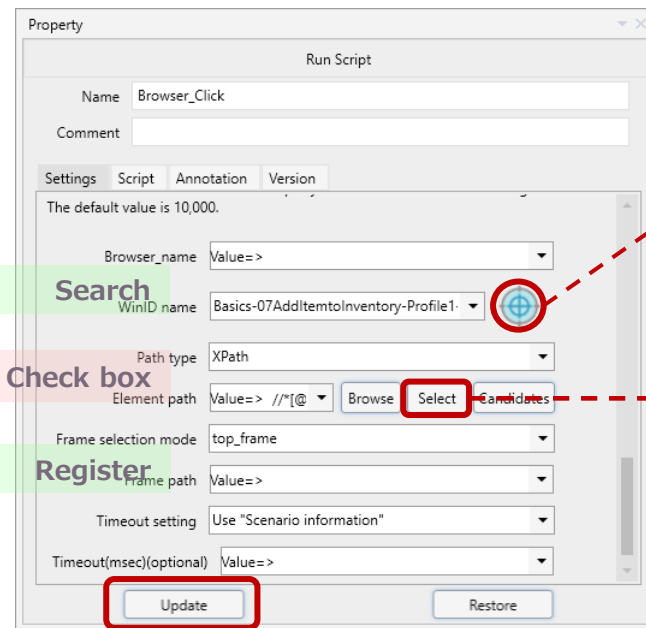
7-3

Searching and registering products in the Add Item to Inventory page



1

Place three 'Browser_Click' libraries to perform search, item check, and registration. Specify the window of "Basics-07 Add Item to Inventory" for [WinID name] for all three libraries, specify "Search button," "check box," and "Register button" respectively for [Element path] for those libraries.



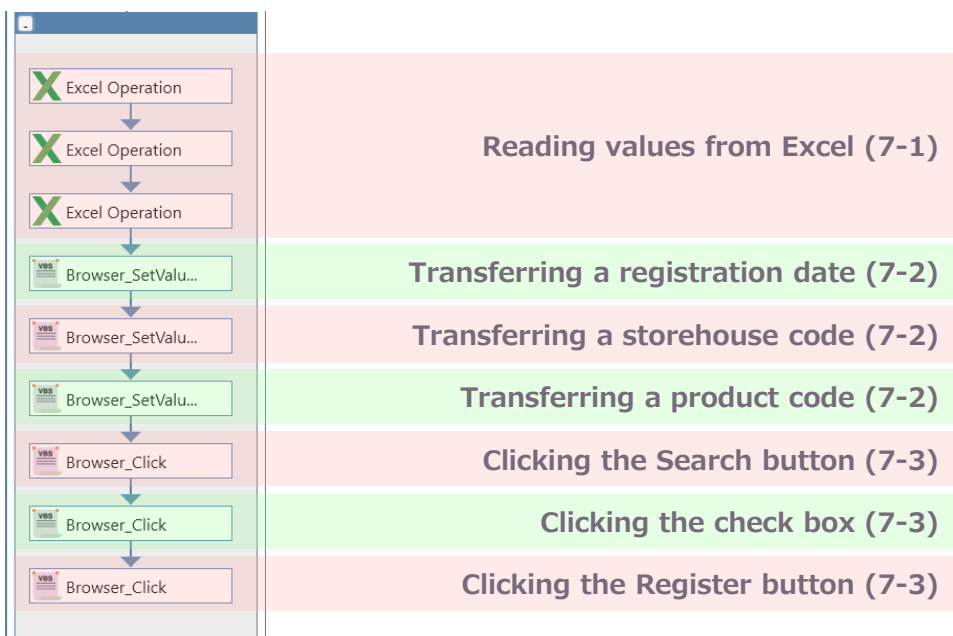
2 Click the [Update] button.

7

Automation for data transfer from Excel to an in-house system

7-4 Checking the entire scenario

1 Confirm that the created scenario is as follows.

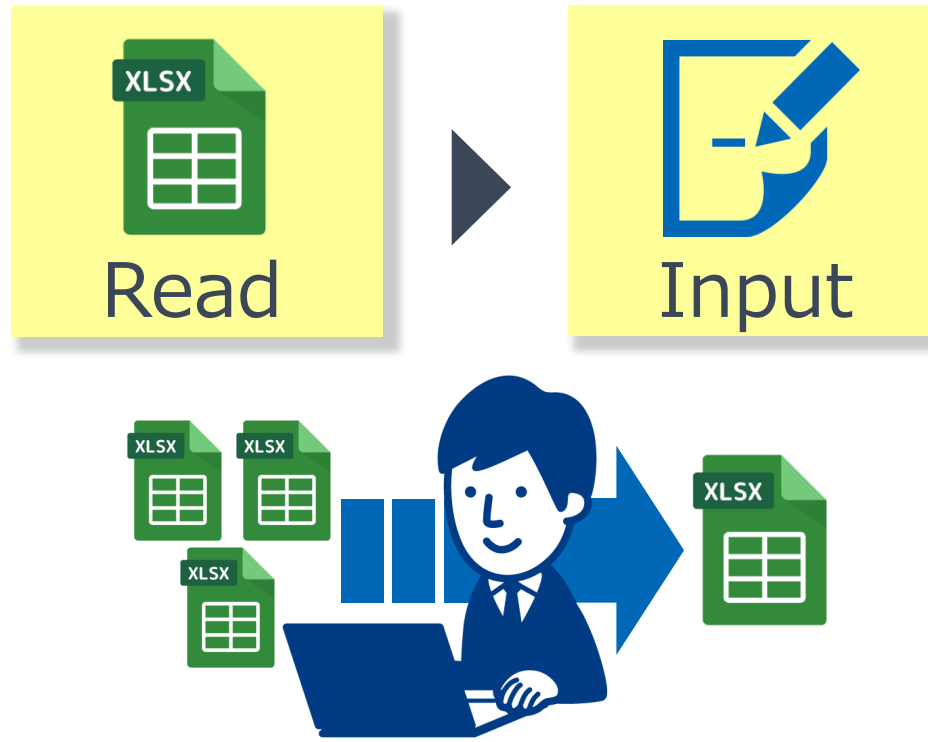


You can run and save the scenario in the same way as in 3-11 and 3-12 in the “3 Automation for click and input on a webpage.”

7-5 Running the scenario

7-6 Saving the scenario

Basics



**Automation for data transfer from
Excel books to another Excel book**

Case

William is getting familiar with using WinActor.

A person in the accounting department who heard about William asked him for help.



"I have been asked to create a payment book by bringing only the necessary numbers from multiple books. I feel like I can do that because I have transferred data from or to Excel so far."



"Yes! It is important to accumulate the experience of being able to do it. WinActor is also good at automating operations of Office applications such as Excel and Outlook. You can automate the operations by combining the existing parts this time as well."



"It's great and very helpful because I use Excel, Word, and Outlook in my work."



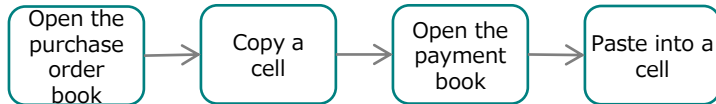
"Again, let's take a look at how operations change between manual work and automation using WinActor."



"In automation using WinActor, the operations change as follows."

Manual work

Person

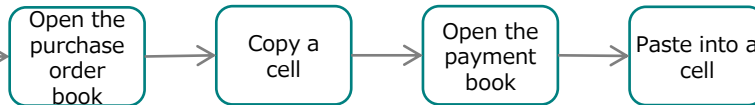


Automation

Person



WinActor



"Well, with this flow, I think I can create a scenario with my experience!"

8

Scenario creation - Basics 4 -



"This time, we will use libraries called `Excel_SetValue2` and `Excel_GetValue2`."



"I have already learned how to use the Excel Operation node."

"In the Excel Operation node learned earlier, you could only specify a column and row together to specify a cell. In `Excel_SetValue2` and `Excel_GetValue2`, you can specify a column and row separately!



Loop processing

Write



Read

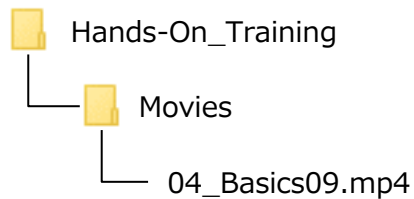
"It is a great advantage to be able to specify a column and row separately when you learn the loop processing in the practice section. We will not perform loop processing this time, but let's get used to it!"

8

Scenario creation - Basics 4 -



"Let's watch the actual movement of WinActor. Double-click the file named 04_Basics09.mp4 in the following folder to play it."



"Now, let's actually create a scenario together!"

9

Automation for data transfer from Excel books to another Excel book

Prep

Checking the purchase order book and the payment book

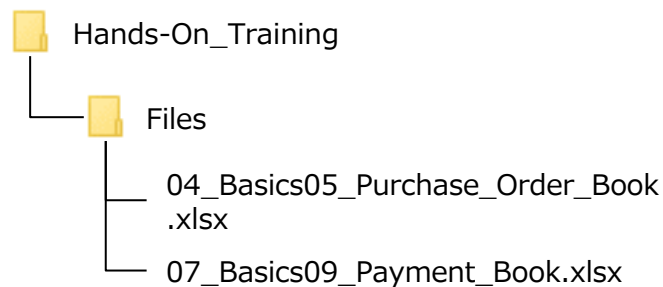
Purchase order book

Number	Order date	Approval date	Department	Requester name	Supplier code	Registrant code	Product code	Status after P/Note
1	25 December 2019	25 December 2019	Accounting Department	Michael Brown	123456	WA011	P001	
2	25 December 2019	25 December 2019	Accounting Department	Catherine Landis	123456	WA011	P002	
3	26 December 2019	27 December 2019	Accounting Department	Aiko Yoshida	123456	WA011	P003	
4	27 December 2019	27 December 2019	Accounting Department	Francisco Galvez	123456	WA011	P004	

Payment Book

Number	Payment date	Bank cod	Payee cod	Account cod	Payment amount	Requester name	Product code
1	30 November 2019	NAT0001	987654	100990	8765000		P001

Files to be checked



This time, we will transfer data from the purchase order book to the payment book.

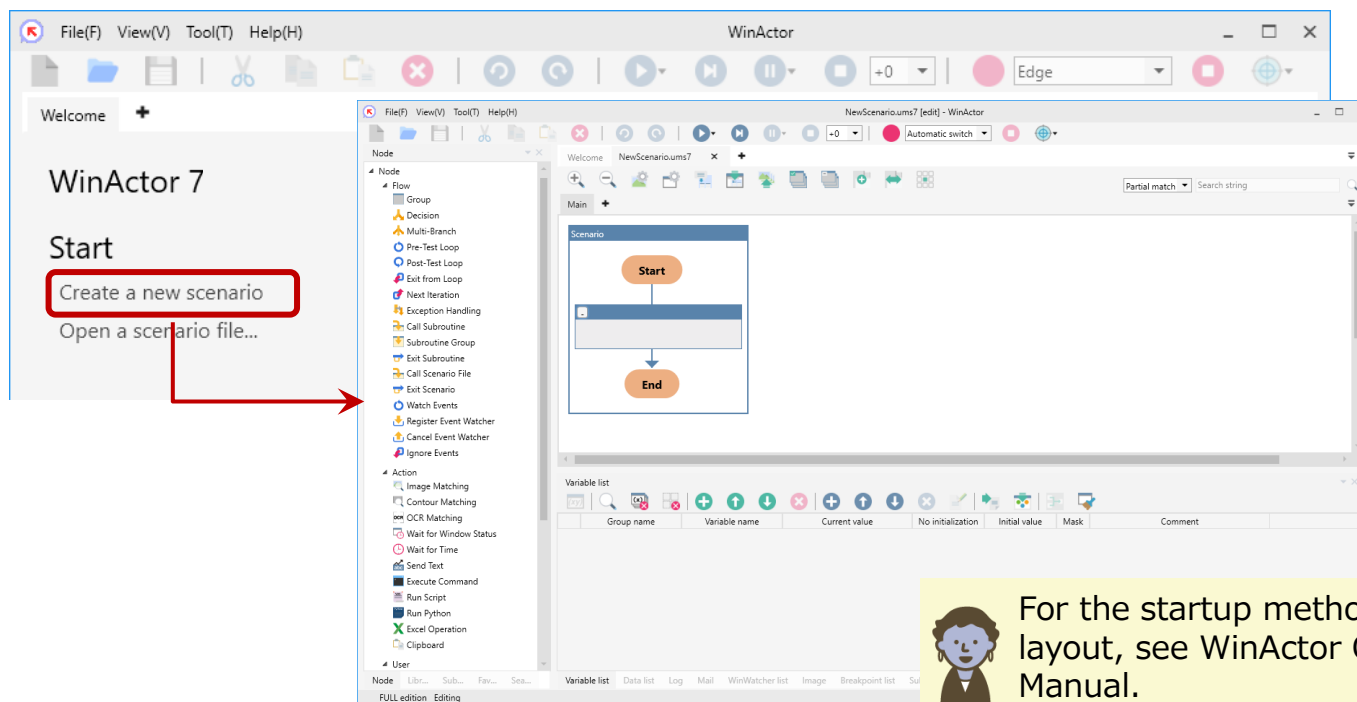
9

Automation for data transfer from Excel books to another Excel book

Prep Launching WinActor

1 Launch WinActor from the Start menu or with any other startup method.

2 Click [Create a new scenario]. The main window of WinActor appears.



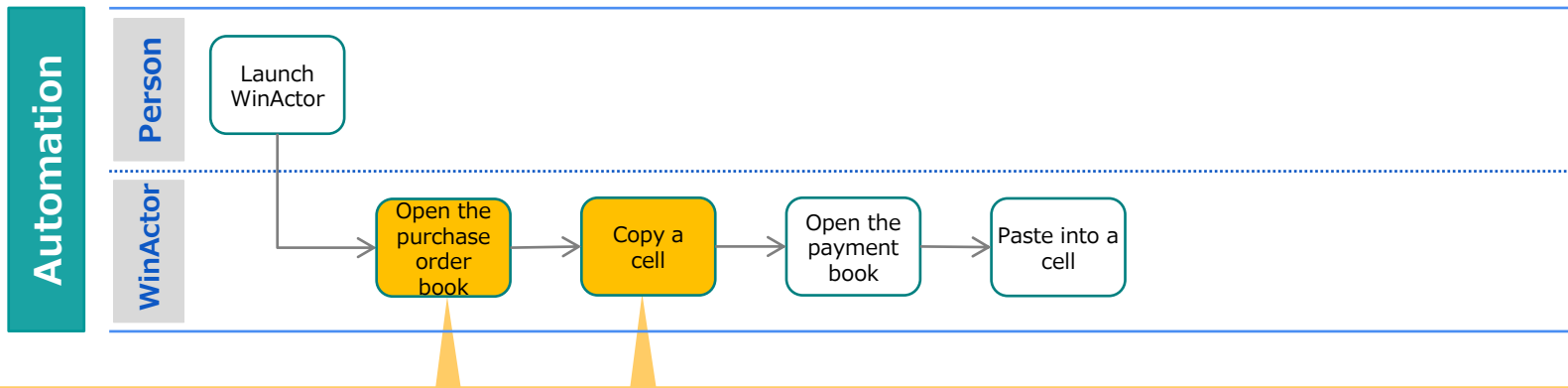
For the startup methods and window layout, see WinActor Operation Manual.

9

Automation for data transfer from Excel books to another Excel book



"From here, we will create a scenario for the following operations."



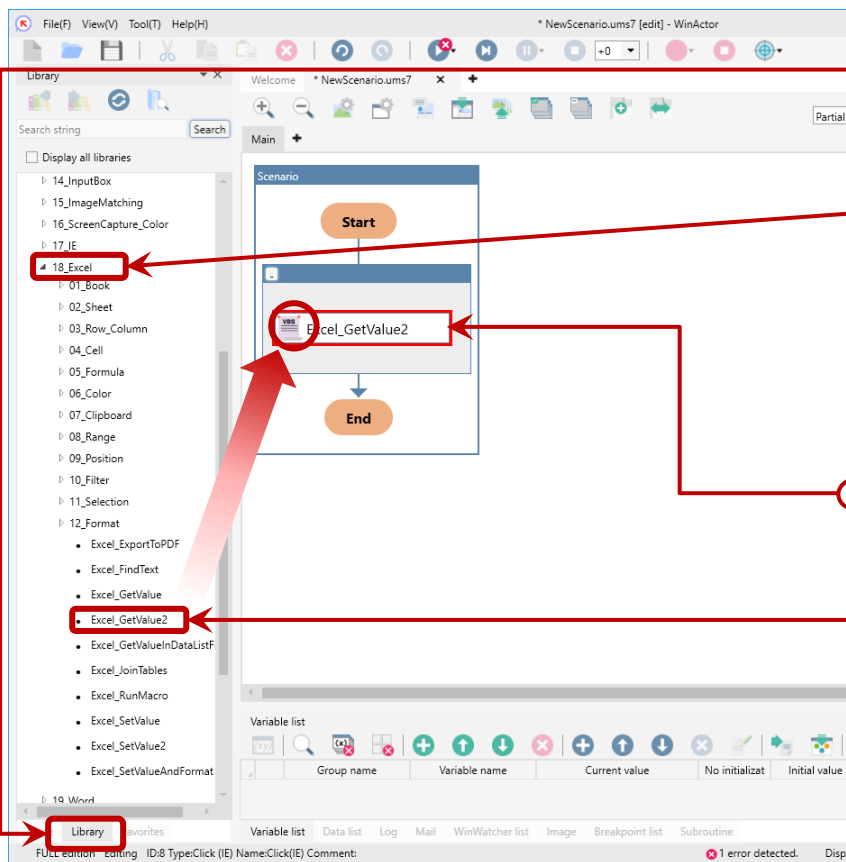
9-1

Reading a value from Excel (using the Excel_GetValue2 library)

9

Automation for data transfer from Excel books to another Excel book

9-1 Reading a value from Excel (using the Excel_GetValue2 library)



1 Click the [Library] tab.

2 Double-click '18_Excel' and expand the list of libraries.

3 Drag the 'Excel_GetValue2' library and drop it into the scenario edit area.

4 Double-click the placed library. (Displaying the property)

9

Automation for data transfer from Excel books to another Excel book

9-1 Reading a value from Excel (using the Excel_GetValue2 library)

Run Script

Name: Excel_GetValue2

Comment:

Settings | Script | Annotation | Version

text such as a date or time.

"Storage_dest_variable":
Specify a variable to store the obtained value.

File_name: Value=> C:\temp\04_Basics05_Purchas

Sheet_name: Value=> Sheet1

Cell(row): Value=> 5

Cell(column): Value=> F

Type: value

Storage_dest_variable: Requester_name

Update Restore

5

Drag and drop "04_Basics05_Purchase_Order_Book.xlsx" into [File_name], and enter "Value=>Sheet1" for [Sheet_name], "Value=>5" for [Cell(row)], "Value=>F" for [Cell(column)], 'value' for [Type], and "Requester_name" for [Storage_dest_variable].

6

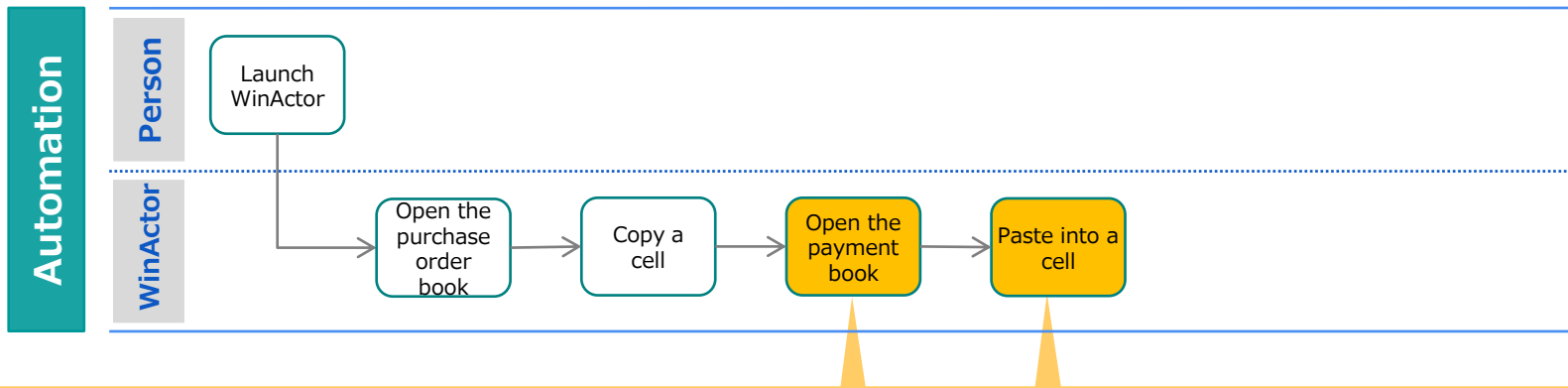
Click the [Update] button. If the variable confirmation dialog appears, click [Yes].

9

Automation for data transfer from Excel books to another Excel book



"From here, we will create a scenario for the following operations."



9-2

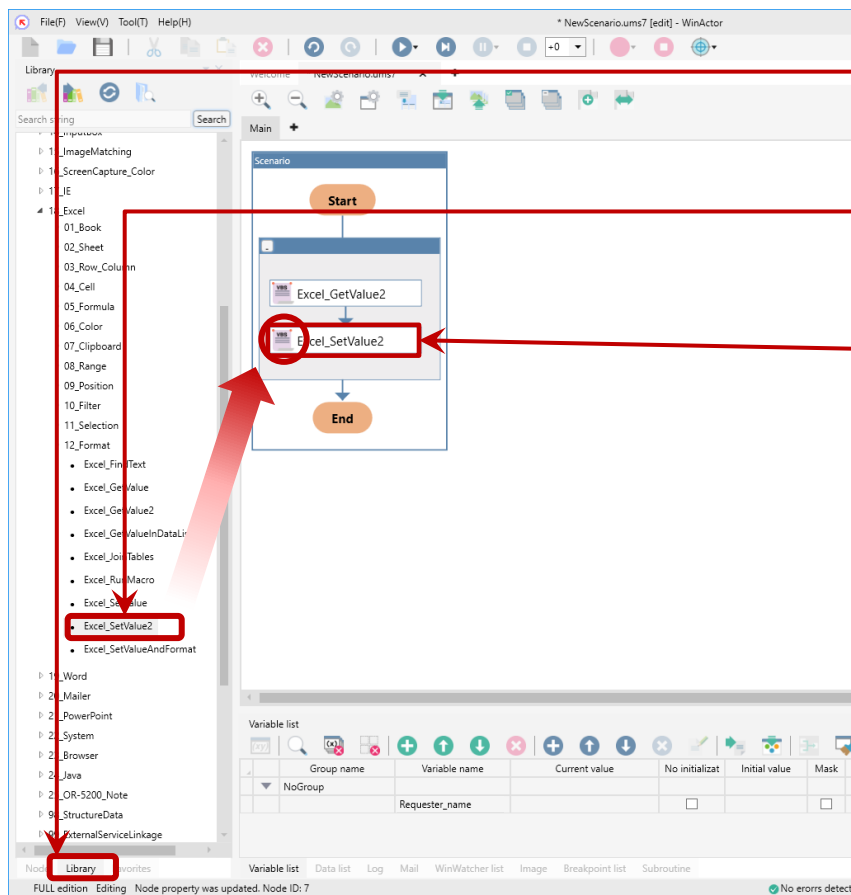
Inputting a value into Excel (using the Excel_SetValue2 library)

9

Automation for data transfer from Excel books to another Excel book

9-2

Inputting a value into Excel (using the Excel_SetValue2 library)



1 Click the [Library] tab.

2 Drag the 'Excel_SetValue2' library and drop it into the scenario edit area.

3 Double-click the placed library. (Displaying the property)

9

Automation for data transfer from Excel books to another Excel book

9-2

Inputting a value into Excel (using the Excel_SetValue2 library)

Run Script

Name: Excel_SetValue2

Comment:

Settings | Script | Annotation | Version

Specify a row position in A1 or R1C1 format.
Example) 3 in A1 format is equivalent to R3 in R1C1 format.

"Cell(column)":
Specify a column position in A1 or R1C1 format.
Example) B in A1 format is equivalent to C2 in R1C1 format.

Set_value: Requester_name

File_name: Value=> C:\temp\07_Basics09_Paymen

Sheet_name: Value=> Sheet1

Cell(row): Value=> 5

Cell(column): Value=> H

Update | Restore

4

Enter "Requester_name" for [Set_value], drag and drop "07_Basics09_Payment_Book.xlsx" into [File_name], and enter "Value=>Sheet1" for [Sheet_name], "Value=>5" for [Cell(row)], and "Value=>H" for [Cell(column)].

5

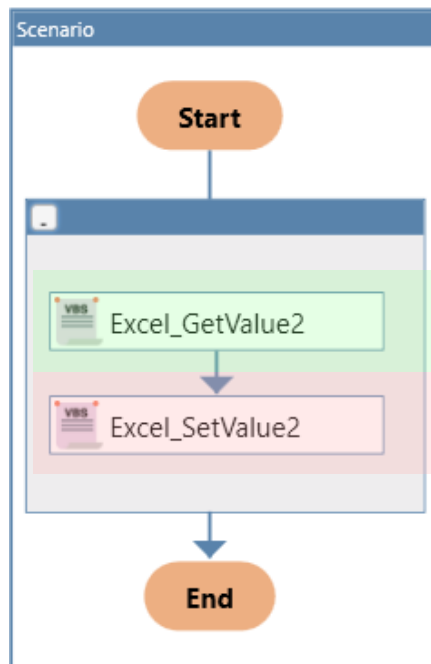
Click the [Update] button.

9

Automation for data transfer from Excel books to another Excel book

9-3 Checking the entire scenario

1 Confirm that the created scenario is as follows.



Getting a requester name from the purchase order book (9-1)

Transferring the acquired information to the payment book (9-2)

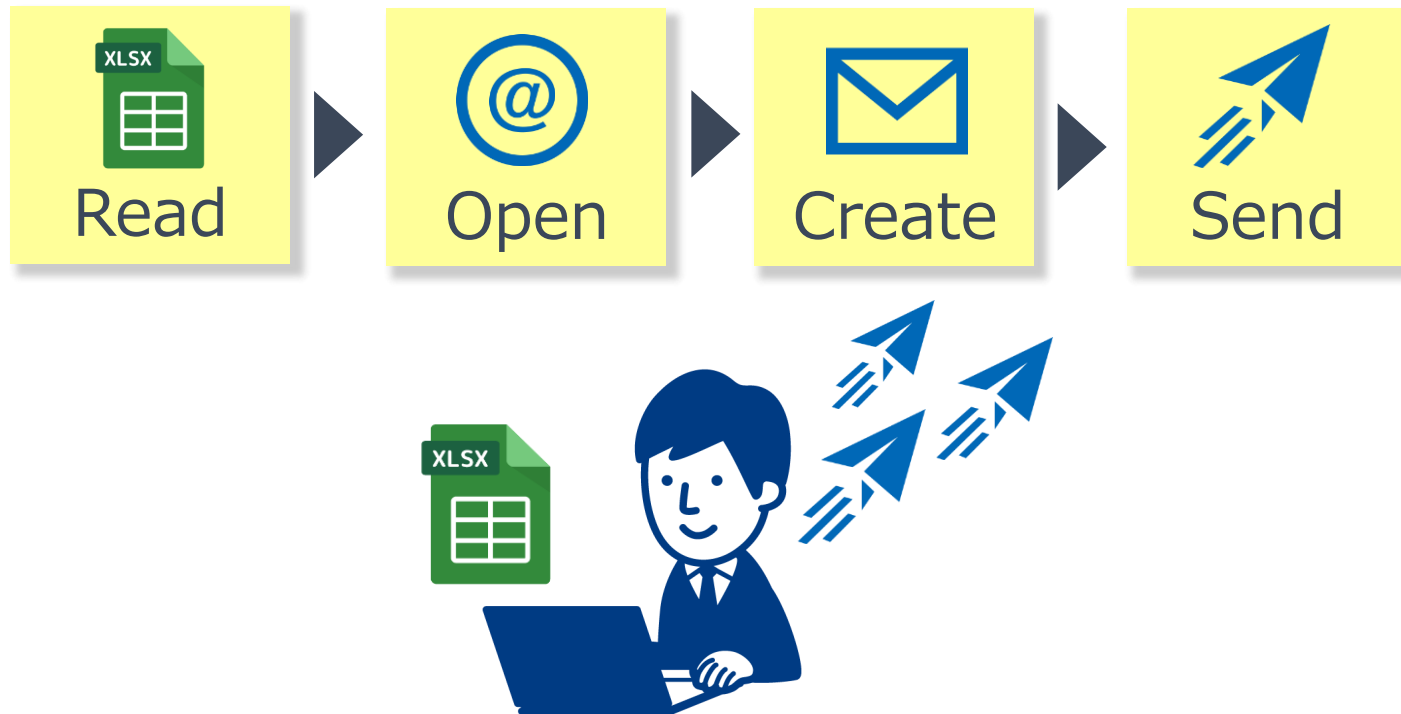


You can run and save the scenario in the same way as in 3-11 and 3-12 "Automation for click and input on a webpage."

9-4 Running the scenario

9-5 Saving the scenario

Basics



Automation for sending emails

Case

William has succeeded in creating the payment book and started to be recognized as a WinActor user in the company. Meanwhile, a different request came this time.



"The accounting department asked me to send an email to the person in charge in the payment book. Should I use SendMail in the library to send an email?"



"You are getting familiar with using WinActor. Of course, WinActor is also good at automating operations of sending emails. You can automate the operations by combining the existing parts this time as well."



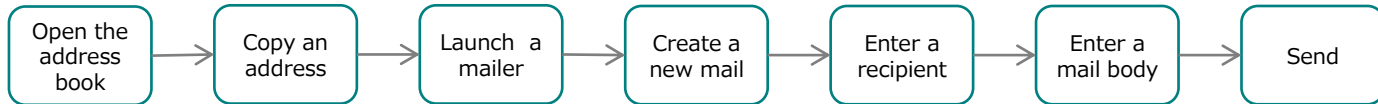
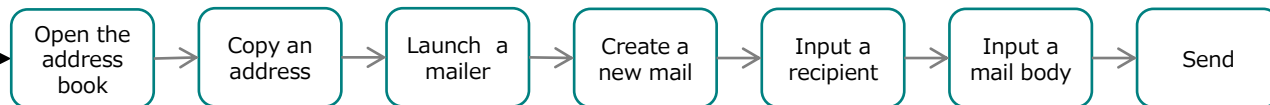
"Emails can cause problems when sent incorrectly, so it would be safe in terms of security if I can automate the operation of sending emails."



"Again, let's take a look at how operations change between manual work and automation using WinActor."



"In automation using WinActor, the operations change as follows."

Manual work**Person****Automation****Person****WinActor**

"It seems that I can use my previous experience to open the address book and copy the address!"



"This time, we will use a library called **Outlook_SendMail**."



"We can use WinActor with mailers, that's nice!"

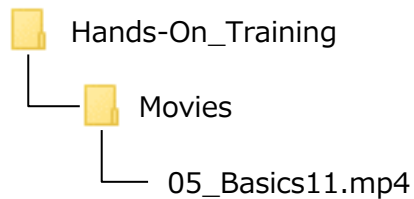
"Yes, Outlook_SendMail is a **library that allows you to send emails in Outlook**. You can freely set a recipient, subject, and body!"



"SendMail can also be used for sending a notification of a result of running a scenario or an error when a scenario has stopped. Let's learn how to use it!"



"Let's watch the actual movement of WinActor. Double-click the file named 05_Basics11.mp4 in the following folder to play it."



"You don't see a new mail window as you see it when manually sending an email, but the operation of sending emails is being processed in Outlook."



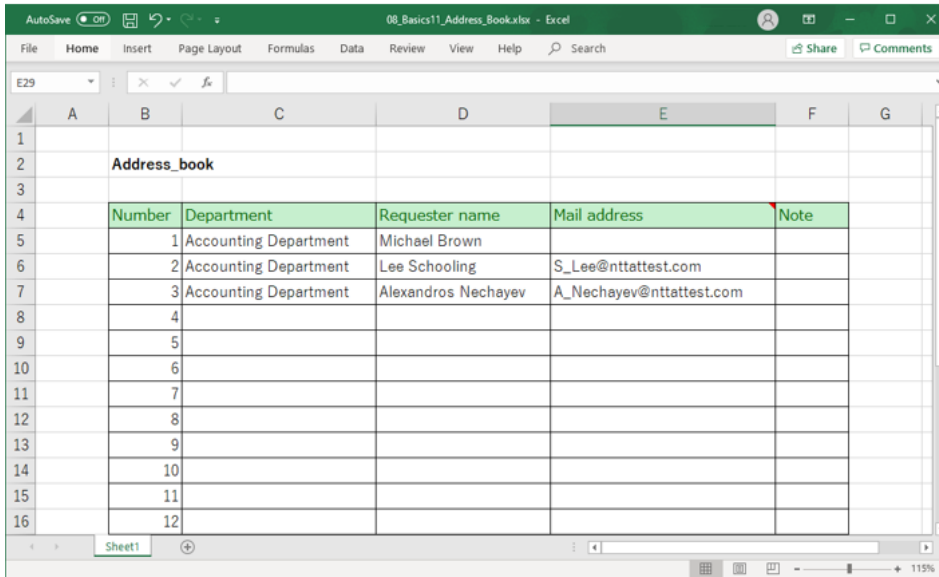
"Now, let's actually create a scenario together!"

11

Automation for sending emails

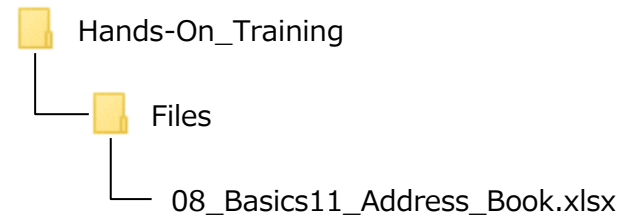
Prep

Checking the address book



Number	Department	Requester name	Mail address	Note
1	Accounting Department	Michael Brown		
2	Accounting Department	Lee Schooling	S_Lee@nttatest.com	
3	Accounting Department	Alexandros Nechayev	A_Nechayev@nttatest.com	
4				
5				
6				
7				
8				
9				
10				
11				
12				

File to be checked



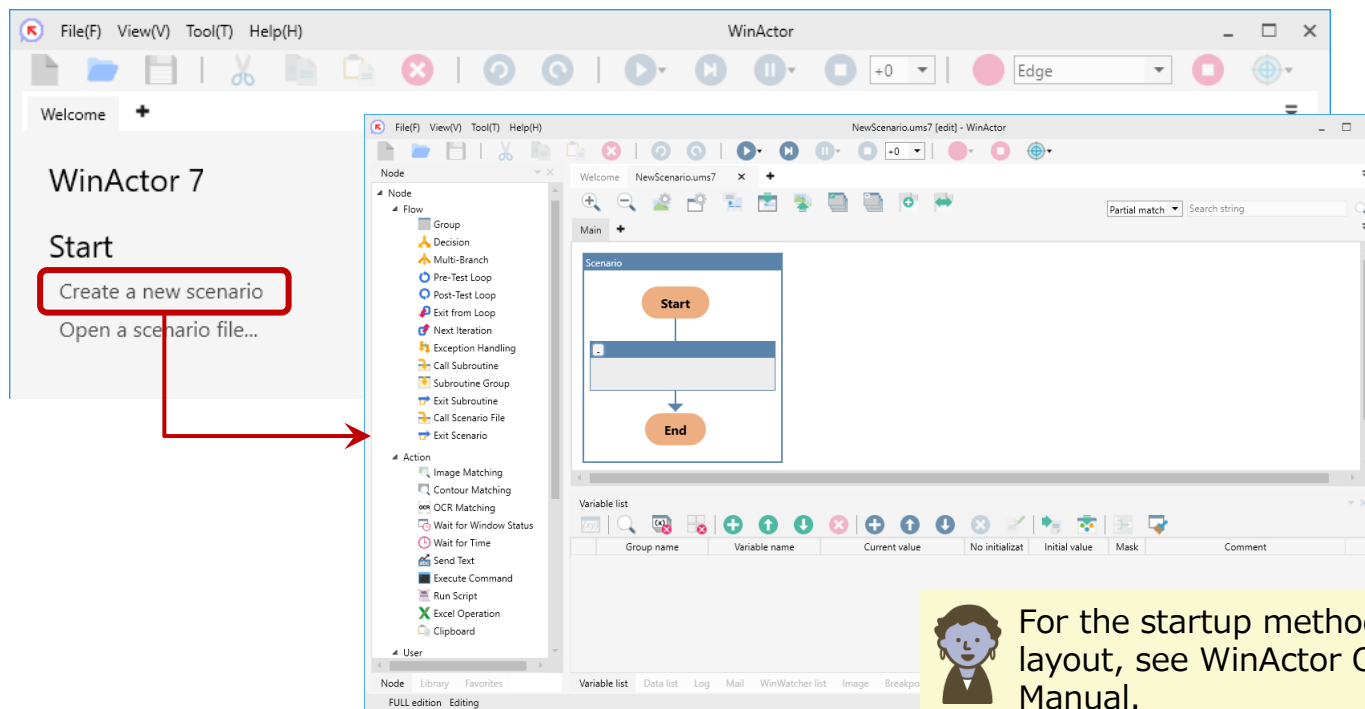
This time, we will get an email address from this address book. Correct the dummy email address to a valid one so that an email can be sent.

11

Automation for sending emails

Prep Launching WinActor

- 1 Launch WinActor from the Start menu or with any other startup method.
- 2 Click [Create a new scenario]. The main window of WinActor appears.



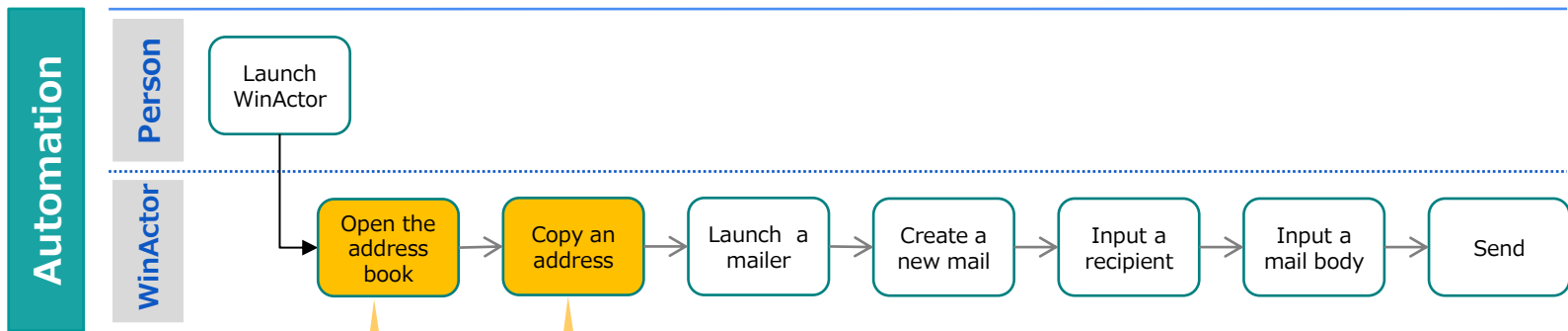
For the startup methods and window layout, see WinActor Operation Manual.

11

Automation for sending emails



"From here, we will create a scenario for the following operations."



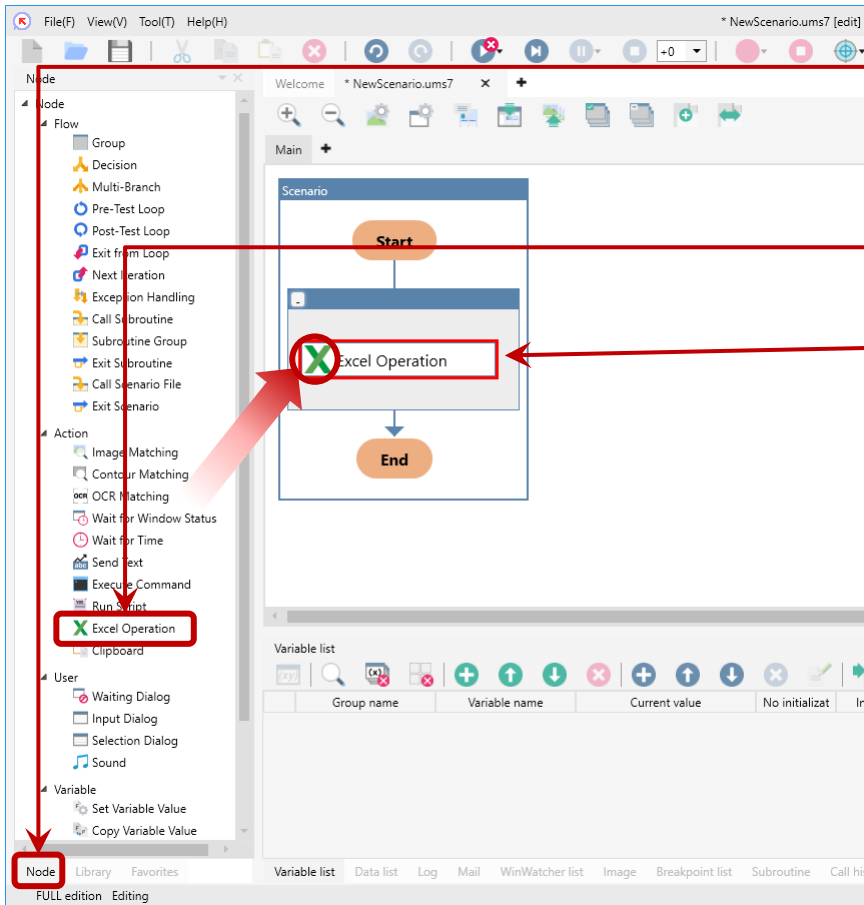
11-1

Reading a value from Excel (using the Excel Operation node)

11

Automation for sending emails

11-1 Reading a value from Excel (using the Excel Operation node)



1 Click the [Node] tab.

2 Drag the 'Excel Operation' node and drop it into the scenario edit area.

3 Double-click the placed node. (Displaying the property)

11

Automation for sending emails

11-1 Reading a value from Excel (using the Excel Operation node)

Excel Operation

Name: Excel Operation

Comment:

Operation: Get value

Source:

Filename: Value=> C:\temp\08_Basics11_Address_B [...] ...

Sheet name: Value=> Sheet1 [...] ...

Cell position: Value=> E5 [...] ...

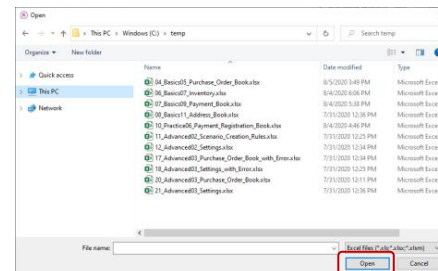
Destination:

Variable: Email_address

Update Restore

4 From the pull-down list of [Operation], select 'Get value.'

5 Click the [...] button for [Filename], and Explorer opens. Specify the file named "08_Basics11_Address_Book.xlsx" and click [Open].



6 For [Sheet name], enter "Value=>Sheet1." (You can also use the [...] button.)
For [Cell position], specify "Value=>E5."

7 For [Variable], enter "Email_address."

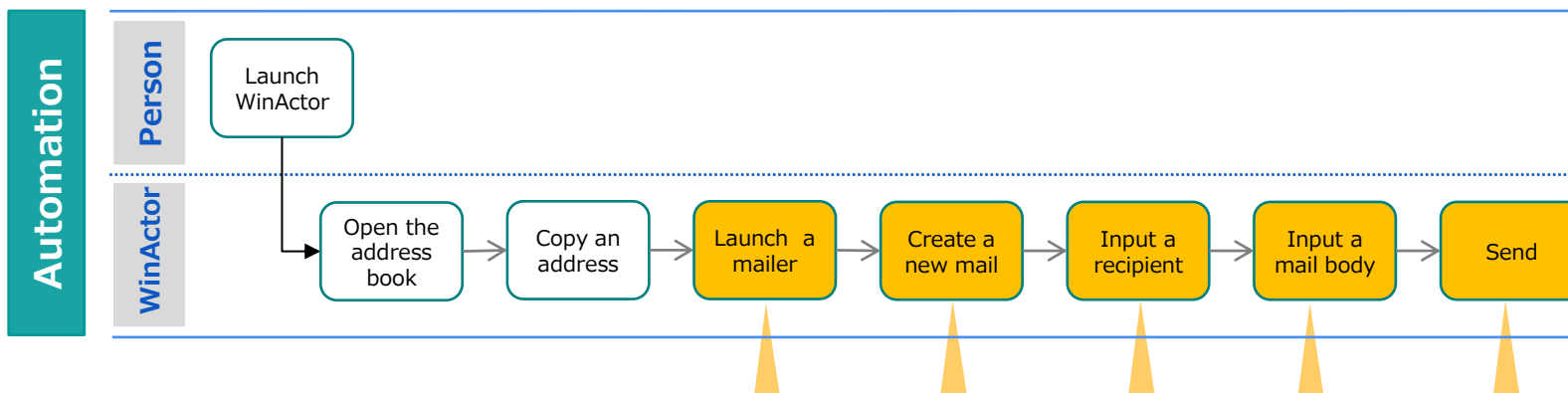
8 Click the [Update] button. If the variable confirmation dialog appears, click [Yes].

11

Automation for sending emails



"From here, we will create a scenario for the following operations."

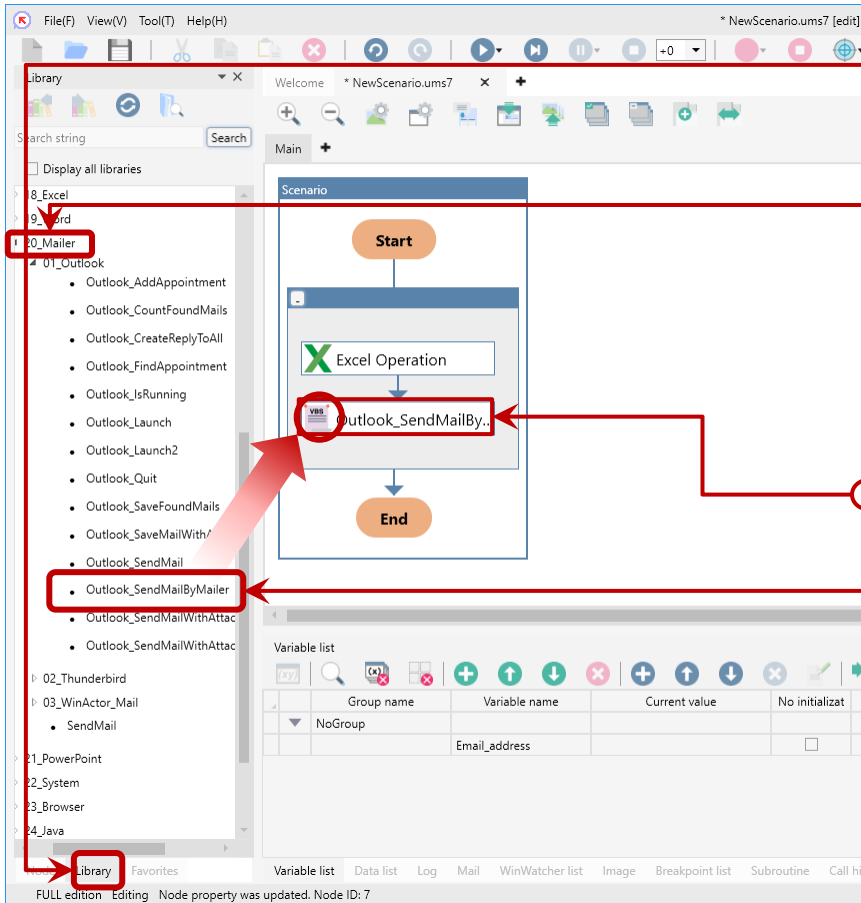


11-2 Sending an email (using the Outlook_SendMailByMailer library)

11

Automation for sending emails

11-2 Sending an email (using the Outlook_SendMailByMailer library)



1 Click the [Library] tab.

2 Double-click '20_Mailer' and expand the list of libraries.

3 Drag the 'Outlook_SendMailByMailer' library and drop it into the scenario edit area.

4 Double-click the placed library. (Displaying the property)

There are several ways to send an email in Outlook. This time, we use the 'Outlook_SendMailByMailer' library, which not only sends an email but also opens and closes Outlook. Depending on a scenario, you can use Outlook_SendMailWithAttachmentByMailer to send an email with attached files.



11

Automation for sending emails

11-2 Sending an email (using the Outlook_SendMailByMailer library)

Run Script

Name Outlook_SendMailByMailer

Comment

Settings Script Annotation Version

Start Outlook Mailer, send mails, and stop Mailer

Recipient(To) Email_address

Recipient(Cc) Value=>

Subject Value=> Test mail

Body Value=> Test mail body

Update Restore

5

Enter Email_address for [Receipient(To)], nothing for [Recipient(Cc)], "Value=>Test mail" for [Subject], and "Value=>Test mail body" for [Body].

6

Click the [Update] button.

The 'Outlook_SendMailByMailer' library is a convenient library that includes the operations to open and close Outlook in addition to send an email. However, if Outlook is configured not to send an email immediately, a confirmation dialog will be displayed when Outlook is stopped, and it cannot be stopped normally.

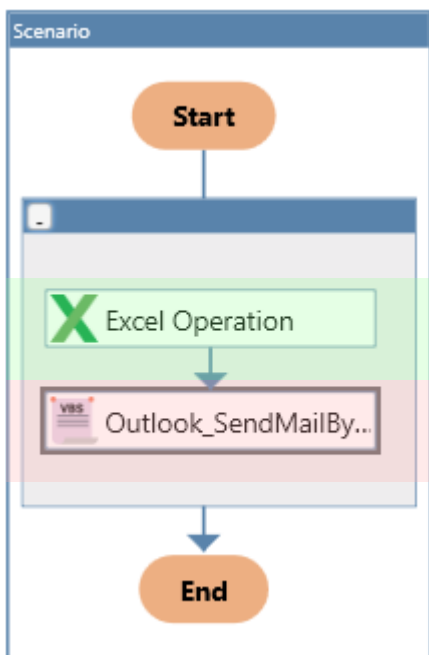


11

Automation for sending emails

11-3 Checking the entire scenario

- 1 Confirm that the created scenario is as follows.



Getting an address from the address book (11-1)

Sending an email referring to the acquired address (11-2)

You can create a scenario simply by using the libraries. WinActor has a number of libraries to help you quickly automate common tasks. Don't always create a scenario with just the nodes, but also consider using the libraries.



You can run and save the scenario in the same way as in 3-11 and 3-12 "Automation for click and input on a webpage."



11-4 Running the scenario

11-5 Saving the scenario



"The basics are all over. How have you been so far, William?"



"I'm not trying to brag after basics are over, but I could automate operations easier than I thought! There are various nodes and libraries, and I can create scenarios by almost dragging and dropping them. Also, I can run the created scenario immediately, quickly fix the part that does not run, and try it again. That's the point, and I could do it without giving up!"



"That's good! Next is a practical part where you learn the functions such as loop processing and branch processing that you should master when using WinActor in actual work. Don't be satisfied here and move on to the next step!"

- Practice -



1

Scenario creation - Practice prologue -

Case

William has made some scenarios using WinActor and has been promoting automation, and it seems that now he wants to do a little more complicated processing.

Let's create a little more complicated automation with William this time, too!



William Lee

A second-year employee of the procurement department.

He knows how to use WinActor and wants to use it for other tasks.

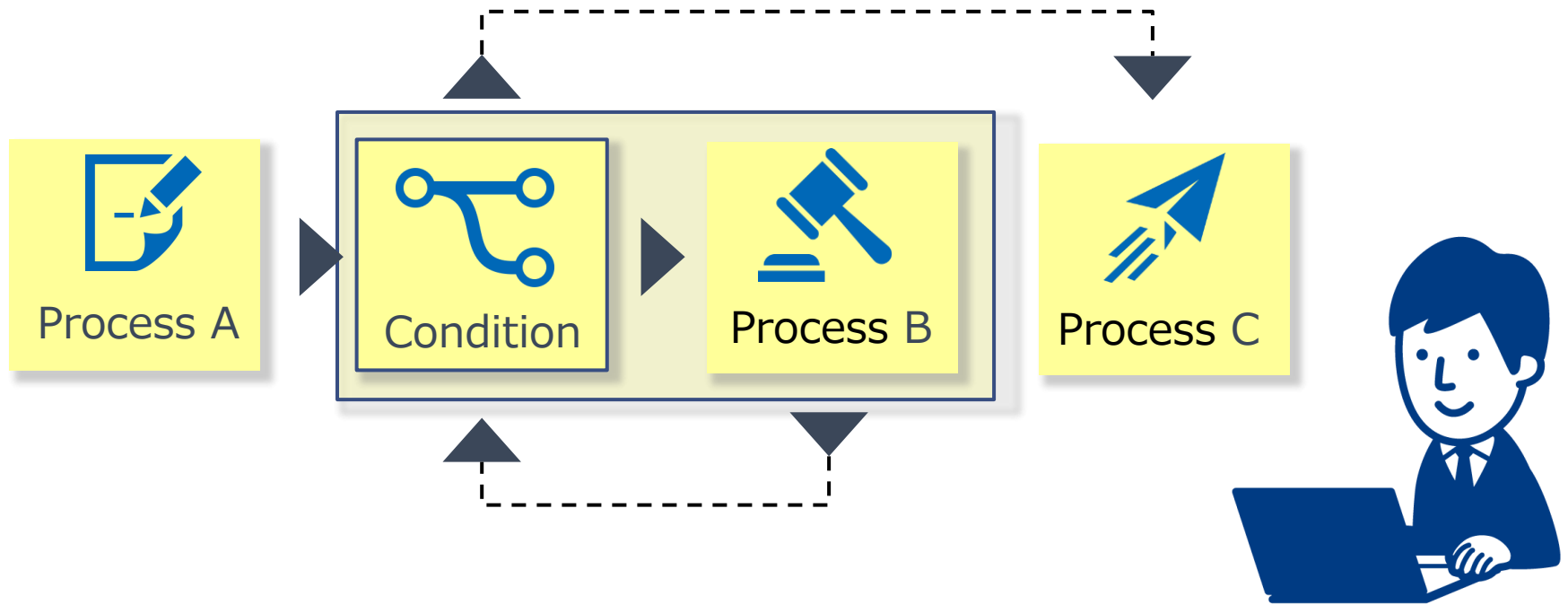


Maria Rodriguez

A senior employee in another department who is already using WinActor.

This time, she responds to a consultation by William and offers to help and teach him.

Practice



**Loop processing for the
same operation**

2

Scenario creation - Practice 1 -

Case

William received a request from the finance department that they want to collect information of several payments and put them together in the in-house system. Will William be able to create a scenario that the finance department will be happy with?



"No... in my experience so far, I can't repeat the same operation... I think I can use the 'Loop' node, but it has a different shape from other nodes and I have no idea how to use it..."



"The scenarios you have created so far are scenarios that run from the start to the end and finish. Let's learn how to create a scenario for loop processing of a large amount of data, which WinActor is good at."



"However, I don't even know how to make it in the first place... If the number of payment slips is constant, the same process can be repeated for the number of payment slips, but the number of payment slips is different each time."



"No problem! To do that, first let's learn the concept of loop processing."

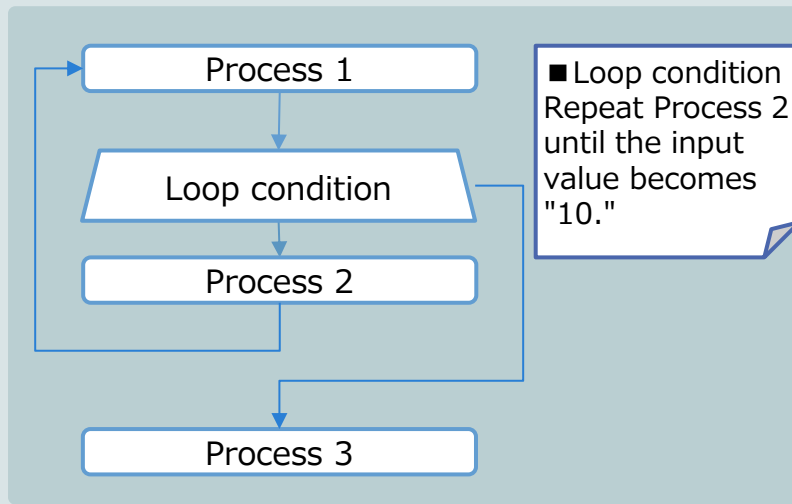
2

Scenario creation - Practice 1 -



"So, what is loop processing exactly?"

"Loop processing means **repeating the same process until the preset end condition is met**. For order processing, you repeat the same process for numbers of users until their order has been completed, right? For this type of work, you can do it with WinActor in a minute. It's a time-saving process indeed."



"The figure on the left is an image of loop processing. If the condition is not satisfied, Process 2 will be executed and then the condition will be checked again. If the condition is met, it will proceed to Process 3."

"How to set the condition here is the point for loop processing."

2

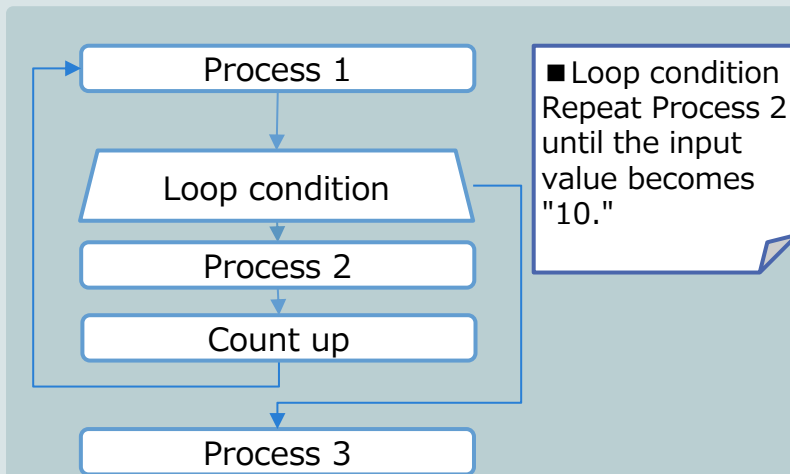
Scenario creation - Practice 1 -



"I think I'm beginning to understand. But if the same process is repeated, I'm wondering if the same content will be processed over and over. I want to register the values written in the book by moving down one row at a time..."

"You are right. So I will explain the concept of **count up**, another point for loop processing."

"**Count up means it will increment the numerical variable value by a fixed number each time the process is repeated.** This allows you to set the number of times to repeat and to shift and get the number of rows in Excel one by one!"



"The figure on the left is an image of loop processing with 'count up.' By counting up, it is possible to use a different value depending on the number of iterations, not just the fixed value for Process 2."

"You can master the loop processing by learning how to set the condition and count up!"

2

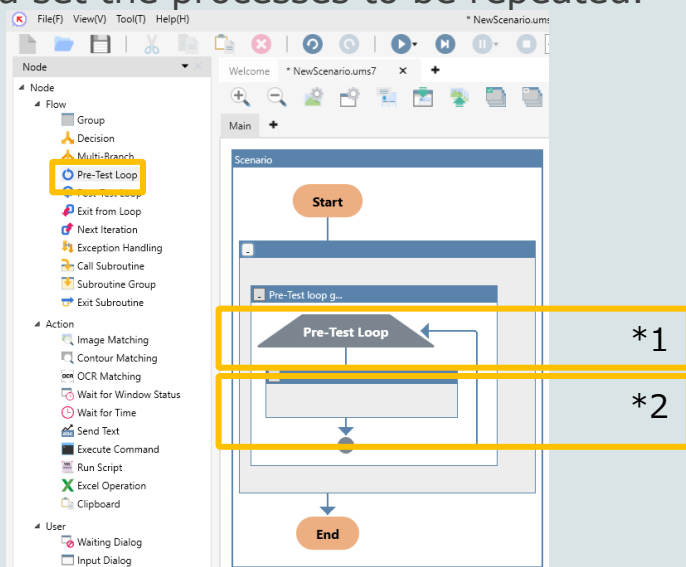
Scenario creation - Practice 1 -



"We are using the idea of counting up, which increments a number by one to move down one row in the book! How can I actually set this in WinActor?"

"We will use the Pre-Test Loop node displayed at the upper part of the Node tab on the left side of the WinActor window."

"The Pre-Test Loop node consists of a trapezoidal loop condition (*1) that determines the condition to end iterations and a square area (*2) where you set the processes to be repeated."



Point!



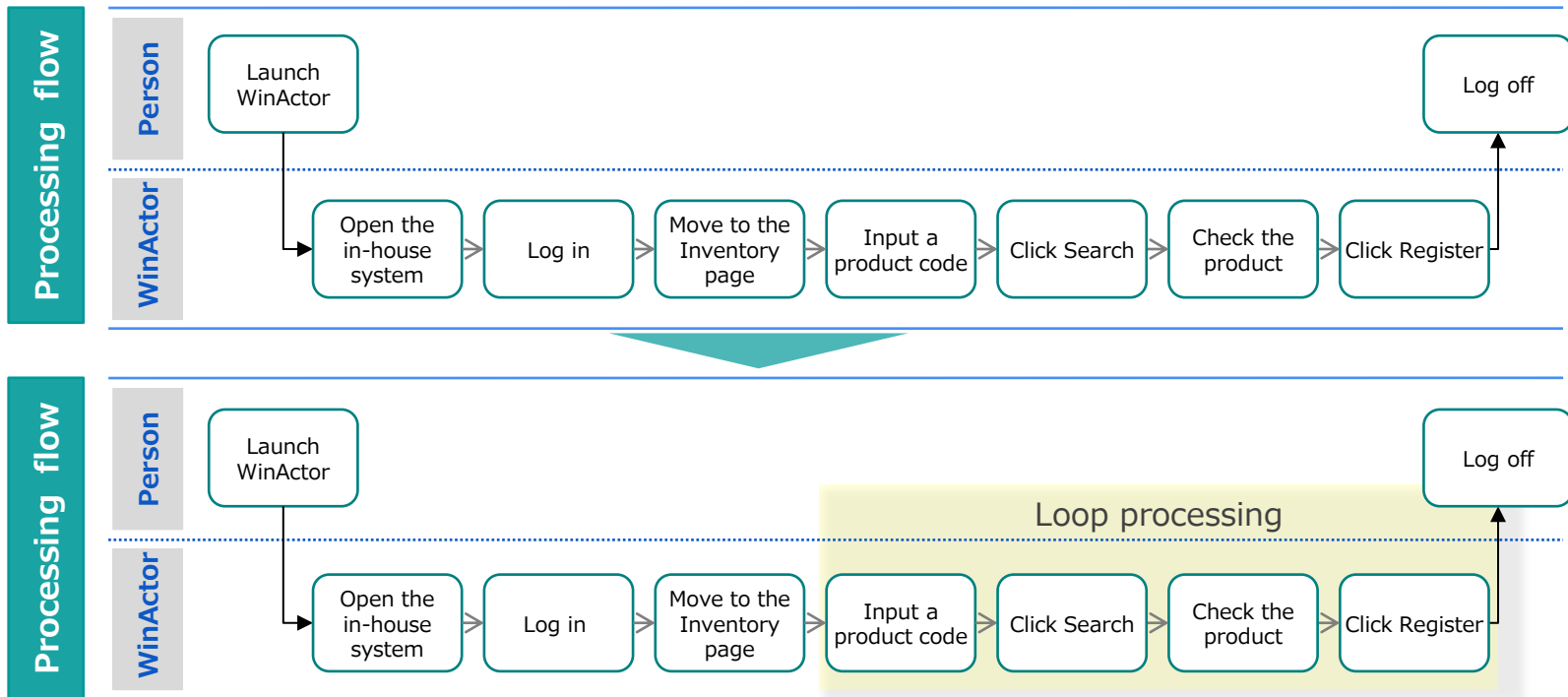
"You can perform loop processing by executing the same process repeated until the setting condition is satisfied. You can set a condition from the property displayed by double-clicking the trapezoid, and you can set processes by dragging and dropping the nodes and libraries into the square area, just like other scenarios."

2

Scenario creation - Practice 1 -



"Now, let's add the loop processing to the purchase order system created in the basics section."



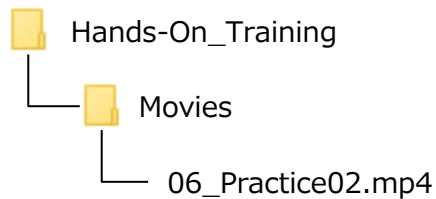
"It seems that I can correct a scenario smoothly if I decide where to perform the loop processing in advance!"

2

Scenario creation - Practice 1 -



"Let's watch the actual movement of WinActor. Double-click the file named 06_Practice02.mp4 in the following folder to play it."



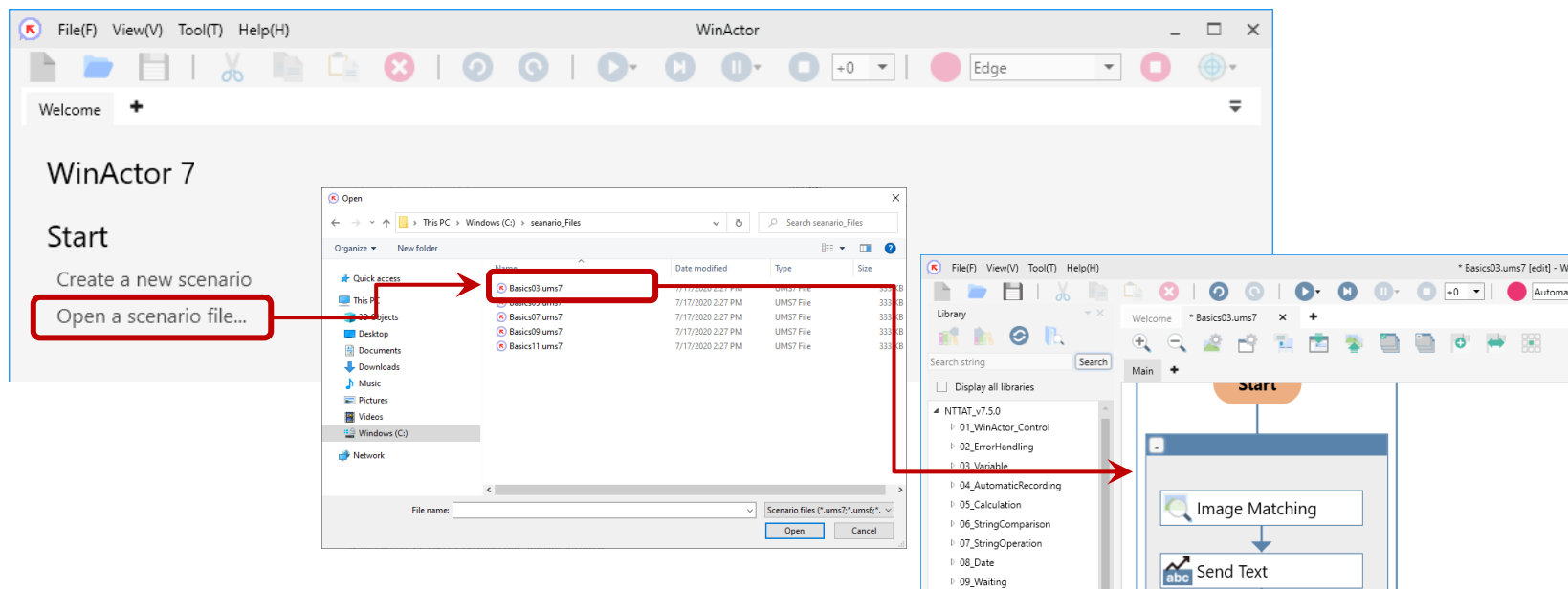
"Now, let's actually create a scenario together!"

3

Loop processing for the same operation

Prep Launching WinActor and opening an existing scenario

- 1 Launch WinActor from the Start menu or with any other startup method.
- 2 Click [Open a scenario file...] and select the scenario saved in the Basics section of "Automation for click and input on a webpage." The created scenario will be displayed in the scenario edit area.



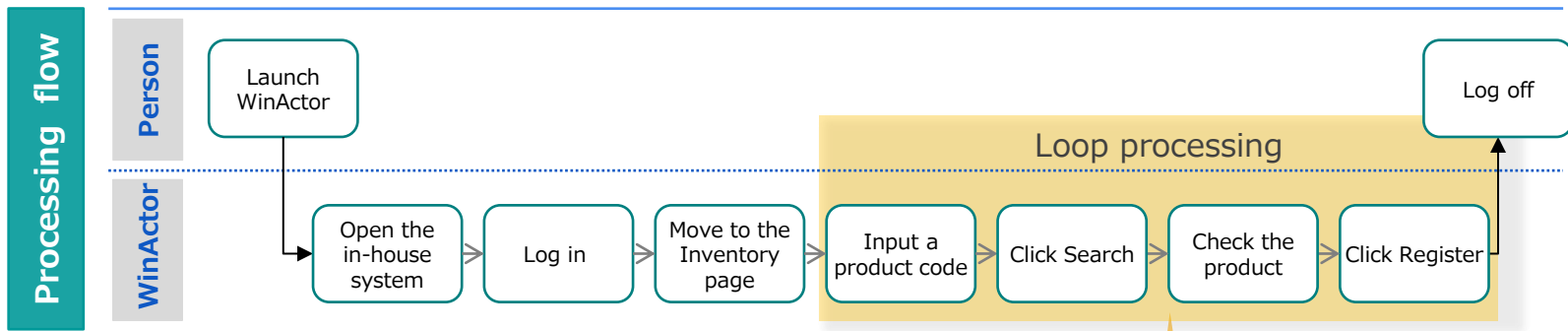
For the startup methods and window layout, see WinActor Operation Manual.

3

Loop processing for the same operation



"From here, we will create a scenario for the following operations."



Prep Displaying the login page

Prep Checking the additional processes

3-1 Setting the number of iterations

3-2 Setting the start row of the purchase order book

3-3 Loop processing

3-4 Getting values

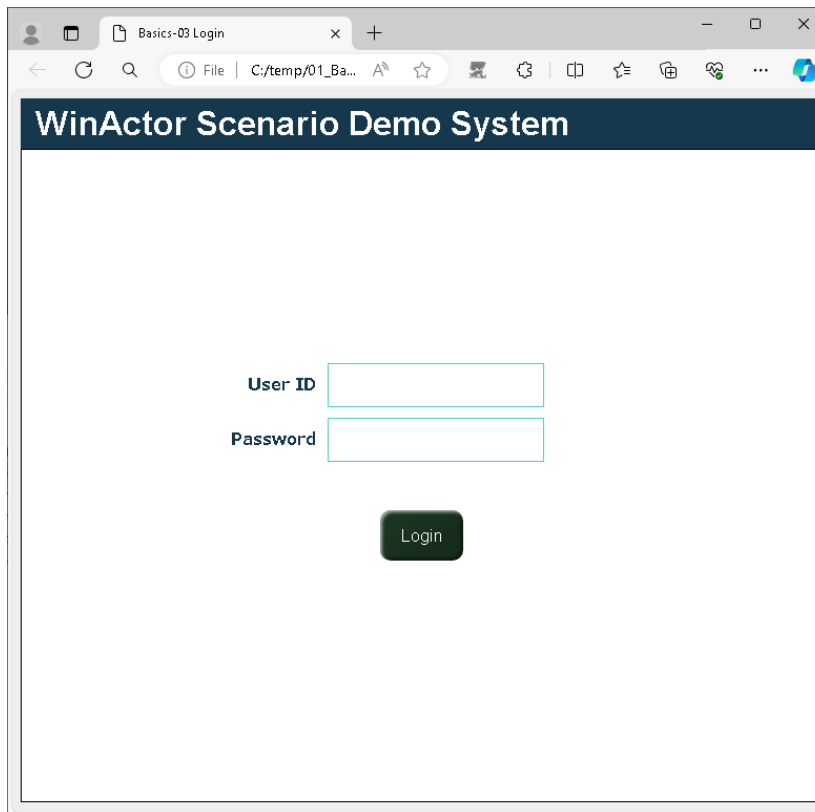
3-5 Inputting values

3

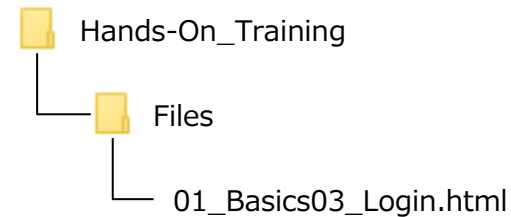
Loop processing for the same operation

Prep Displaying the login page

- 1 Right-click "01_Basics03_Login.html" and select 'Microsoft Edge' from 'Open with.'



File to be used



Be sure to use Edge or Chrome as the browser to start the demo system.



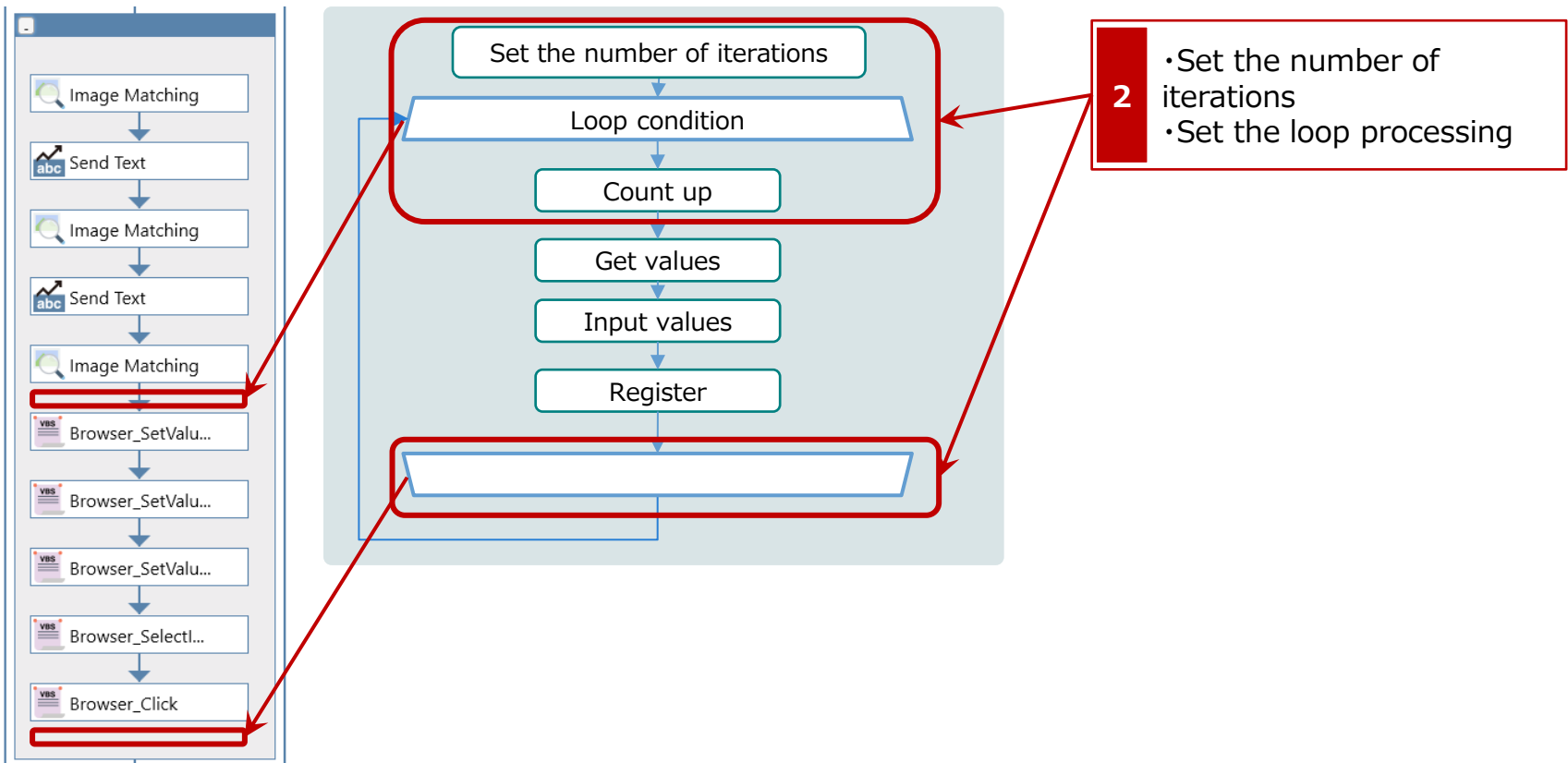
For Chrome users, select 'Google Chrome' from 'Open with.'

3

Loop processing for the same operation

Prep Checking the additional processes

1 This time, the following processes will be added.



Loop processing for the same operation

3-1

The screenshot shows the WinActor software interface. On the left is the 'Library' pane, which contains a tree view of available actions. A red box highlights the 'Excel' folder, and another red box highlights the 'Excel_GetLastRow4' action. A red arrow points from this action to the 'Excel_GetLastRow...' action in the flowchart. The flowchart on the right shows a sequence of actions: Start, Image Matching, Send Text, Image Matching, Send Text, Image Matching, Excel_GetLastRow..., and Browser_SetValu... The 'Excel_GetLastRow...' action is circled in red. At the bottom, a table shows the 'Variable list' with columns for Variable name, Current value, and No initialization.

1 Click the [Library] tab.

2 Double-click the '18_Excel' and expand the list of libraries.

3 Double-click the '03_Row_Column' and expand the list of libraries.

4 Drag the 'Excel_GetLastRow4' library and drop it into the scenario edit area.

5 Double-click the placed library. (Displaying the property)



3

Loop processing for the same operation

3-1 Setting the number of iterations

Run Script

Name: Excel_GetLastRow4

Comment:

Settings Script Annotation Version

Get the index number of the last row in the specified column.
The last row is determined by pressing Ctrl + UP key from the bottom row of the sheet.

* The folder where the current scenario exists is the base for relative path.
* To express the cell position, only A1 format is supported.

"File_name":
Specify an Excel file.

"Sheet_name":
Specify a sheet name.
When omitted, the active sheet is used.

"Search_column":
Specify the column name to search for the last row.
Example) A

"Last_row":
Specify a variable to store the index number of the last row.

File_name: Value=> C:\temp\04_Basics05_Purchase_Ord

Sheet_name: Value=> Sheet1

Search_column: Value=> C

Last_row: Last_row

Update Restore

6

Drag and drop
"04_Basics05_Purchase_Order_Book.xlsx" into
[File_name], and enter
"Value=>Sheet1" for [Sheet_name],
"Value=>C" for [Search_column], and
"Last_row" for [Last_row].

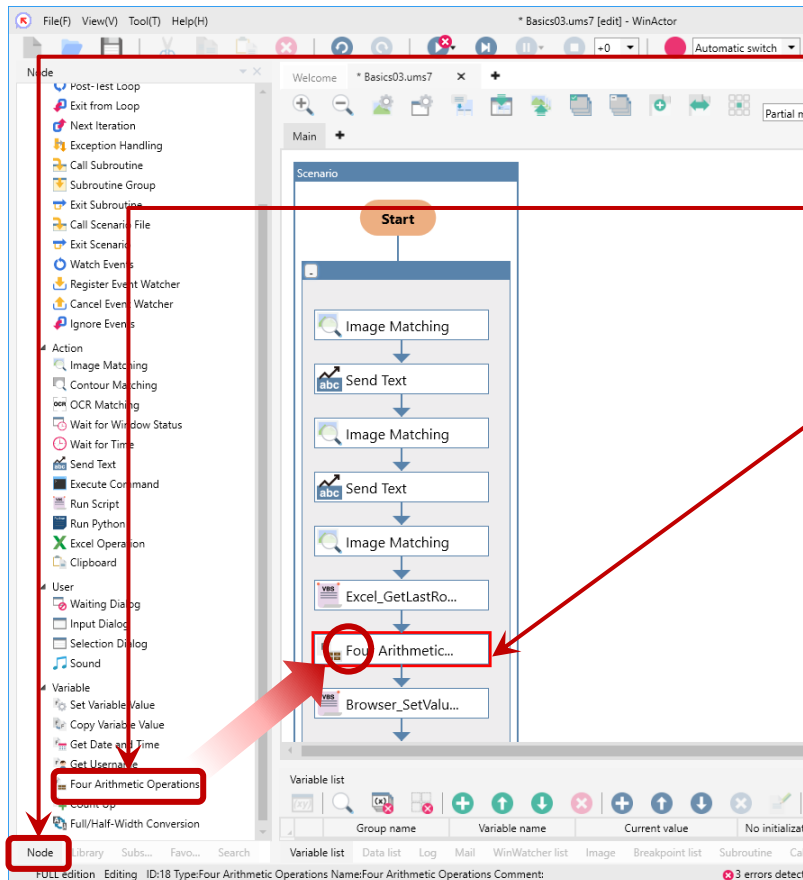
7

Click the [Update] button. If the variable
confirmation dialog appears, click [Yes].

3

Loop processing for the same operation

3-1 Setting the number of iterations



8 Click the [Node] tab.

9 Drag the 'Four Arithmetic Operations' node and drop it into the scenario edit area.

10 Double-click the placed node. (Displaying the property)

3

Loop processing for the same operation

3-1 Setting the number of iterations

Four Arithmetic Operations

Name Four Arithmetic Operations

Comment

Calculation result Loop_count

Last_row - Value=> 4

☐ Calculate as an integer and truncate the result numbers beyond the decimal point.

Update Restore

11 Enter "Loop_count" for [Calculation result].

12 Select 'Last_row' from the pull-down list of [Input variable name or value] on the left, '-' (minus) from the pull-down list of the operator in the middle, and enter "Value=>4" for the pull-down list of [Input variable name or value] on the right.

13 Click the [Update] button. If the variable confirmation dialog appears, click [Yes].

AutoSave Off

File Home Insert Page Layout Formulas Data Review View Develop

D9

	A	B	C	D	E
1					
2					
3					
4					
5		1	25 December 2019	25 December 2019	Accounting Department
6		2	25 December 2019	25 December 2019	Accounting Department
7		3	26 December 2019	27 December 2019	Accounting Department
8		4	27 December 2019	27 December 2019	Accounting Department

4 is subtracted because there are rows containing values other than the value that we actually input, such as the book name, on the purchase order book. The actual input value is set from the 5th row this time, so it is adjusted to the correct number of iterations.

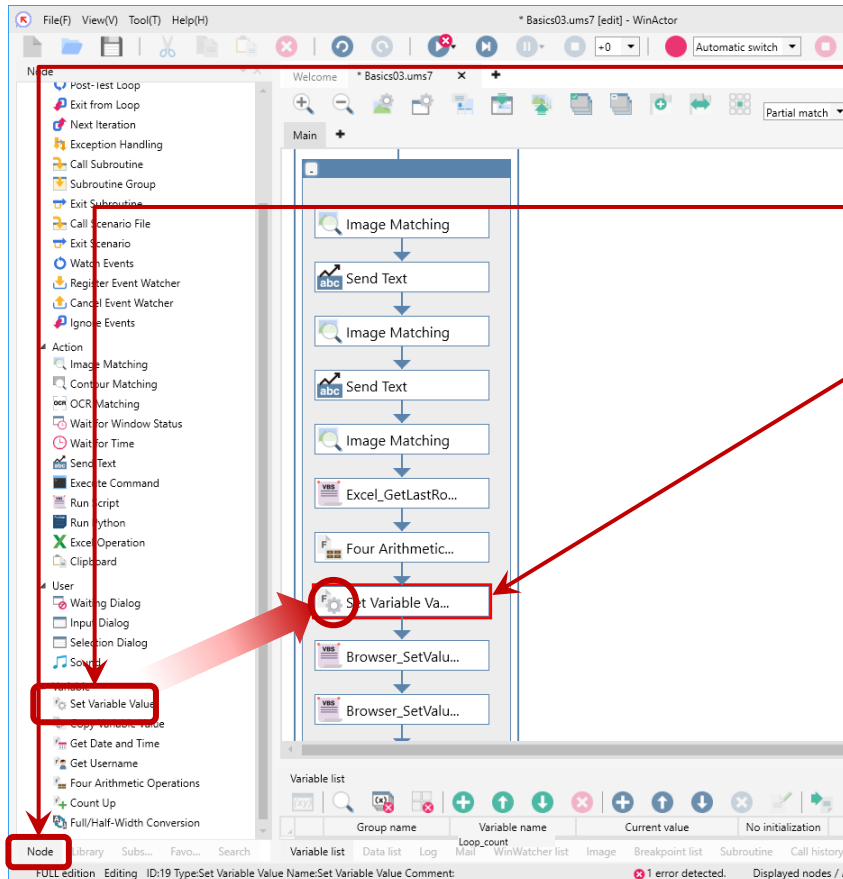


3

Loop processing for the same operation

3-2

Setting the start row of the purchase order book



1 Click the [Node] tab.

2 Drag the 'Set Variable Value' node and drop it into the scenario edit area.

3 Double-click the placed node. (Displaying the property)

3

Loop processing for the same operation

3-2 Setting the start row of the purchase order book

The screenshot shows a 'Set Variable Value' dialog box. It has a 'Name' field with 'Set Variable Value' and a 'Comment' field. Below these is a 'Variable name' dropdown menu set to 'Row' and a 'Value' field set to '4'. At the bottom are 'Update' and 'Restore' buttons. Red boxes and arrows highlight the 'Variable name' dropdown (labeled 4), the 'Value' field (labeled 5), and the 'Update' button (labeled 6).

4 For [Variable name], enter "Row."

5 For [Value], enter "4."

6 Click the [Update] button. If the variable confirmation dialog appears, click [Yes].

The reason for setting the Row variable to 4 in advance is that we want to input from the 5th row of the book.

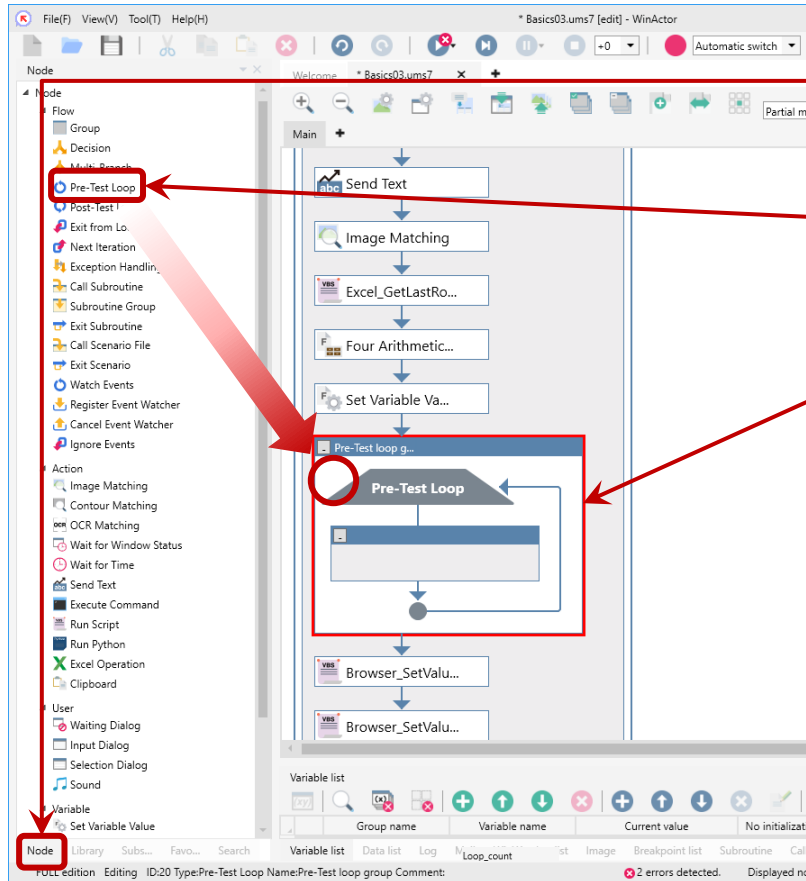


The counter is incremented by 1 at the beginning of loop processing, so it is set to 4.

3

Loop processing for the same operation

3-3 Loop processing



1 Click the [Node] tab.

2 Drag the 'Pre-Test Loop' node and drop it into the scenario edit area.

3 Double-click the placed node. (Displaying the property)

3

Loop processing for the same operation

3-3 Loop processing

Pre-Test Loop

Name: Pre-Test loop group

Comment:

☐ Conditional expression

☒ Number of iterations Loop_count

☐ Range Input variable name or value to Input variable name or value

☐ Number of data Data filename Input variable name or value

☐ Number of data (database) Data Source name Input variable name or value

Username Input variable name or value

Password Input variable name or value

Table name Input variable name or value

Counter Select variable name (optional)

4

Click the radio button of 'Number of iterations' and select 'Loop_count.'

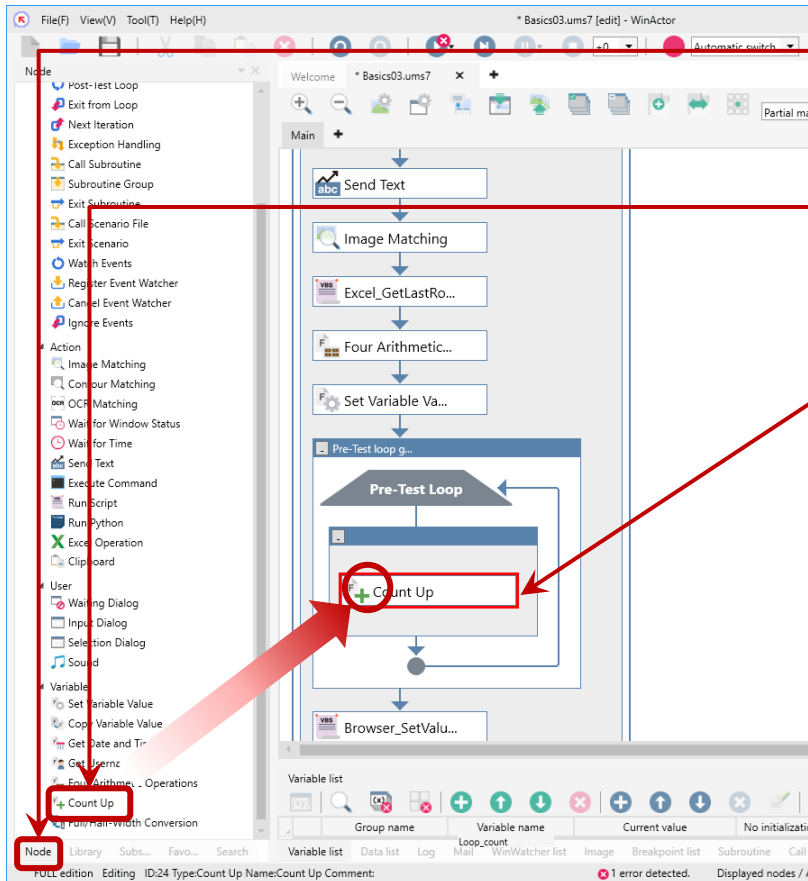
5

Click the [Update] button.

3

Loop processing for the same operation

3-3 Loop processing



6 Click the [Node] tab.

7 Drag the 'Count Up' node and drop it into the scenario edit area.

8 Double-click the placed node. (Displaying the property)

3

Loop processing for the same operation

3-3 Loop processing

The screenshot shows a web form titled "Count Up". It contains the following elements:

- Name:** A text input field containing "Count Up".
- Comment:** A text input field.
- Result:** A pull-down menu currently showing "Row". A red box highlights this menu, with a red arrow pointing to it from step 9.
- Additional value:** A numeric input field containing "1". A red box highlights this field, with a red arrow pointing to it from step 10.
- Buttons:** "Update" and "Restore" buttons at the bottom. A red box highlights the "Update" button, with a red arrow pointing to it from step 11.

9

Select 'Row' from the pull-down list of [Result].

10

Set the value "1" for [Additional value].

11

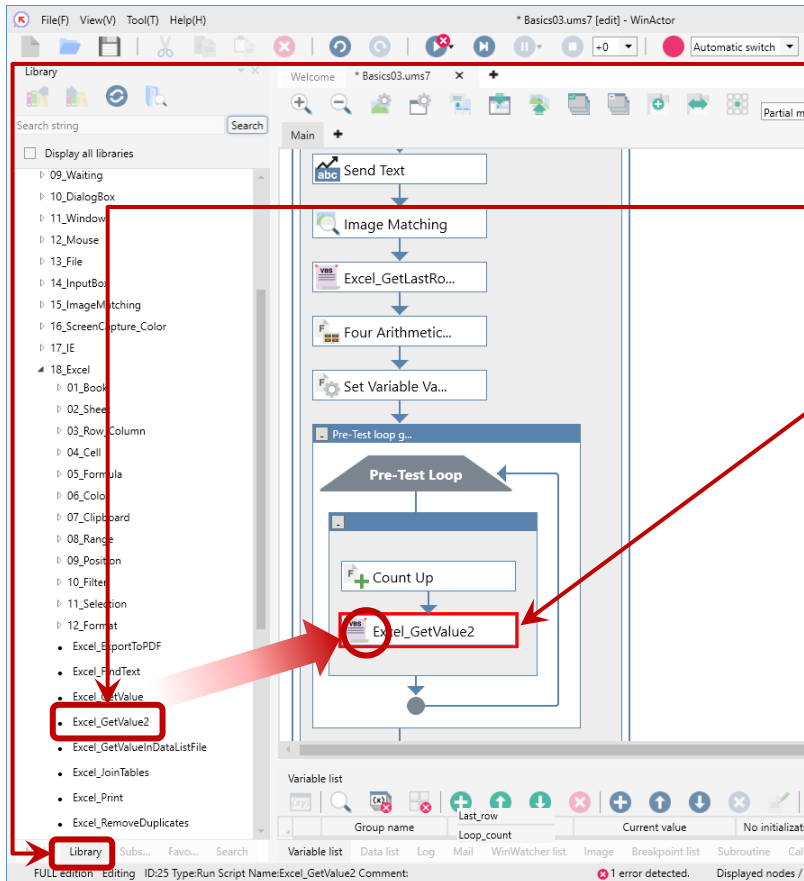
Click the [Update] button.

3

Loop processing for the same operation

3-4

Getting values



1 Click the [Library] tab.

2 Drag the 'Excel_GetValue2' library and drop it into the scenario edit area.

3 Double-click the placed library. (Displaying the property)

3

Loop processing for the same operation

3-4

Getting values

Run Script

Name: Excel_GetValue2

Comment:

Settings Script Annotation Version

text such as a date or time.

"Storage_dest_variable":
Specify a variable to store the obtained value.

File_name: Value=> C:\temp\04_Basics05

Sheet_name: Value=> Sheet1

Cell(row): Row

Cell(column): Value=> C

Type: value

Storage_dest_variable: Order_date

Update Restore

4

Drag and drop "04_Basics05_Purchase_Order_Book.xlsx" into [File_name], and enter "Value=>Sheet1" for [Sheet_name], "Row" for [Cell(row)], "Value=>C" for [Cell(column)], 'value' for [Type], and "Order_date" for [Storage_dest_variable].

5

Click the [Update] button. If the variable confirmation dialog appears, click [Yes].



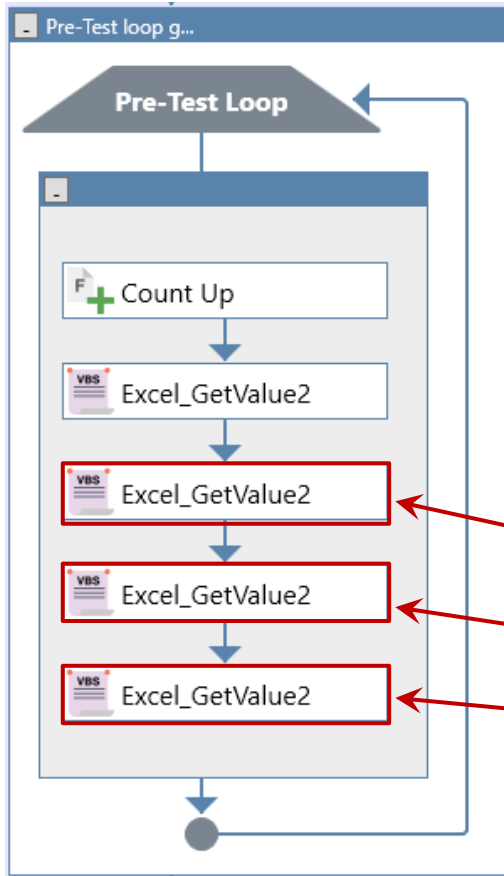
The point here is to set "Row" variable for [Cell(row)]. "Row" is incremented by one for each iteration, so the row number increases by one for each iteration.

3

Loop processing for the same operation

3-4

Getting values



Similar to the settings to get the order date described in the previous slide, set the libraries to get a supplier code, registrant code, and product code. For [Cell(column)] and [Storage_dest_variable], set them as shown in the table below.

6

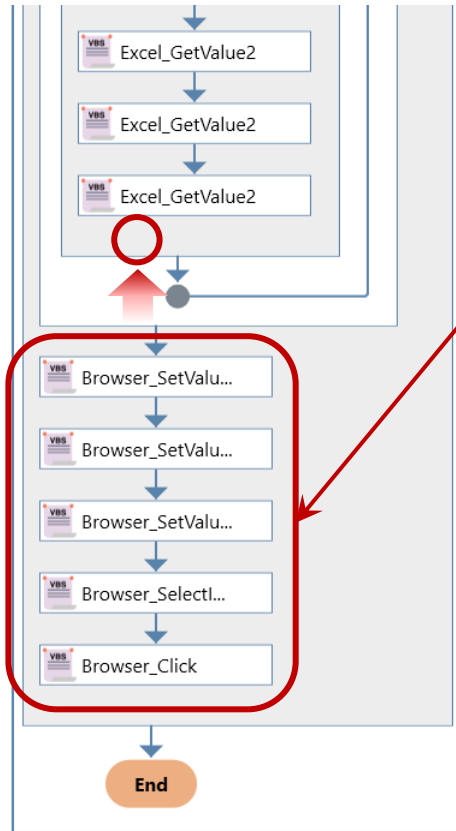
For [File_name], [Sheet_name], [Cell(row)], and [Type], drag and drop "04_Basics05_Purchase_Order_Book.xlsx" into [File_name], and enter "Value=>Sheet1" for [Sheet_name], "Row" for [Cell(row)], and 'value' for [Type], the same as described in the previous slide.

Cell (column)	Storage_dest_variable
G	Supplier_code
H	Registrant_code
I	Product_code

3

Loop processing for the same operation

3-5 Inputting values



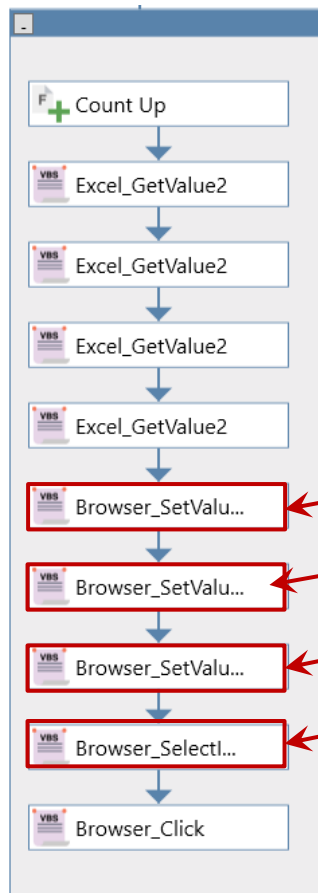
1

Move three "Browser_SetValue," one "Browser_SelectItem," and one "Browser_Click" that are placed in the existing scenario into the Pre-Test loop group.

3

Loop processing for the same operation

3-5 Inputting values



2

Change the settings for each existing library of inputting a value of order date, supplier code, registrant code, and product code.
For [Set_value] or [Value] of each library, open the property and make changes referring to the table below.

[Set_value] or
[Value]

Order_date

Supplier_code

Registrant_code

Product_code

3

Loop processing for the same operation

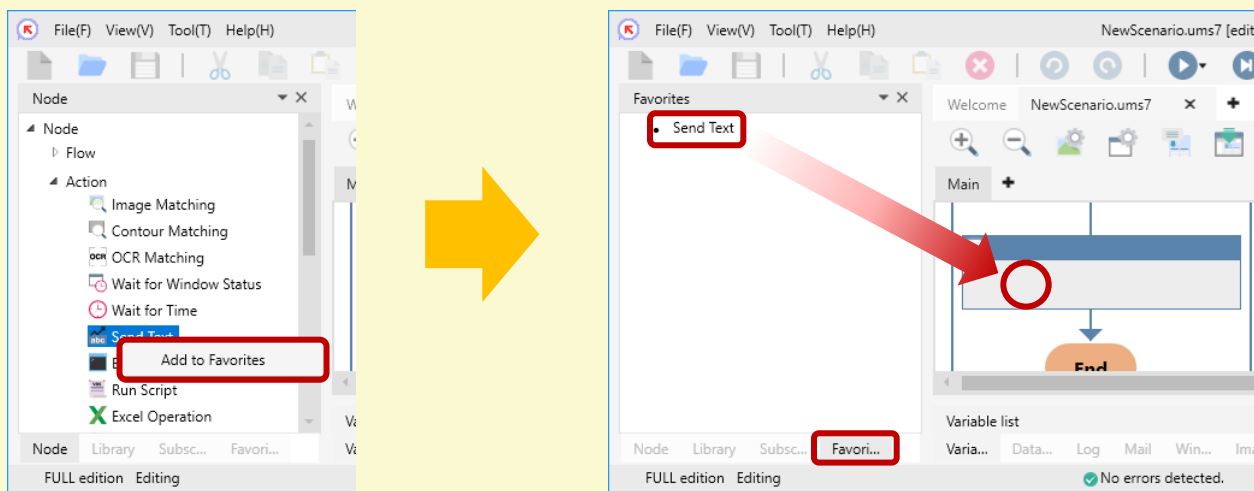
Tips

Favorites function for nodes and libraries



Frequently used nodes and libraries can be registered in the Favorites palette, and selected quickly.

Right-click a frequently used node or library, and select 'Add to favorites' to register it to the Favorites palette. The registered nodes and libraries can be used by dragging & dropping as they are in the usual palettes. Accelerate scenario creation by registering frequently used nodes and libraries, and reducing the time to looking for them

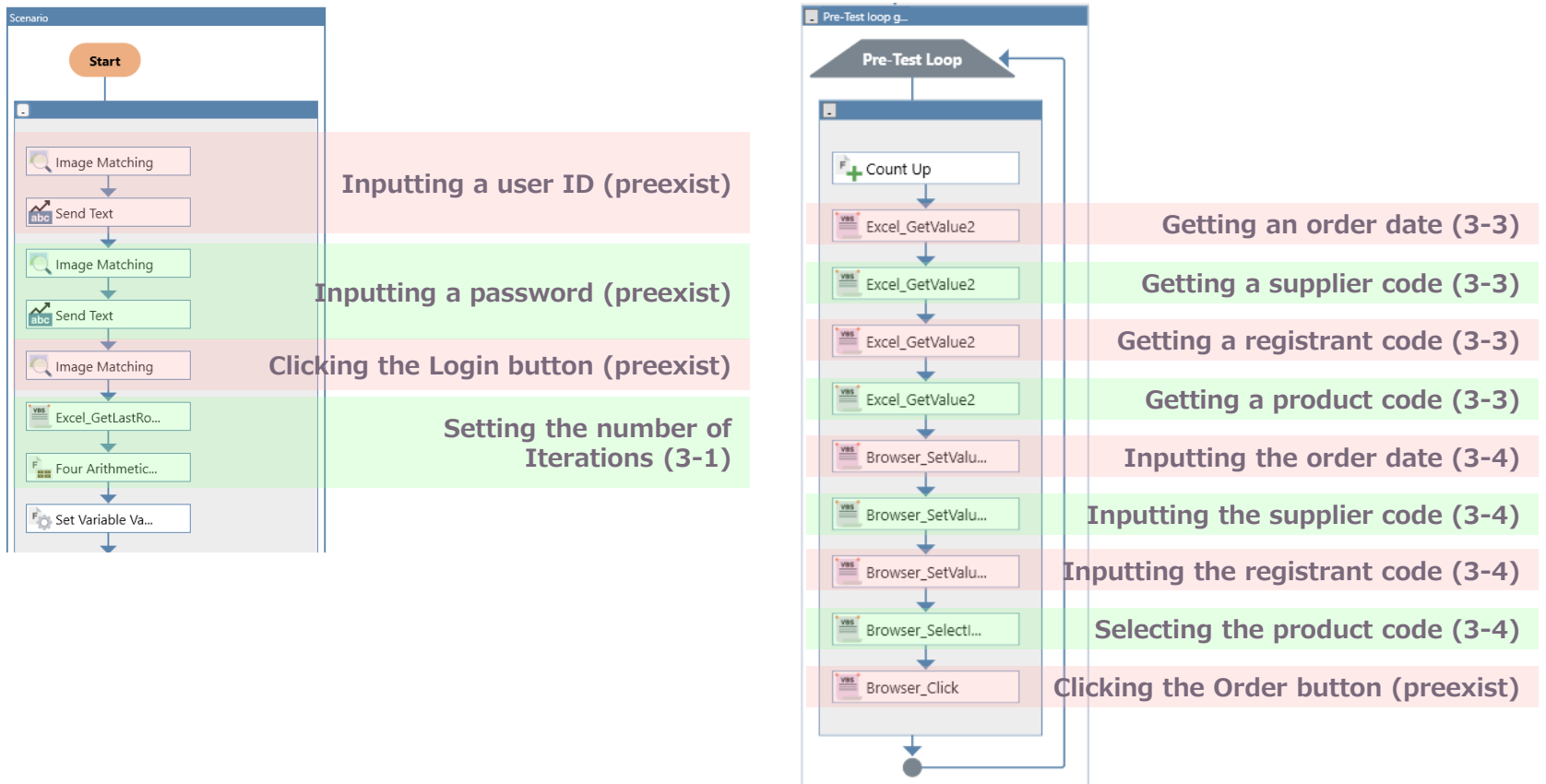


3

Loop processing for the same operation

3-6 Checking the entire scenario

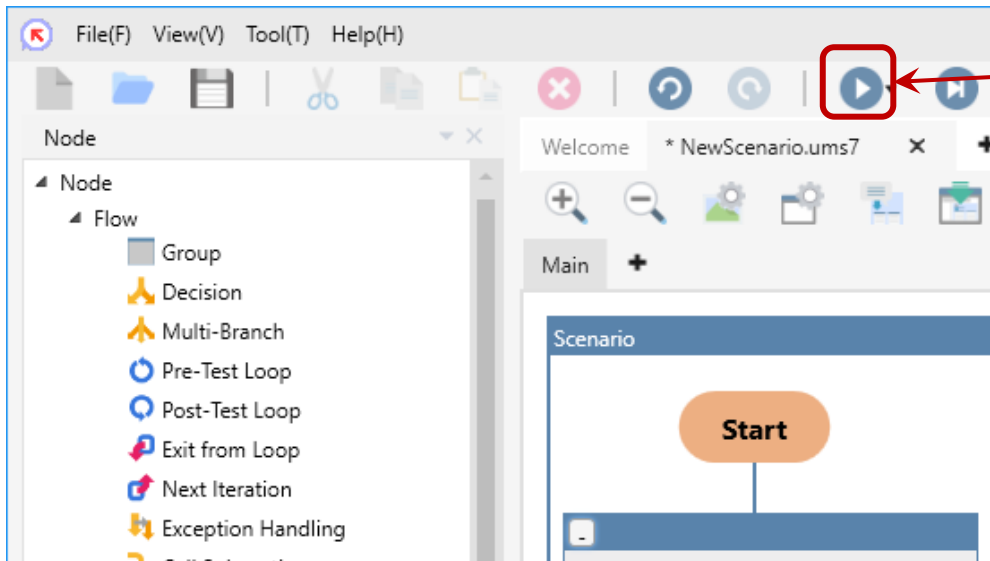
1 Confirm that the created scenario is as follows.



3

Loop processing for the same operation

3-7 Running the scenario



1 Click the 'Run scenario' button and check if the scenario runs without error.

2 If an error occurs, check the error message and review the settings of the property and the like.

3

Loop processing for the same operation

3-8 Saving the scenario

1 Click the [File] menu.

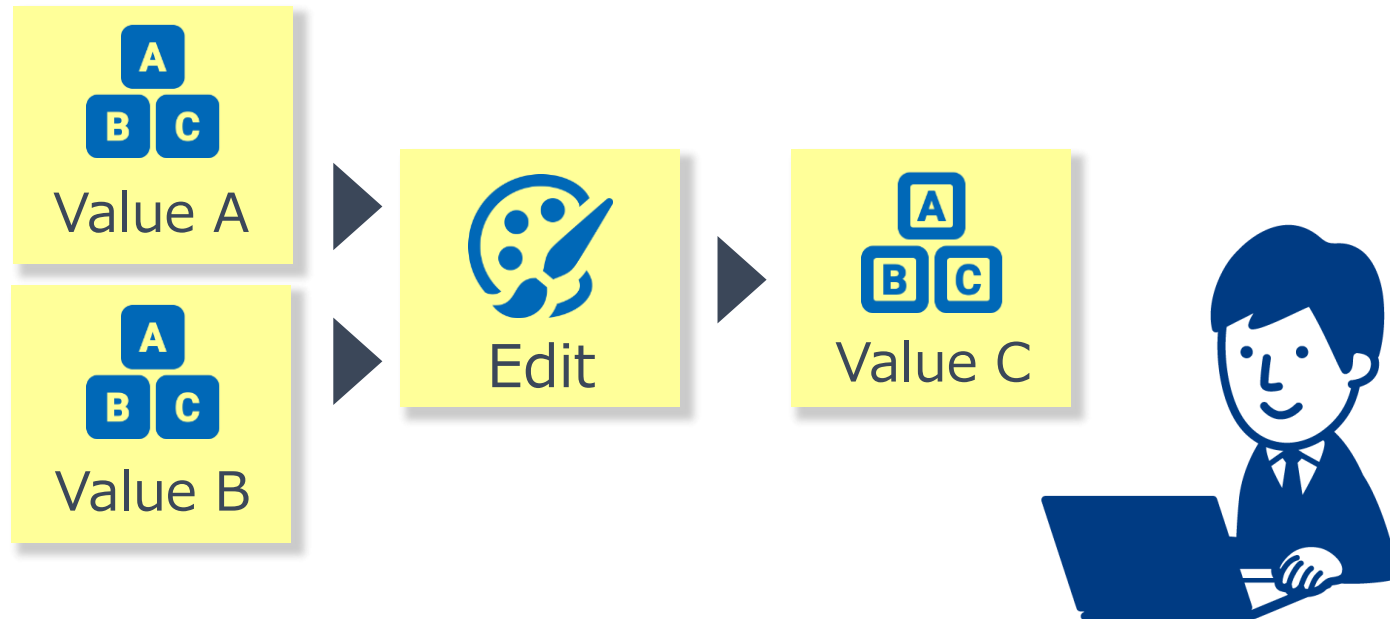
2 Click the [Save as] menu.

3 Select a location to save a file for the scenario, enter a filename, and click the [Save] button.



For a scenario that has already been saved, you can use the [Save] menu.

Practice



**Text editing of acquired
characters and numbers**

4

Scenario creation - Practice 2 -

Case

William seems to have mastered loop processing and is now able to use WinActor on his own. However, he has found that it took longer than he expected to prepare materials in advance to be processed by WinActor.



"When I think over my work, it seems that I spend a lot of time preparing data, such as trimming the space of the name from the original material and filling it with 0s to match the number of digits..."



"Such detailed operation can be done with WinActor as well. WinActor has functions to edit characters and numbers, and you can use them for such operations like modifying, deleting, adding strings."



"It's convenient. I would like to incorporate them in the scenario if the operations that were previously done with Notepad and now this can be done with WinActor."



"Ok, now let's actually use those functions."

4

Scenario creation - Practice 2 -



"Specifically, what kind of things can I do?"

"You can calculate numbers and convert, concatenate, and divide characters. Below are some examples."

Type	Node/Library name	Description	Example
Number	Four Arithmetic Operations	Operates one of four arithmetic operations with values.	$5 + 3 \rightarrow 8$
Number	Formatting_SuppressZero	Removes leading zeros for an integer that has leading zeros due to digit alignment.	$000123 \rightarrow 123$
Number	Count Up	Often used in loop processing. Adds a specified integer to the target value.	$5 + 1 \rightarrow 6$
String	Conversion_Uppercase_Lowercase	Converts characters to uppercase or lowercase.	$ABC \Leftrightarrow abc$
String	Formatting_TrimSpace	Removes leading and trailing white spaces from a specified string.	$(space)123(space) \rightarrow 123$
String	Split_SplitStringIntoTwo	Splits a string specified in [Split_source_string] by [Delimiter_character] into [Before] and [After].	Delimiter_character : ~ 2014/1/1~2014/3/31 ↓ 2014/1/1 and 2014/3/31
String	Concatenation_Concatenate2Strings	Concatenates [String_1] and [String_2] and stores the result to [Concatenated_results].	$ABC + DEF \rightarrow ABCDEF$

Point!



4

Scenario creation - Practice 2 -



"Below is an example of the settings of the Four Arithmetic Operations node."

Four Arithmetic Operations

Name Four Arithmetic Operations

Comment

Calculation result Select variable name

Input variable name or va + Input variable name or va

☐ Calculate as an integer and truncate the result numbers beyond the decimal point.

Update Restore

1

Enter a value you want to calculate in the left pulldown and the right pulldown, and select one of $+$ $-$ \times \div for the operator.

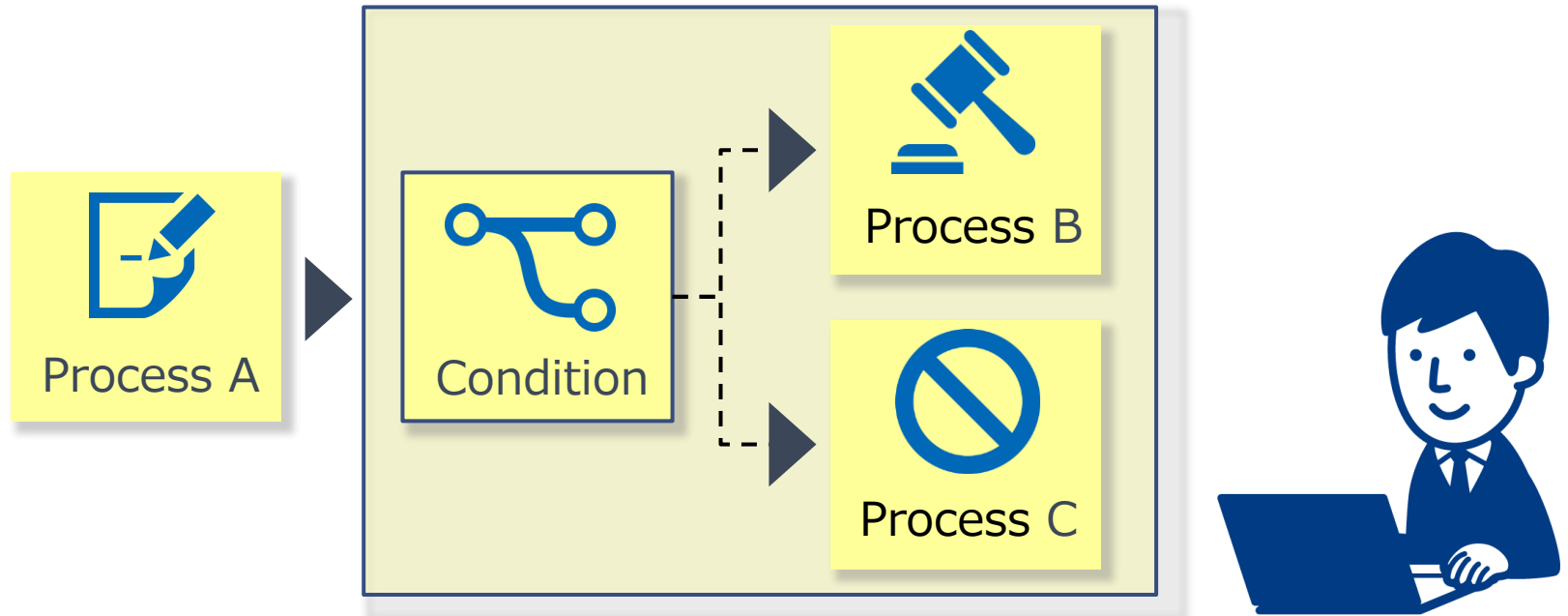
2

Click the [Update] button.



"It's easy!"

Practice



**Changing processes
depending on conditions**

5

Scenario creation - Practice 3 -

Case

William is now able to create a scenario with loop processing and text editing.

This time, he received a request to change processes depending on the value entered in the in-house system.



"The loop processing and text editing that I learned from you last time are amazing. 100 or 1000 cases can be executed at once including preprocessing. This can be applied to various tasks!"



"That's good. However, is it possible to repeat the process of 'Registering for a specific bank' that was requested this time with loop processing?"



"Hmm... No, it's not just the same work repeated, so it's difficult with my current knowledge..."



"Well, such processing is called conditional decision processing. It is as important as loop processing, so let's learn it this time."

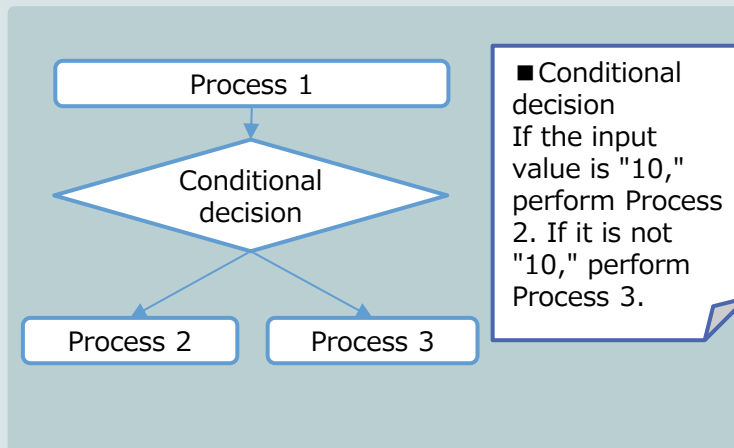
5

Scenario creation - Practice 3 -



"I would like to ask what is conditional decision processing, but I think that it is to branch processing to be executed with some kind of condition."

"Exactly! Conditional decision processing means that if it is Yes, A is performed, and if it is No, B is performed. The process to be executed will be different according to the condition."



"The figure on the left is an image of conditional decision processing. If the condition is met, Process 2 will be executed, and if the condition is not met, Process 3 will be executed."

"Like loop processing, how to set the condition here is the point for conditional decision processing."

5

Scenario creation - Practice 3 -

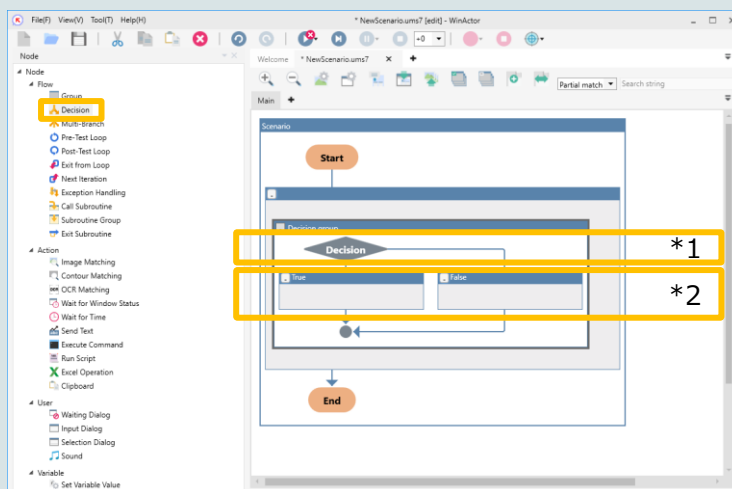


"What should I actually do when creating a scenario?"

"We will use the **Decision node** displayed at the upper part of the Node tab on the left side of the WinActor window."

"The conditional decision processing consists of a diamond-shaped branch condition (*1) and square areas (*2) where you set each process of if the condition is met (True) and if the condition is not met (False)."

Point!



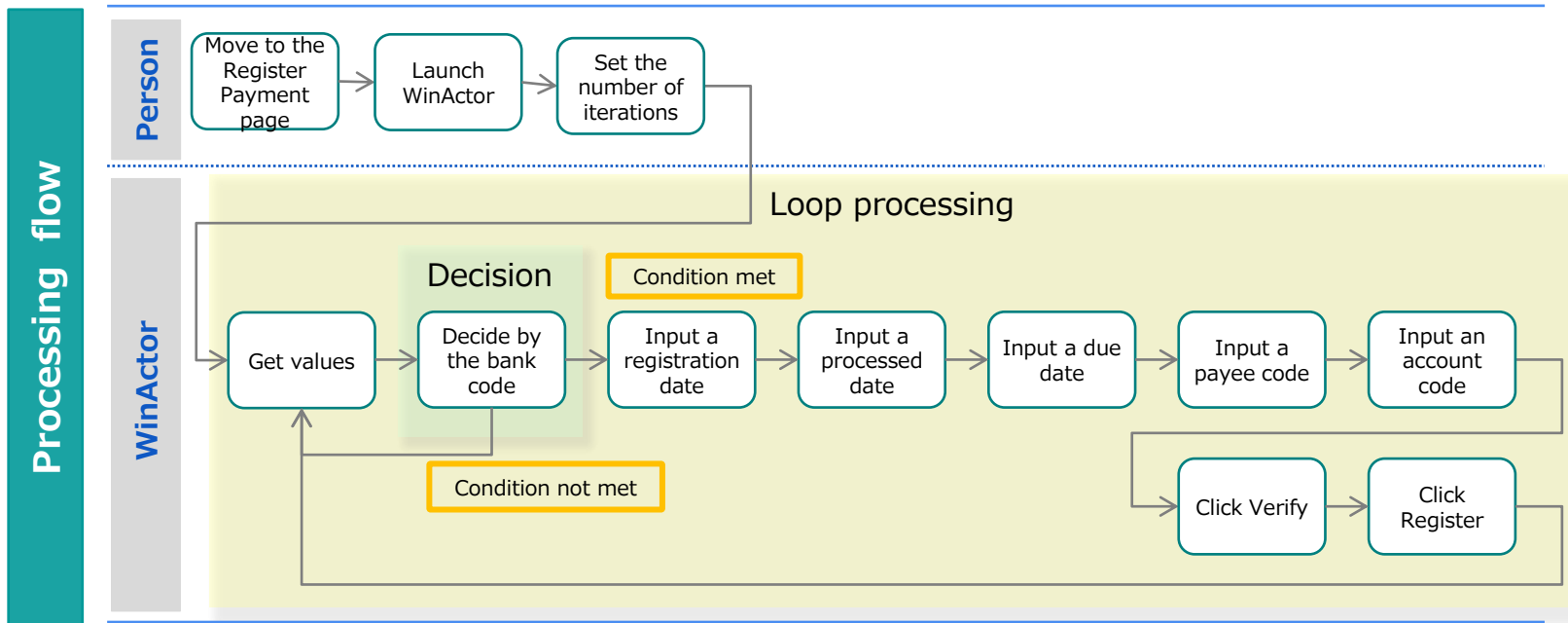
"You can perform conditional decision processing by setting a condition and processes. Double-click the diamond to open the properties to set the conditions, and drag the nodes and libraries to the boxes to set the processes, just like in other scenarios."

5

Scenario creation - Practice 3 -



"Let's create a scenario for payment registration by applying what we have learned so far."



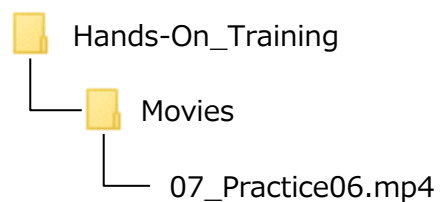
"It is the sum of the basics and practice!"

5

Scenario creation - Practice 3 -



"Let's watch the actual movement of WinActor. Double-click the file named 07_Practice06.mp4 in the following folder to play it."



"Now, let's actually create a scenario together!"

6

Changing processes depending on conditions

Prep The flow of the scenario

1 The scenario to be created this time is as follows.

2

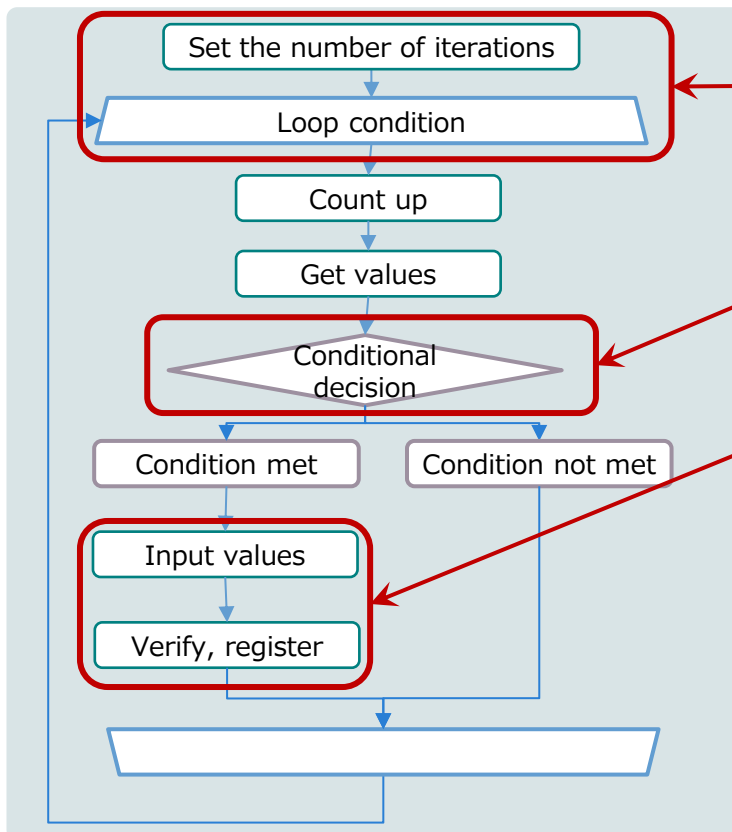
Similar to the previous time, count the number of rows in the book and set the number of iterations.

3

Set "If the bank code is NAT0001" as a condition for the conditional decision.

4

Registration will be done only if the condition is met.



6

Changing processes depending on conditions

Prep Displaying the login page

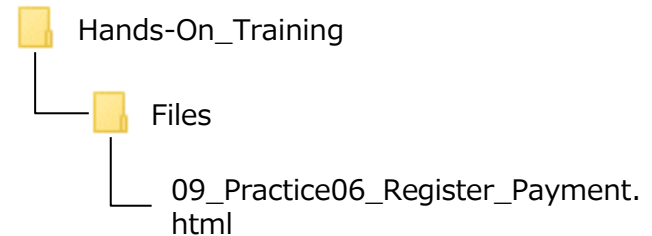
- 1 Right-click "09_Practice06_Register_Payment.html" and select 'Microsoft Edge' from 'Open with.'

The screenshot shows a web browser window titled "Practice-06 Register Payment". The page displays the "WinActor Scenario Demo System" header with a "Menu" bar containing buttons for "Add P/O", "Search P/O", "Add to Inventory", and "Register Payment". Below this is the "Register Payment" form, which includes the following fields and values:

Registration date	29 June 2020	Processed date	29 June 2020
Due date	30 June 2020		
Bank code	NAT0001	Bank name	
Payee code	987654	Payee name	
Account code	100990	Account name	
Payment amount	8765000		

At the bottom of the form are three buttons: "Save", "Verify", and "Register".

File to be used



Be sure to use Edge or Chrome as the browser to start the demo system.



For Chrome users, select 'Google Chrome' from 'Open with.'

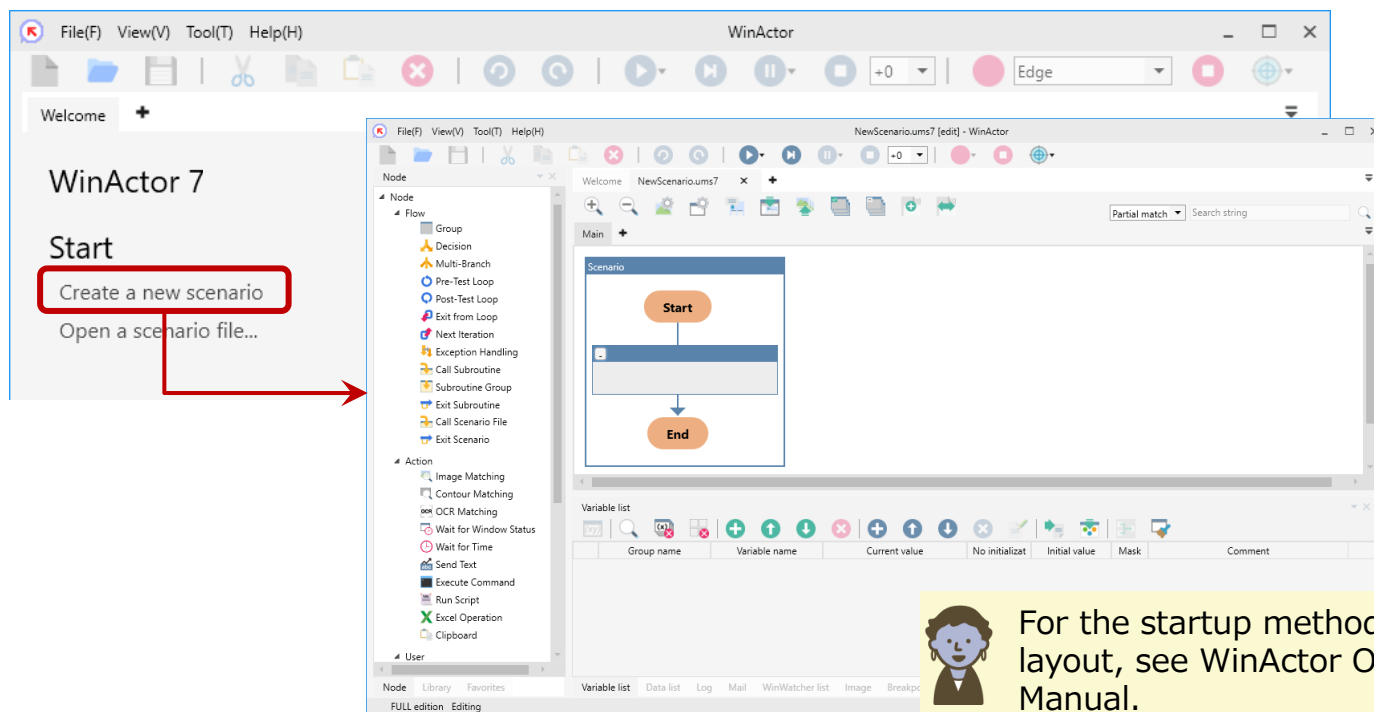
6

Changing processes depending on conditions

Prep Launching WinActor

1 Launch WinActor from the Start menu or with any other startup method.

2 Click [Create a new scenario]. The main window of WinActor appears.



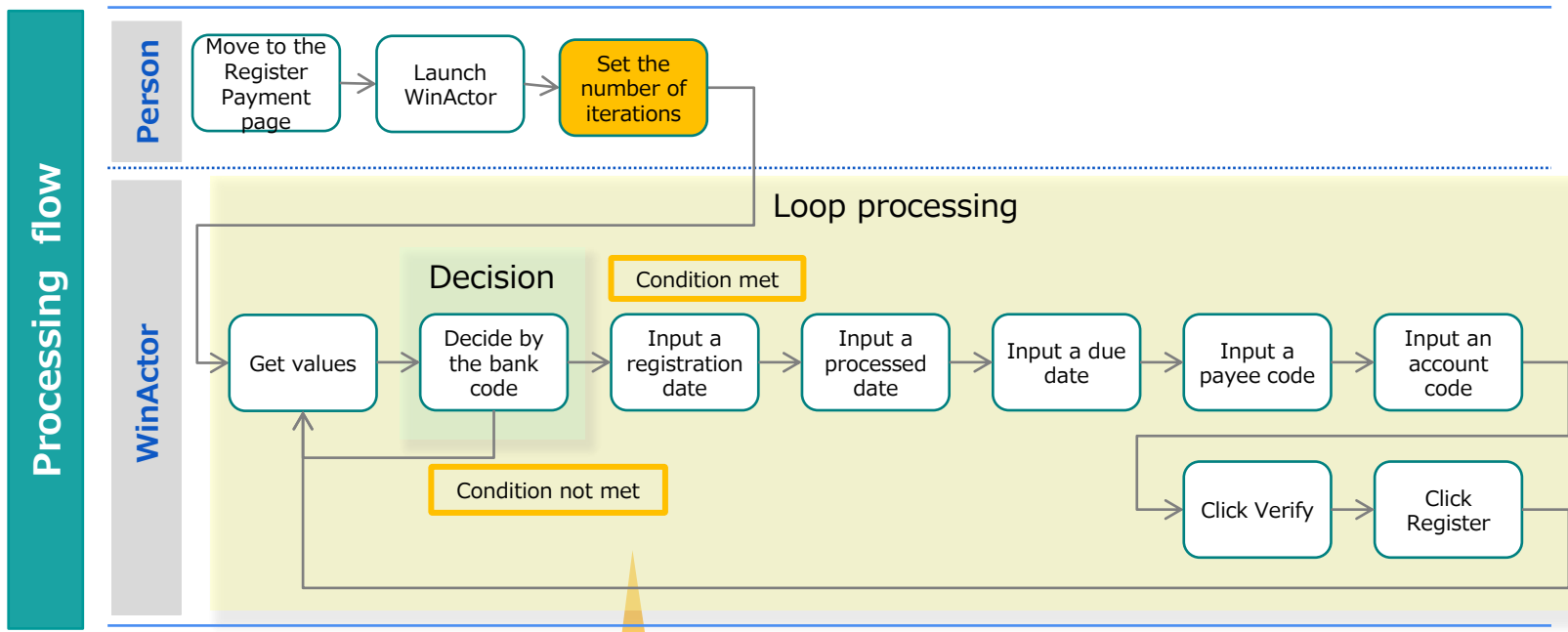
For the startup methods and window layout, see WinActor Operation Manual.

6

Changing processes depending on conditions



"From here, we will create a scenario for the following operation."

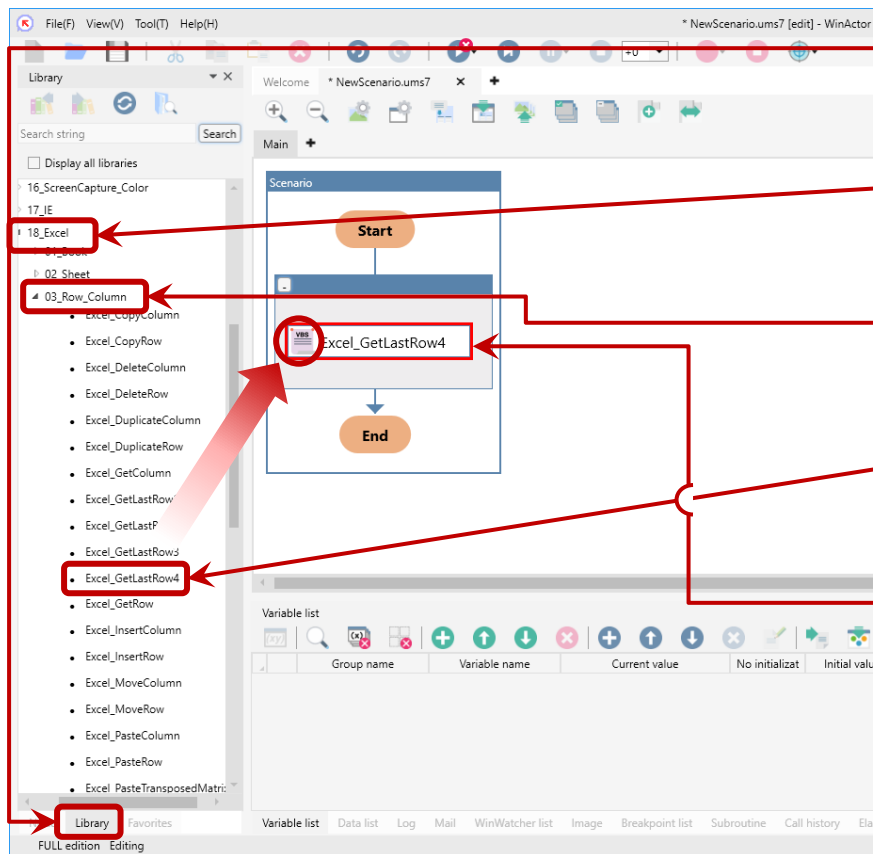


6-1 Setting the number of iterations

6

Changing processes depending on conditions

6-1 Setting the number of iterations



1 Click the [Library] tab.

2 Double-click '18_Excel' and expand the list of libraries.

3 Double-click '03_Row_Column' and expand the list of libraries.

4 Drag the 'Excel_GetLastRow4' library and drop it into the scenario edit area.

5 Double-click the placed library. (Displaying the property)

After getting the number of the last row, subtract the number of unnecessary rows to make the number of iterations. First, we want to get all the information of the payment registration book, so we will use a library called 'Excel_GetLastRow4' that gets all rows to the last.



6

Changing processes depending on conditions

6-1 Setting the number of iterations

Run Script

Name: Excel_GetLastRow4

Comment:

Settings | Script | Annotation | Version

Specify a sheet name.
When omitted, the active sheet is used.

"Search_column":
Specify the column name to search for the last row.
Example) A

"Last_row":
Specify a variable to store the index number of the last row.

File_name: Value=> C:\temp\10_Practice06_Paym

Sheet_name: Value=> Sheet1

Search_column: Value=> C

Last_row: Last_row

Update | Restore

6

Enter
"Value=>10_Practice06_Payment_Registrati
on_Book.xlsx" for [File_name],
"Value=>Sheet1" for [Sheet_name],
"Value=>C" for [Search_column], and
"Last_row" for [Last_row].

7

Click the [Update] button. If the variable
confirmation dialog appears, click [Yes].

6

Changing processes depending on conditions

6-1 Setting the number of iterations

The screenshot displays the UMS (Unified Modeling System) software interface. The main window shows a scenario diagram with a flow from 'Start' to 'Excel_GetLastRow4' to 'Four Arithmetic Operations' to 'End'. The 'Four Arithmetic Operations' node is highlighted with a red circle. A red arrow points from this node to the 'Node' tab in the left sidebar, which is also highlighted with a red box. Another red arrow points from the 'Four Arithmetic Operations' node to the 'Variable list' table at the bottom, which is also highlighted with a red box. The 'Variable list' table has the following data:

Group name	Variable name	Current value	No initializat
NoGroup	Last_row		<input type="checkbox"/>

The status bar at the bottom indicates 'FULL edition Editing Node property was updated. Node ID: 7'.

8 Click the [Node] tab.

9 Drag the 'Four Arithmetic Operations' node and drop it into the scenario edit area.

10 Double-click the placed node. (Displaying the property)

6

Changing processes depending on conditions

6-1 Setting the number of iterations

The screenshot shows a dialog box titled "Four Arithmetic Operations". It has a "Name" field with the text "Four Arithmetic Operations" and a "Comment" field. Below these is a "Calculation result" dropdown menu with "Loop_count" selected. Underneath is a condition row with three dropdowns: "Last_row", "-", and "Value=> 4". A checkbox labeled "Calculate as an integer and truncate the result numbers beyond the decimal point." is present. At the bottom are "Update" and "Restore" buttons. Red boxes and arrows highlight the "Calculation result" dropdown (pointing to instruction 11), the condition row (pointing to instruction 12), and the "Update" button (pointing to instruction 13).

11 Enter "Loop_count" for [Calculation result].

12 Select 'Last_row' from the pull-down list of [Input variable name or value] on the left, '-' (minus) from the pull-down list of the operator in the middle, and enter "Value=>4" for the pull-down list of [Input variable name or value] on the right.

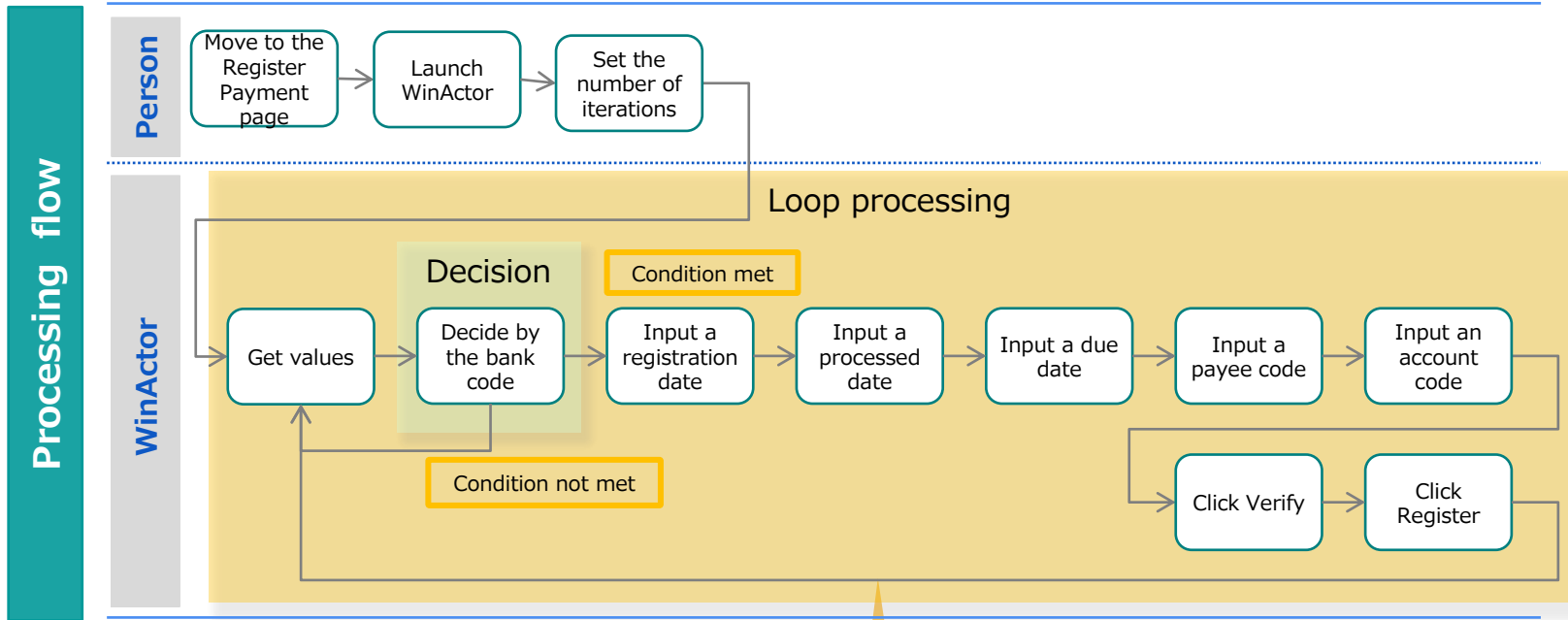
13 Click the [Update] button. If the variable confirmation dialog appears, click [Yes].

6

Changing processes depending on conditions



"From here, we will create a scenario for the following operations."



6-2 Setting the starting row of the payment registration book

6-3 Loop processing

6

Changing processes depending on conditions

6-2

Setting the starting row of the payment registration book

The screenshot shows the UMS software interface with a scenario flowchart. The flowchart starts with a 'Start' node, followed by 'Excel_GetLastRow4', 'Four Arithmetic Ope...', and 'Set Variable Value', ending with an 'End' node. The 'Set Variable Value' node is highlighted with a red circle. A red arrow points from the 'Node' tab in the left sidebar to the 'Set Variable Value' node in the flowchart. Another red arrow points from the 'Set Variable Value' node to the 'Variable list' table at the bottom.

Node

Flow

- Group
- Decision
- Multi-Branch
- Pre-Test Loop
- Post-Test Loop
- Exit from Loop
- Next Iteration
- Exception Handling
- Call Subroutine
- Subroutine Group
- Exit Subroutine
- Call Scenario File
- Exit Scenario

Action

- Image Matching
- Contour Matching
- OCR Matching
- Wait for Window Status
- Wait for Time
- Send Text
- Execute Command
- Run Script
- Excel Operation
- Clipboard

User

- Waiting Dialog
- Input Dialog
- Selection Dialog
- Sound

Variable list

Group name	Variable name	Current value	No initializat
NoGroup	Last_row		<input type="checkbox"/>
	Loop_count		<input type="checkbox"/>

Variable list Data list Log Mail WinWatcher list Image Breakpoint list Subroutine Call hist

FULL edition Editing Node property was updated. Node ID: 9

1 Click the [Node] tab.

2 Drag the 'Set Variable Value' node and drop it into the scenario edit area.

3 Double-click the placed node. (Displaying the property)

6

Changing processes depending on conditions

6-2

Setting the starting row of the payment registration book

The screenshot shows a 'Property' window with a 'Set Variable Value' sub-dialog. The 'Name' field is 'Set Variable Value' and the 'Comment' field is empty. The 'Variable name' dropdown is set to 'Row' and the 'Value' field contains '4'. The 'Update' button is highlighted with a red box. Red arrows point from numbered instructions 4, 5, and 6 to the 'Variable name' dropdown, the 'Value' field, and the 'Update' button respectively.

4 Select 'Row' from the pull-down list of [Variable name].

5 For [Value], enter "4."

6 Click the [Update] button. If the variable confirmation dialog appears, click [Yes].

The reason for setting the Row variable to 4 in advance is that we want to input from the 5th row of the book.

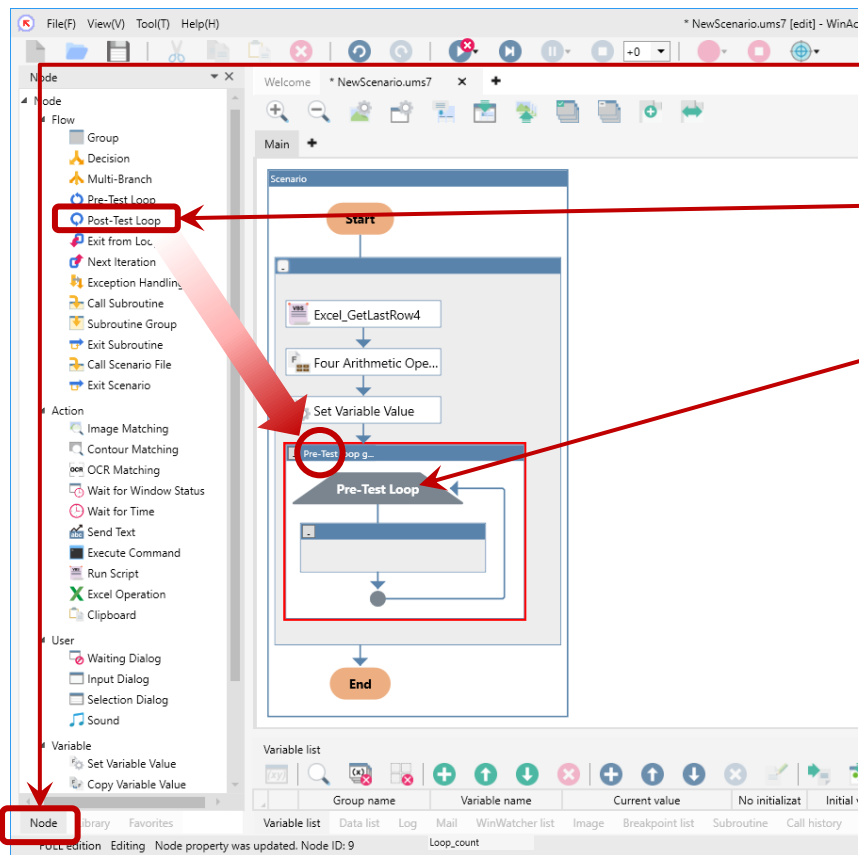


The counter is incremented by 1 at the beginning of loop processing, so it is set to 4.

6

Changing processes depending on conditions

6-3 Loop processing



1 Click the [Node] tab.

2 Drag the 'Pre-Test Loop' node and drop it into the scenario edit area.

3 Double-click the placed node. (Displaying the property)

6

Changing processes depending on conditions

6-3 Loop processing

Pre-Test Loop

Name: Pre-Test loop group

Comment:

☐ Conditional expression Edit

☒ Number of iterations Loop_count

☐ Range Input variable name or value to Input variable name or value

☐ Number of data Data filename Input variable name or value

☐ Number of data (database) Data Source name Input variable name or value

Username Input variable name or value

Password Input variable name or value

Table name Input variable name or value

Counter Select variable name (optional)

Update Restore

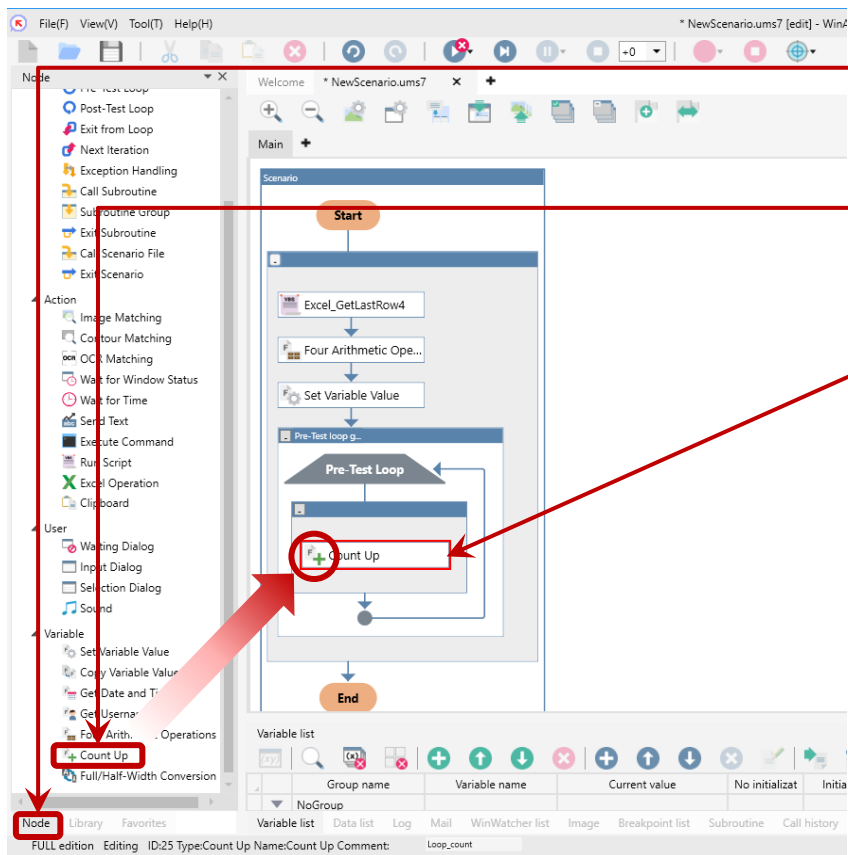
4 Click the radio button of [Number of iterations] and select the 'Loop_count.'

5 Click the [Update] button.

6

Changing processes depending on conditions

6-3 Loop processing



6 Click the [Node] tab.

7 Drag the 'Count Up' node and drop it into the scenario edit area.

8 Double-click the placed node. (Displaying the property)

6

Changing processes depending on conditions

6-3 Loop processing

The screenshot shows a web form titled "Count Up". It contains the following elements:

- Name:** A text input field containing "Count Up".
- Comment:** A text input field.
- Result:** A dropdown menu currently showing "Row".
- Additional value:** A numeric input field with a spinner, currently set to "1".
- Buttons:** "Update" and "Restore" buttons at the bottom.

Red boxes and arrows highlight specific parts of the form for instructional purposes:

- A red box around the "Result" dropdown is pointed to by an arrow from step 9.
- A red box around the "Additional value" spinner is pointed to by an arrow from step 10.
- A red box around the "Update" button is pointed to by an arrow from step 11.

9 For [Result], select 'Row.'

10 For [Additional value], set "1."

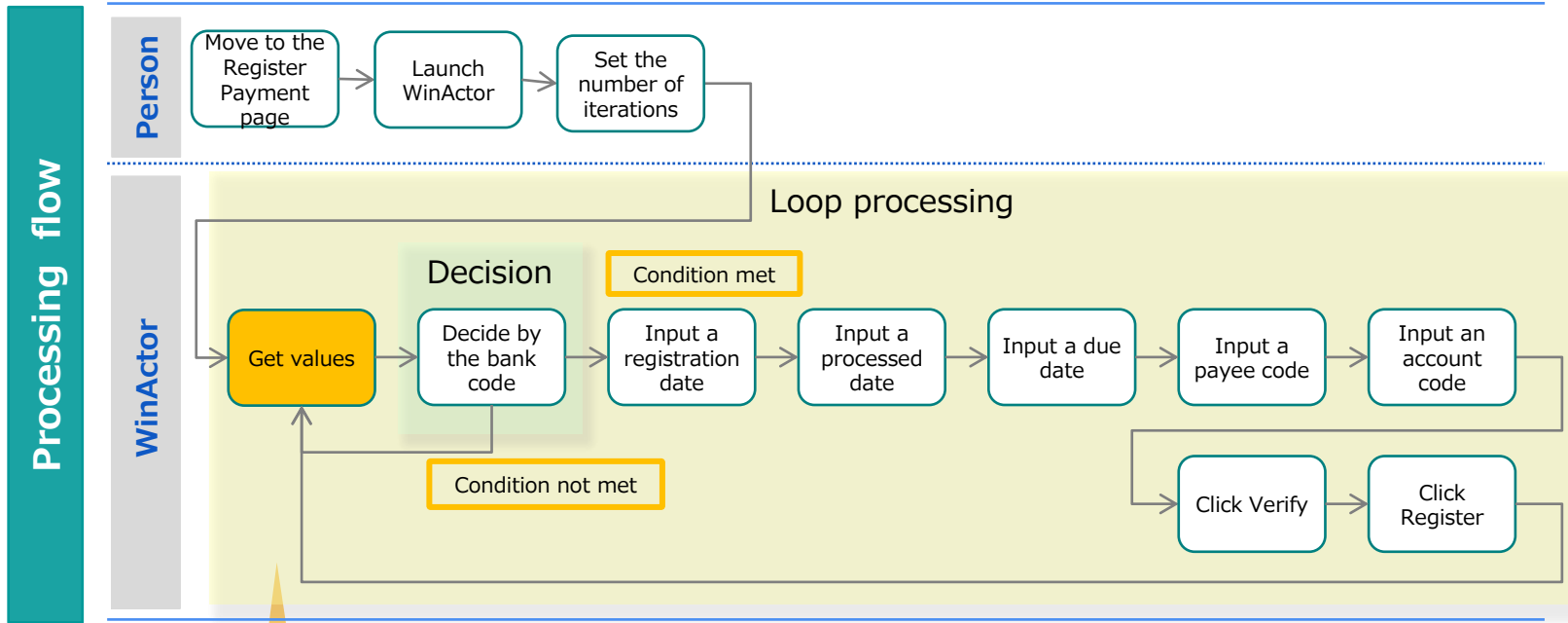
11 Click the [Update] button.

6

Changing processes depending on conditions



"From here, we will create a scenario for the following operation."



6-4

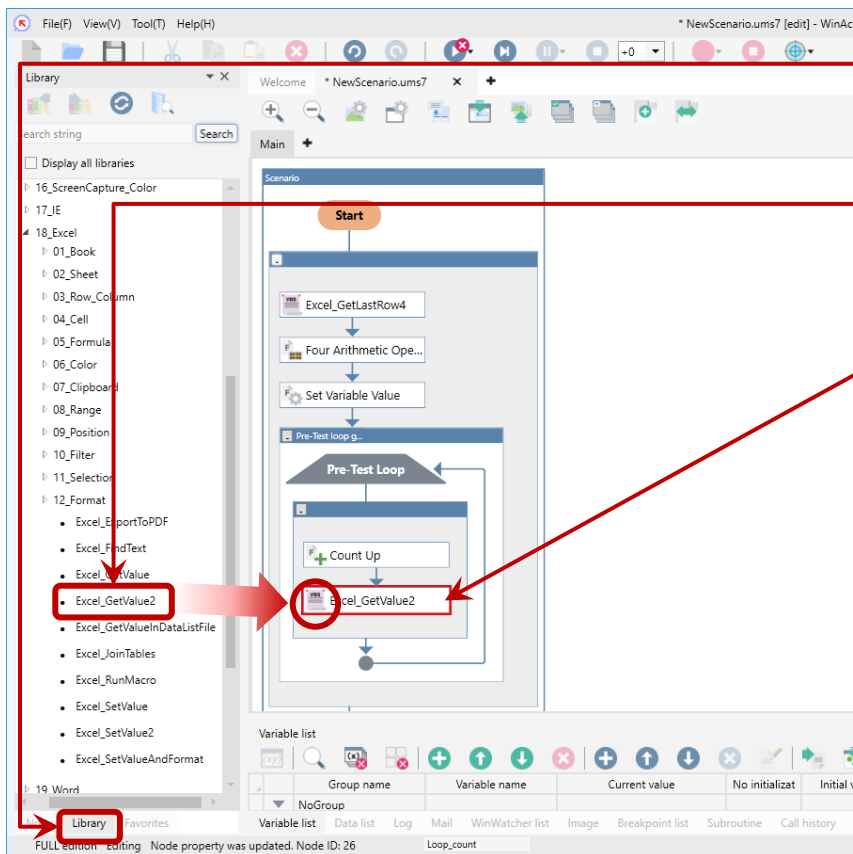
Getting values

6

Changing processes depending on conditions

6-4

Getting values



1 Click the [Library] tab.

2 Drag the 'Excel_GetValue2' library and drop it into the scenario edit area.

3 Double-click the placed library. (Displaying the property)

6

Changing processes depending on conditions

6-4

Getting values

Run Script

Name: Excel_GetValue2

Comment:

Settings Script Annotation Version

"text": obtains a displayed text of the cell. Select this to get a formatted text such as a date or time.

"Storage_dest_variable": Specify a variable to store the obtained value.

File_name: Value=> C:\temp\10_Practice06_Paym

Sheet_name: Value=> Sheet1

Cell(row): Row

Cell(column): Value=> C

Type: value

Storage_dest_variable: Due_date

Update Restore

4

Drag and drop "10_Practice06_Payment_Registration_Book.xlsx" into [File_name], and enter "Value=>Sheet1" for [Sheet_name], "Row" for [Cell(row)], "Value=>C" for [Cell(column)], 'value' for [Type], and "Due_date" for [Storage_dest_variable].

5

Click the [Update] button. If the variable confirmation dialog appears, click [Yes].

The point here is to set "Row" variable for [Cell(row)]. "Row" is incremented by 1 each time it is repeated, so the row number increases by 1 each time it is repeated.

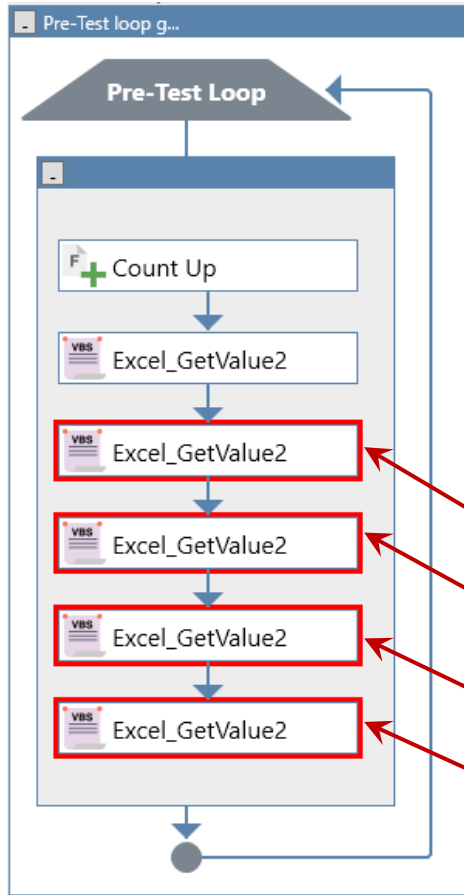


6

Changing processes depending on conditions

6-4

Getting values



Similar to the settings to get the due date described in the previous two slides, set the libraries to get a bank code, payee code, account code, and payment amount. For [Cell(column)] and [Storage_dest_variable], set them as shown in the table below.

6 Drag and drop "10_Practice06_Payment_Registration_Book.xlsx" into [File_name], and enter "Value=>Sheet1" for [Sheet_name], "Row" for [Cell(row)], 'value' for [Type] in the same way as described in the previous slide.

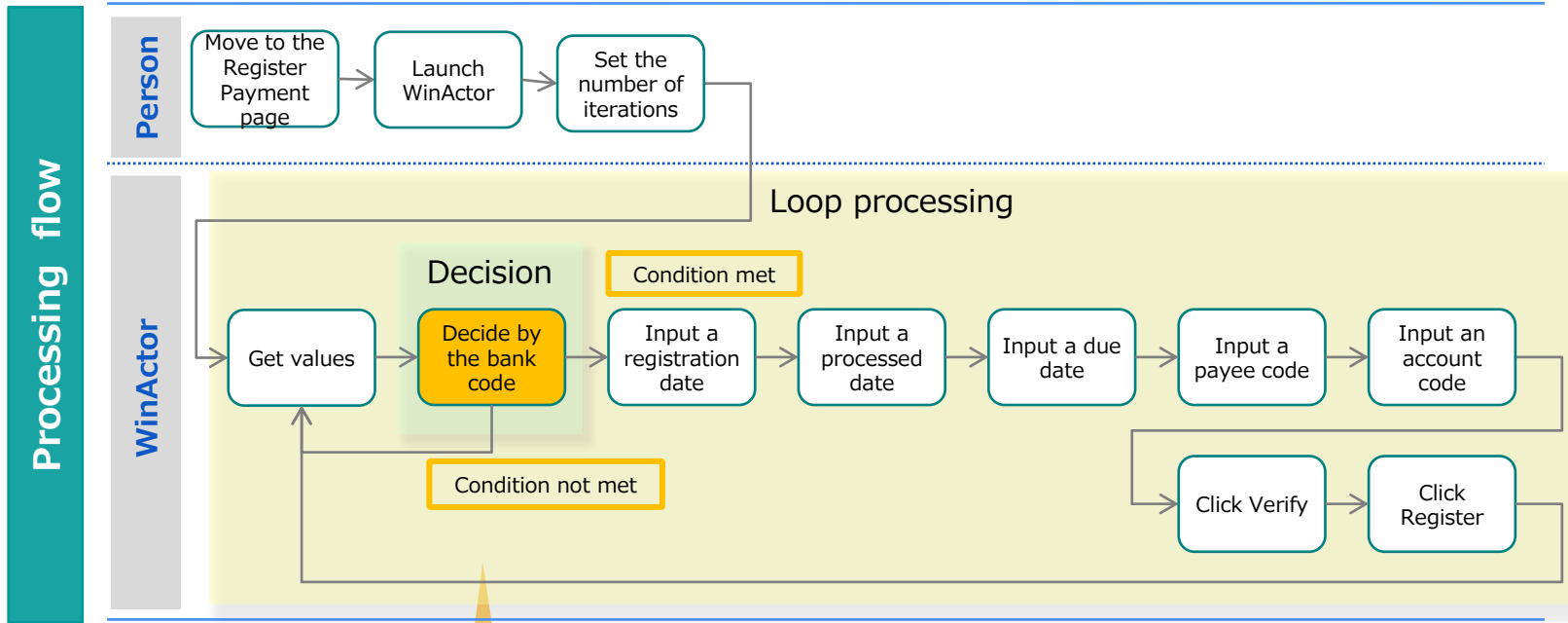
Cell (column)	Storage_dest_variable
D	Bank_code
E	Payee_code
F	Account_code
G	Payment_amount

6

Changing processes depending on conditions



"From here, we will create a scenario for the following operation."



6-5

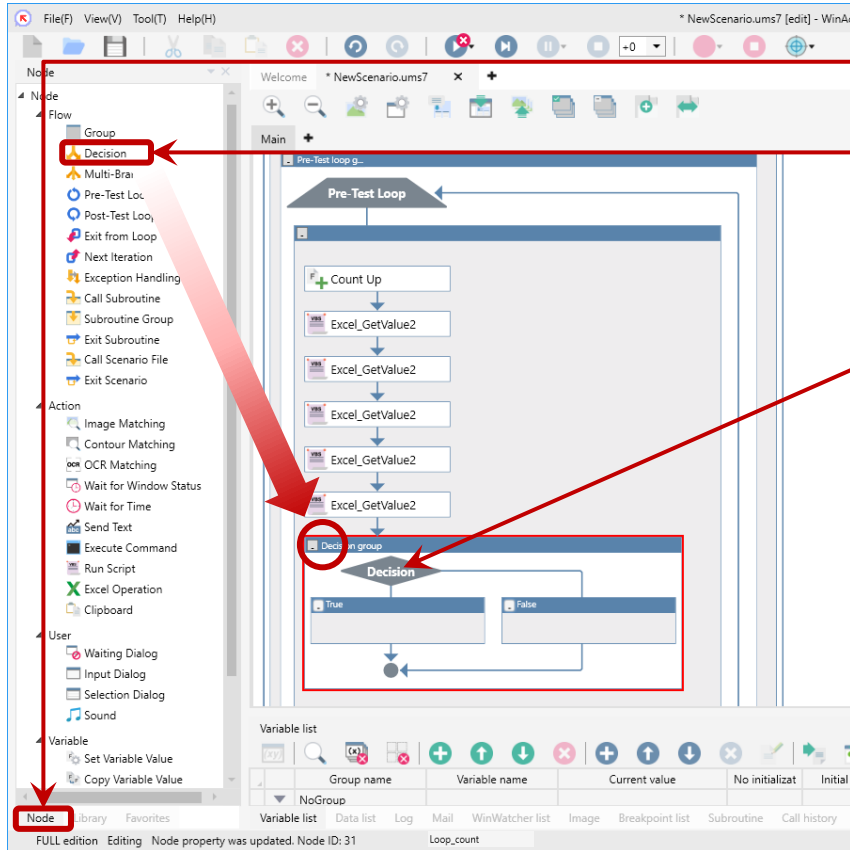
Decision processing

6

Changing processes depending on conditions

6-5

Decision processing



1 Click the [Node] tab.

2 Drag the 'Decision' node and drop it into the scenario edit area.

3 Double-click the placed node. (Displaying the property)

6

Changing processes depending on conditions

6-5 Decision processing

Decision

Name Decision group

Comment

Result	Branch name	Conditional expression	
True	True	[] is equal to []	Edit
False	False		

4 Click [Edit].

Conditional expression

Condition is equal to

5 Select 'AND' from [Condition].

Conditional expression

AND

6 Click [+].

6

Changing processes depending on conditions

6-5 Decision processing

Conditional expression

AND + ×

Condition Bank_code is equal to Value=> NAT0001

Update Restore

7 For the conditional expression, set 'Condition,' "Bank_code," 'is equal to,' and "Value=>NAT0001."

8 Click the [Update] button.

Decision

Name Decision group

Comment

Result	Branch name	Conditional expression	
True	True	[(Bank_code) is equal to	Edit
False	False		

Update Restore

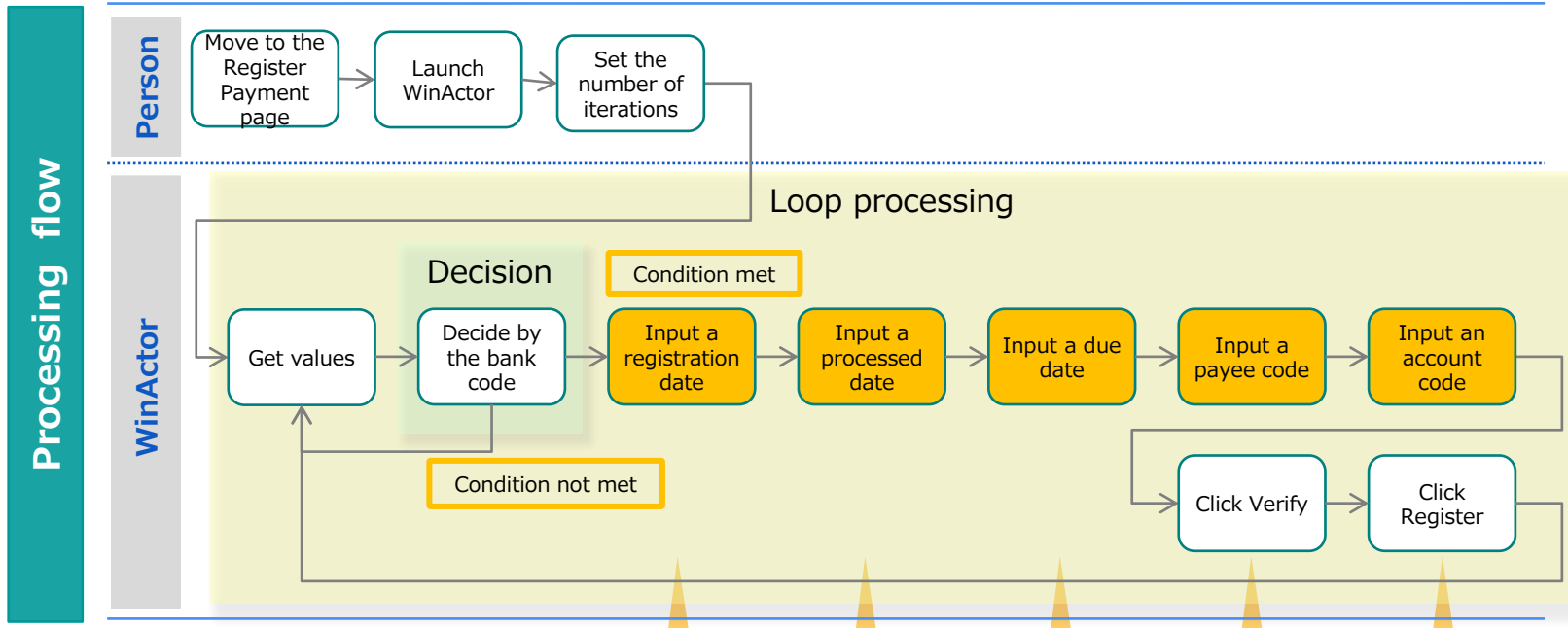
9 Click the [Update] button.

6

Changing processes depending on conditions



"From here, we will create a scenario for the following operations."



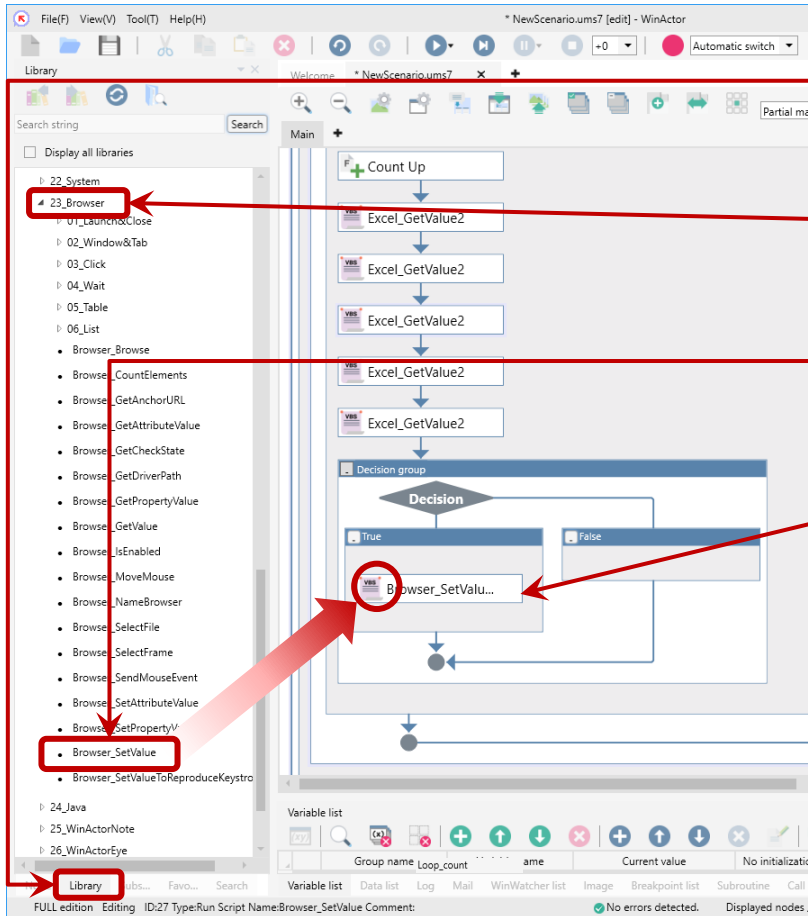
6-6

Inputting values

6

Changing processes depending on conditions

6-6 Inputting values



1 Click the [Library] tab.

2 Double-click '23_Browser' and expand the list of libraries.

3 Drag the 'Browser_SetValue' library and drop it into the scenario edit area.

4 Double-click the placed library. (Displaying the property)

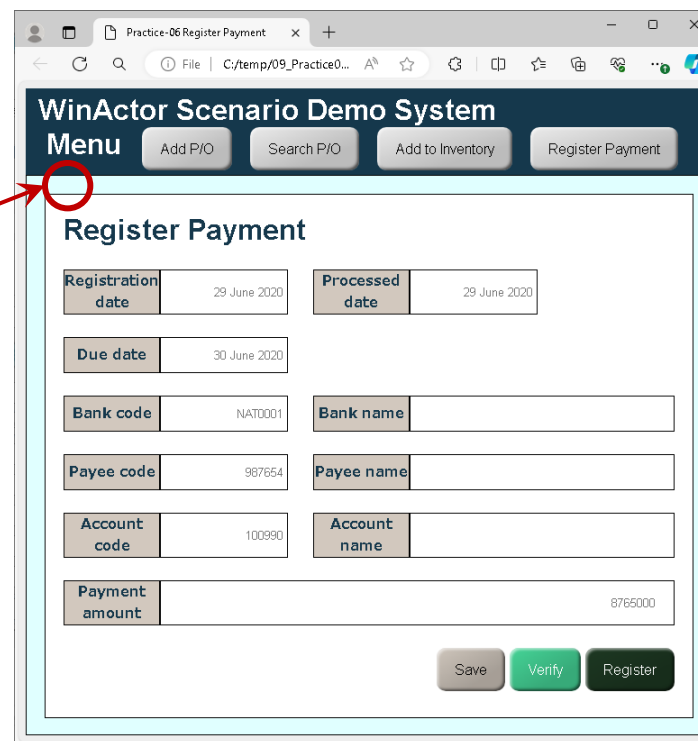
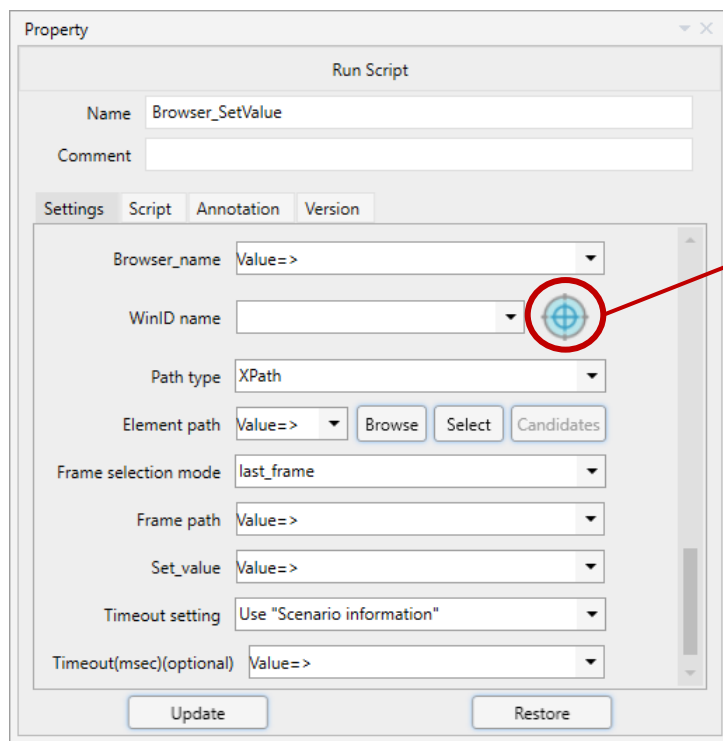
6

Changing processes depending on conditions

6-6 Inputting values

5 Click the blue scope button for [WinID name].

6 Move the mouse cursor on a page you want to input data, and click the page.



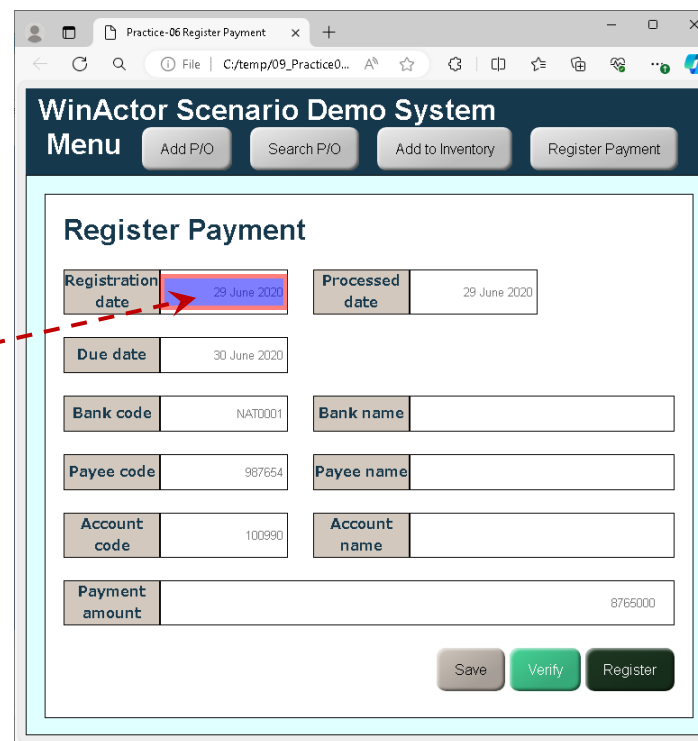
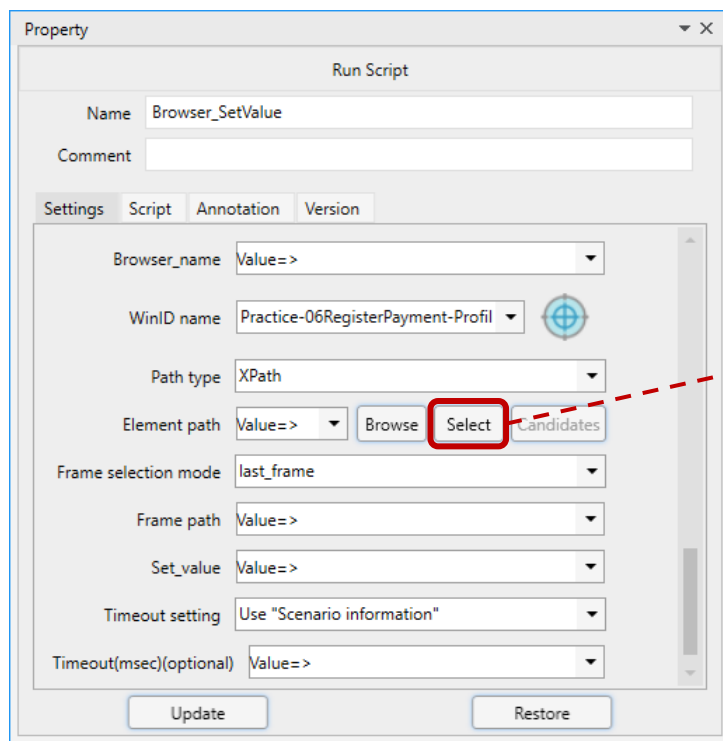
6

Changing processes depending on conditions

6-6 Inputting values

7 Click the [Select] button in [Element path].

8 Move mouse cursor over the "Registration date" text box, wait for the color to change, and click it.



6

Changing processes depending on conditions

6-6

Inputting values

The screenshot shows the 'Property' dialog box for a 'Run Script' action. The 'Name' field is 'Browser_SetValue'. The 'Settings' tab is selected. The 'Browser_name' is 'Value=>'. The 'WinID name' is 'Practice-06RegisterPayment-Profile1-I'. The 'Path type' is 'XPath'. The 'Element path' is 'Value=> //*[@'. The 'Frame selection mode' is 'top_frame'. The 'Frame path' is 'Value=>'. The 'Set_value' field is 'Value=> 20 December 2019'. The 'Timeout setting' is 'Use "Scenario information"'. The 'Timeout(msec)(optional)' is 'Value=>'. The 'Update' button is highlighted with a red box. A red arrow points from the 'Set_value' field to the 'Update' button. Another red arrow points from the 'Update' button to the 'Restore' button.

9

For [Set_value], set "Value=> 20 December 2019."

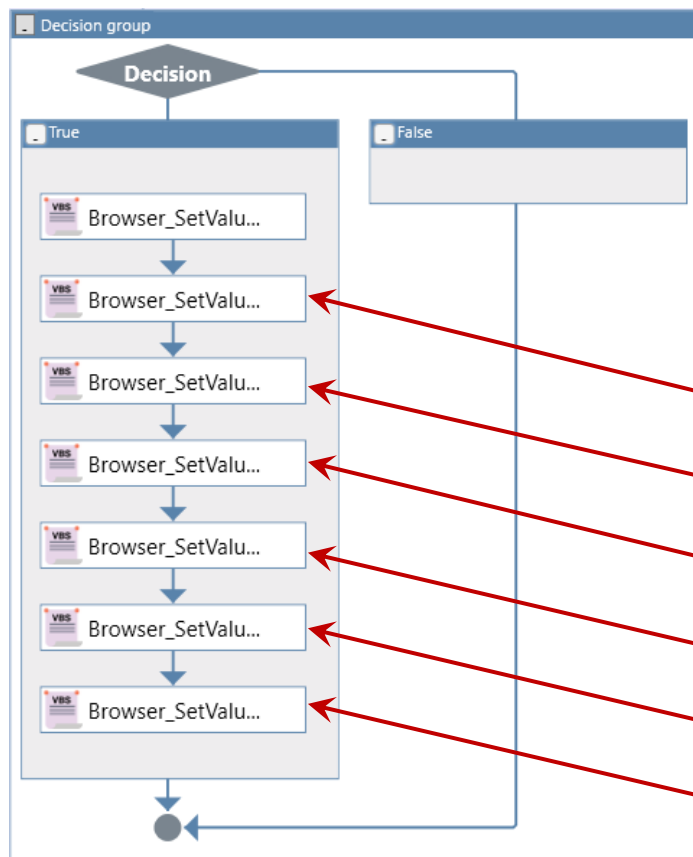
10

Click the [Update] button.

6

Changing processes depending on conditions

6-6 Inputting values



11

Similar to the settings to input the registration date described in the previous four slides, set the libraries to input a processed date, due date, bank code, payee code, account code, and payment amount. For [Element path] and [Set_value], set them by referring to the table below.

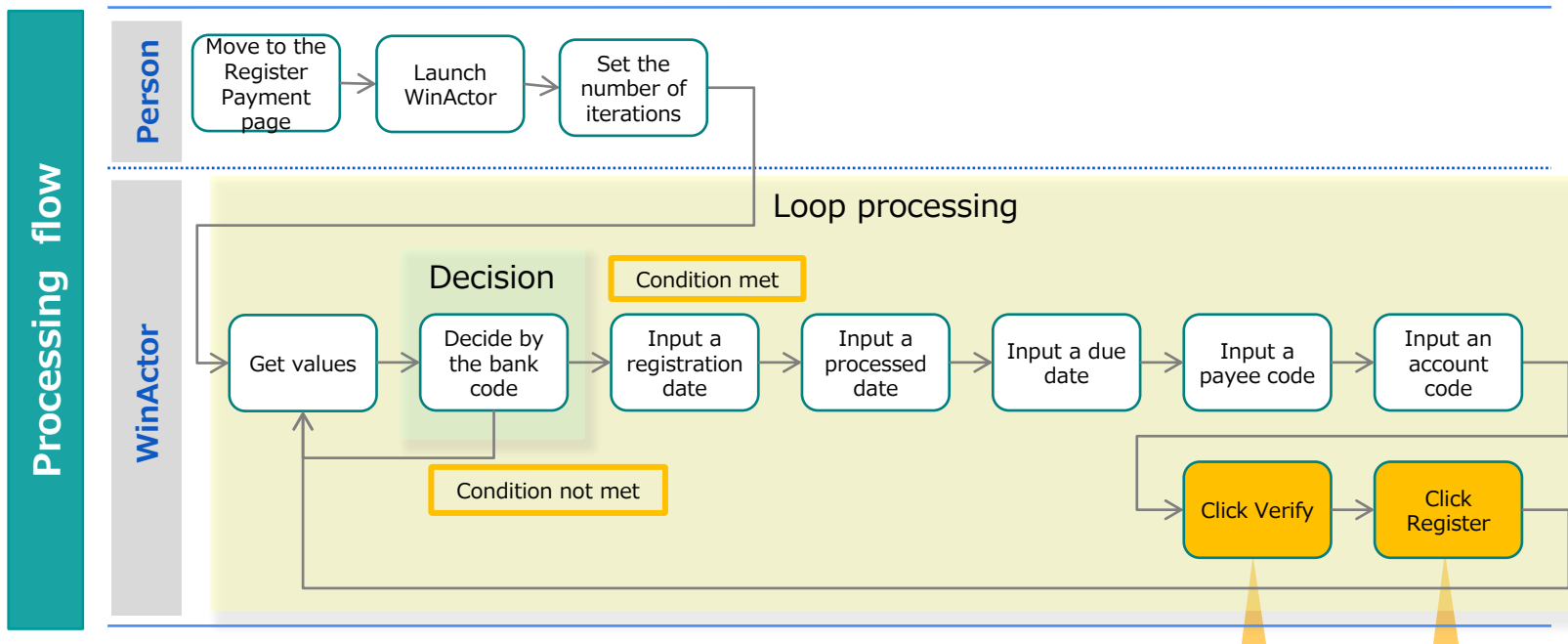
Element path	Set_value
Processed date text box	Value⇒26 December 2019
Due date text box	Due_date
Bank code text box	Bank_code
Payee code text box	Payee_code
Account code text box	Account_code
Payment amount text box	Payment_amount

6

Changing processes depending on conditions



"From here, we will create a scenario for the following operations."



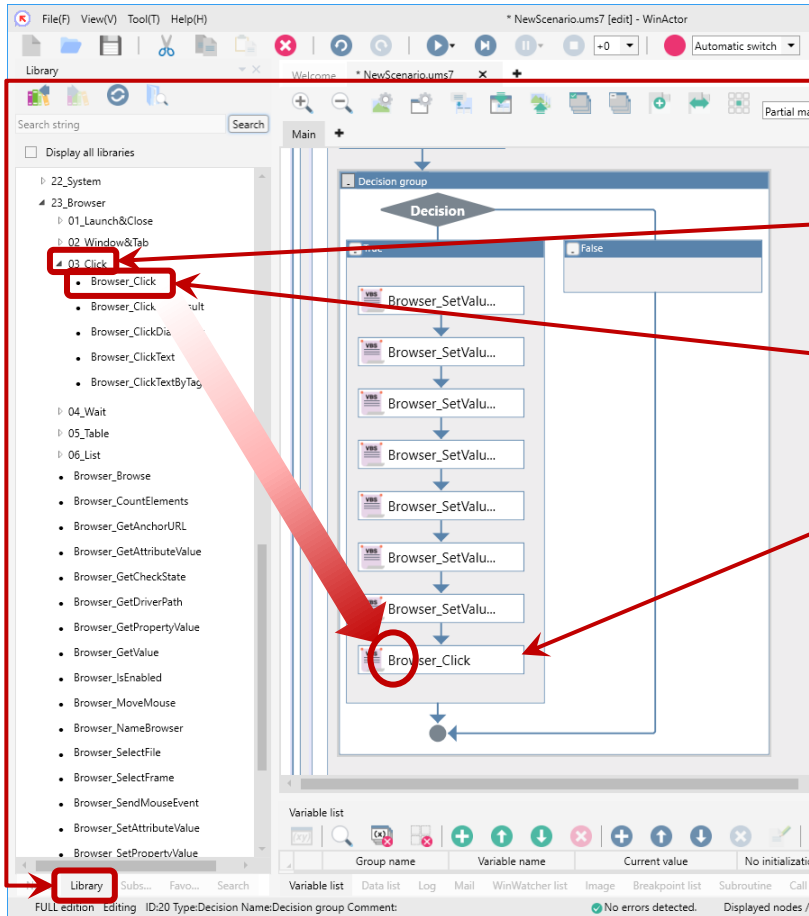
6-7

Registration

6

Changing processes depending on conditions

6-7 Registration



1 Click the [Library] tab.

2 Double-click '03_Click' and expand the list of libraries.

3 Drag the 'Browser_Click' library and drop it into the scenario edit area.

4 Double-click the placed library. (Displaying the property)

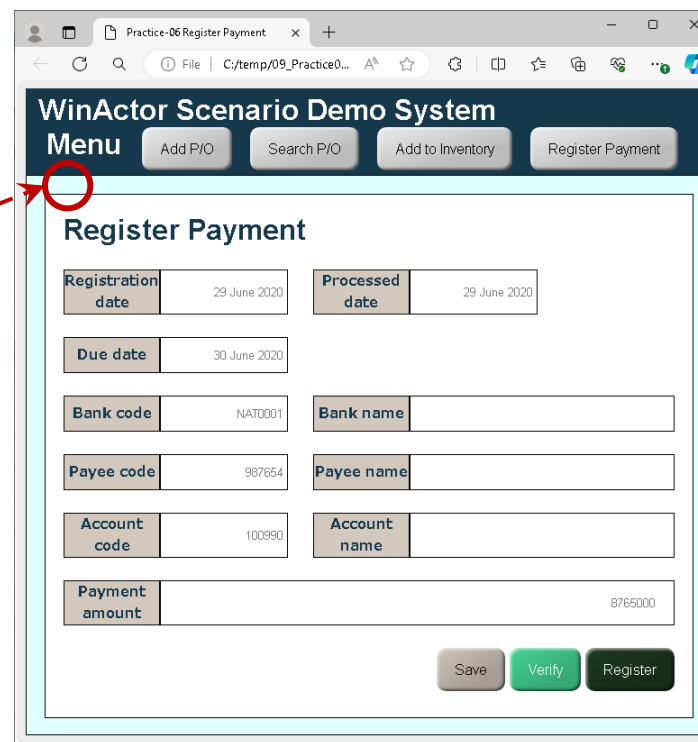
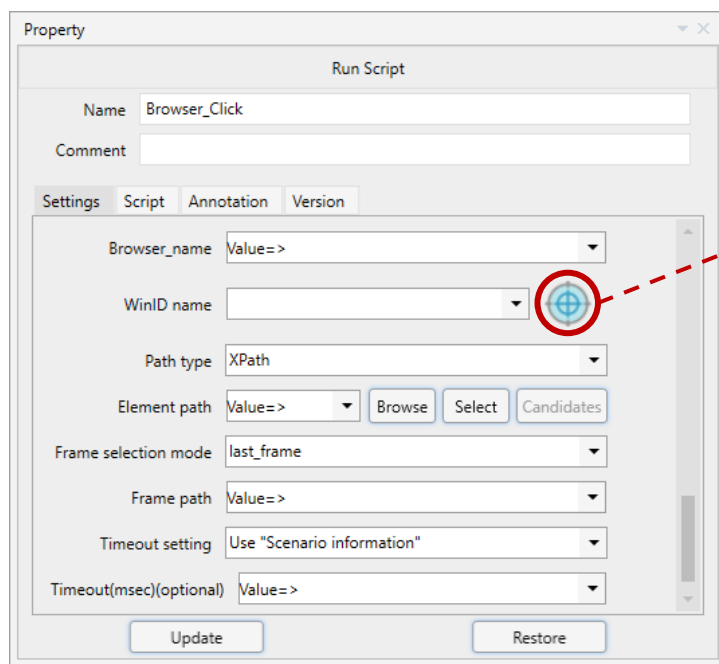
6

Changing processes depending on conditions

6-7 Registration

5 Click the blue scope button for [WinID name].

6 Move the mouse cursor on a page you want to capture, and click the page.



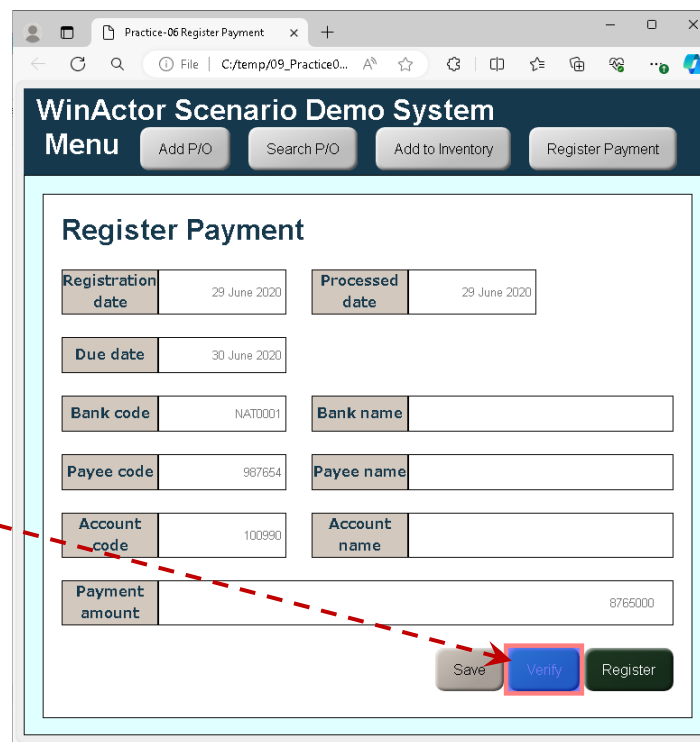
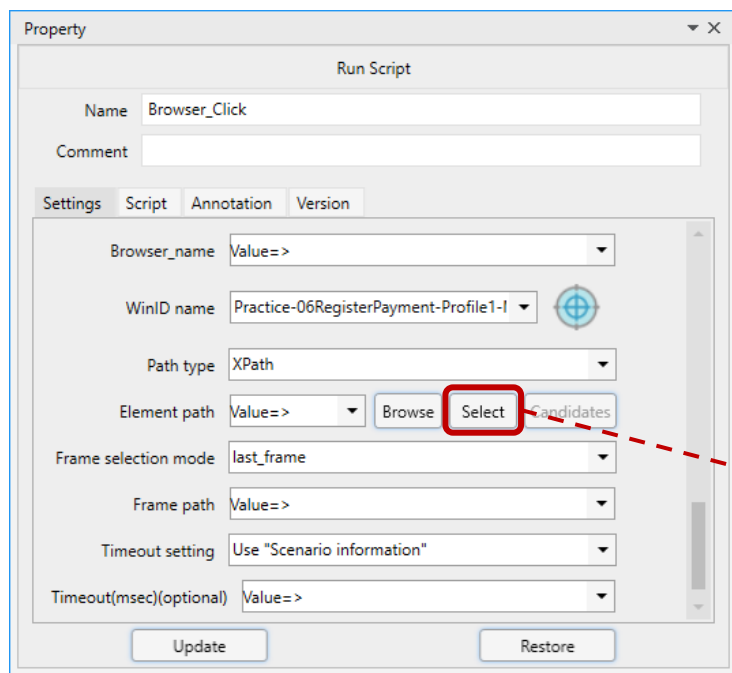
6

Changing processes depending on conditions

6-7 Registration

7 Click the [Select] button in [Element path].

8 Move mouse cursor over the 'Verify' button, wait for the color to change, and click it.



6

Changing processes depending on conditions

6-7 Registration

9 Click the [Update] button.

Property

Run Script

Name Browser_Click

Comment

Settings Script Annotation Version

Browser_name Value=>

WinID name Practice-06RegisterPayment-Profile1-I

Path type XPath

Element path Value=> Browse Select Candidates

Frame selection mode last_frame

Frame path Value=>

Timeout setting Use "Scenario information"

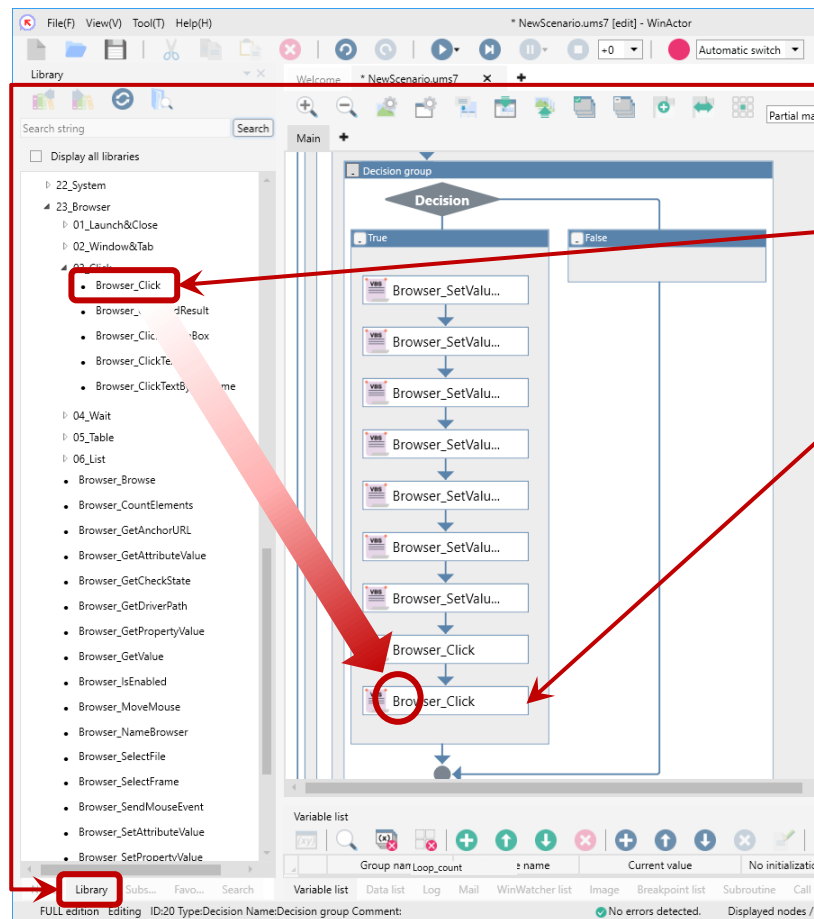
Timeout(msec)(optional) Value=>

Update Restore

6

Changing processes depending on conditions

6-7 Registration



10 Click the [Library] tab.

11 Drag the 'Browser_Click' library and drop it into the scenario edit area.

12 Double-click the placed library. (Displaying the property)

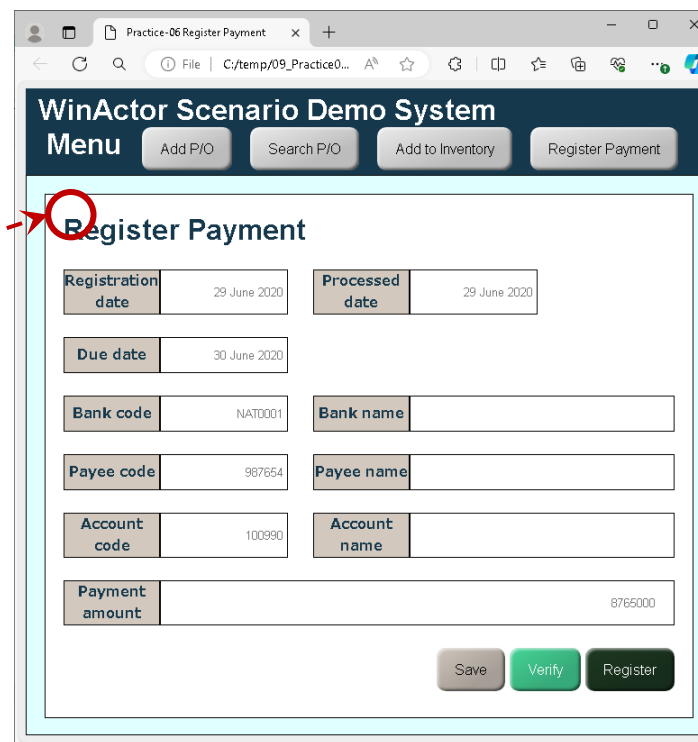
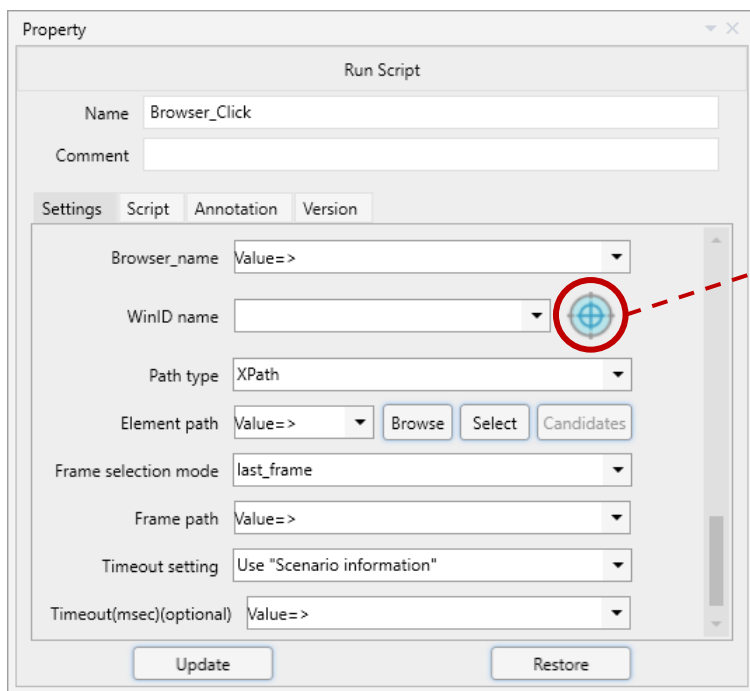
6

Changing processes depending on conditions

6-7 Registration

13 Click the blue scope button for [WinID name].

14 Move the mouse cursor on a page you want to capture, and click the page.



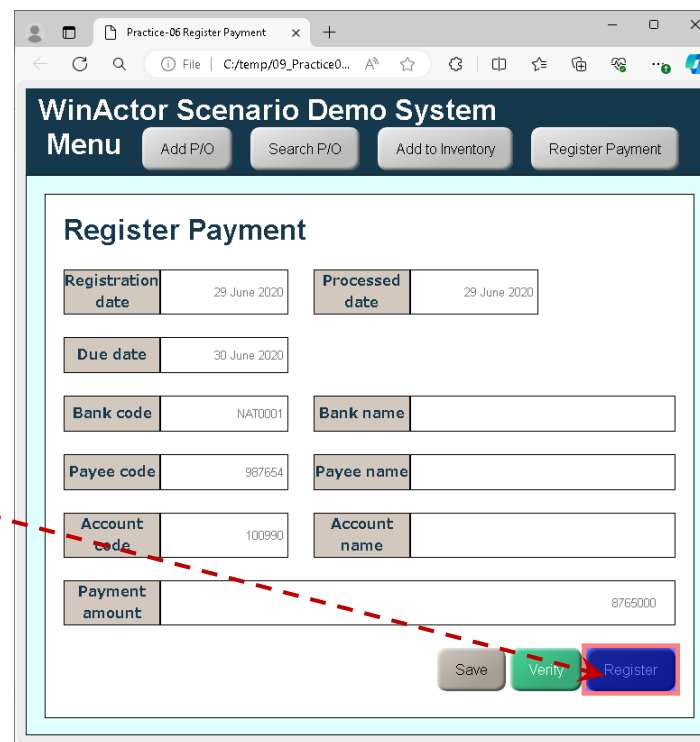
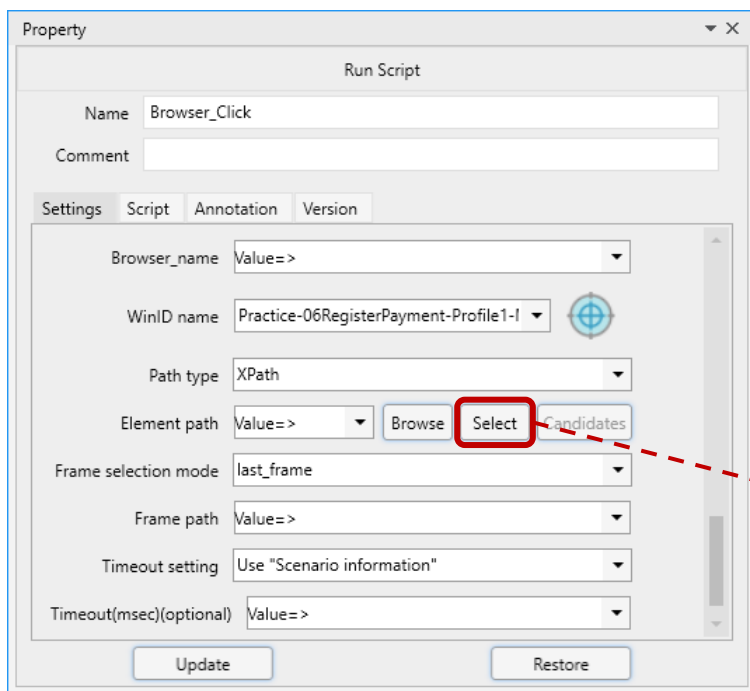
6

Changing processes depending on conditions

6-7 Registration

15 Click the [Select] button in [Element path].

16 Move mouse cursor over the 'Register' button, wait for the color to change, and click it.



6

Changing processes depending on conditions

6-7 Registration

17 Click the [Update] button.

The screenshot shows a 'Property' dialog box for a 'Run Script' action. The 'Settings' tab is selected, displaying various configuration options. The 'Update' button at the bottom left is highlighted with a red rectangle.

Property [X]

Run Script

Name: Browser_Click

Comment:

Settings | Script | Annotation | Version

Browser_name: Value=>

WinID name: Practice-06RegisterPayment-Profile1-I [Target Icon]

Path type: XPath

Element path: Value=> /*[@ [Browse] [Select] [Candidates]

Frame selection mode: top_frame

Frame path: Value=>

Timeout setting: Use "Scenario information"

Timeout(msec)(optional): Value=>

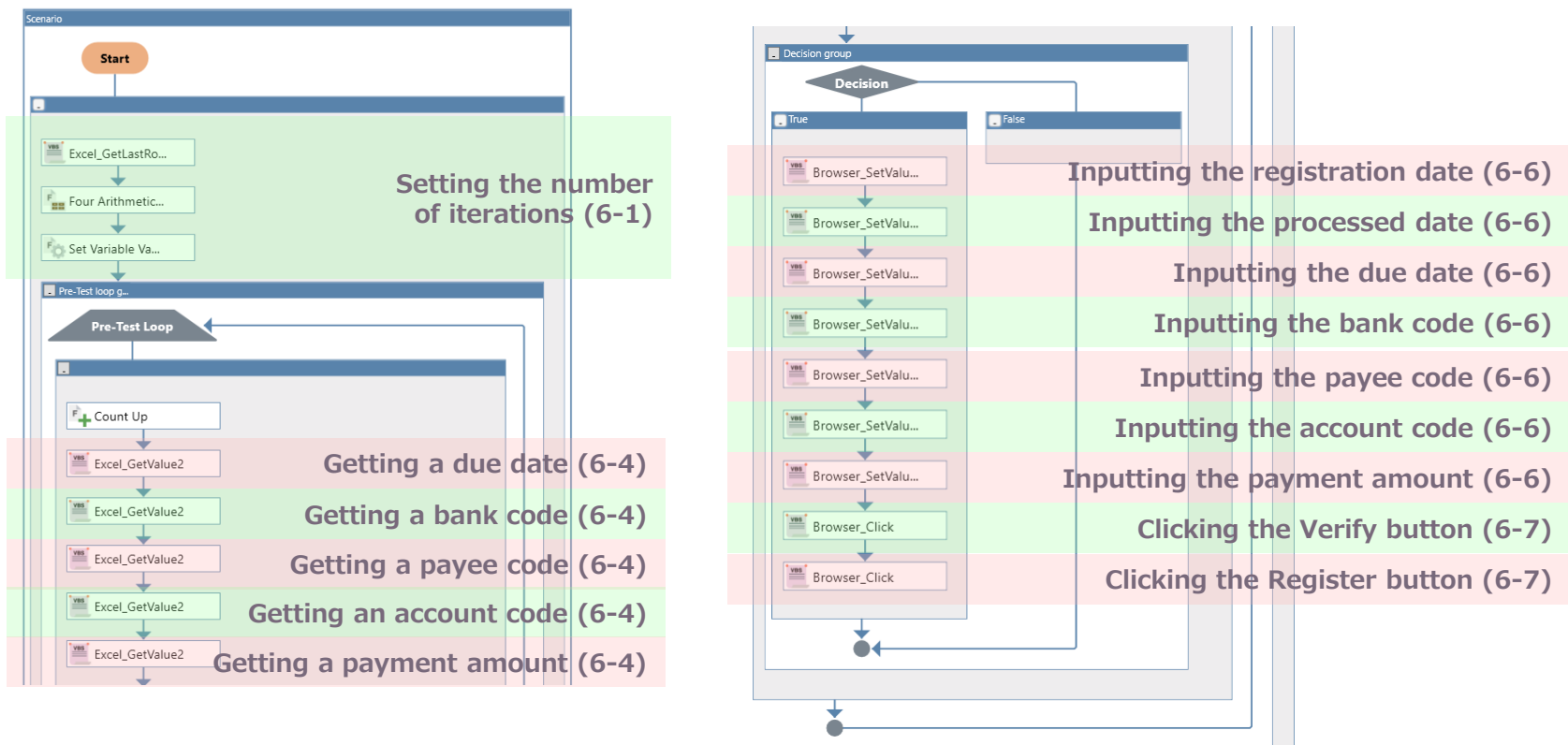
[Update] [Restore]

6

Changing processes depending on conditions

6-8 Checking the entire scenario

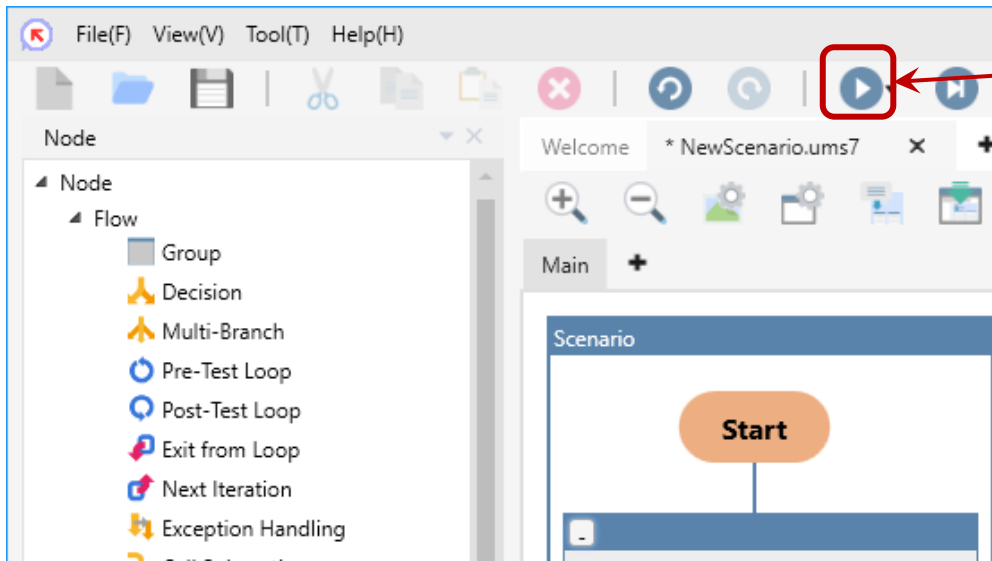
1 Confirm that the created scenario is as follows.



6

Changing processes depending on conditions

6-9 Running the scenario



1 Click the 'Run scenario' button and check if the scenario runs without error.

2 If an error occurs, check the error message and review the settings of the property and the like.

6

Changing processes depending on conditions

6-10 Saving the scenario

1 Click the [File] menu.

2 Click the [Save as] menu.

3 Select a location to save a file for the scenario, enter a filename, and click the [Save] button.



For a scenario that has already been saved, you can use the [Save] menu.



"William, how was your learning in the basics and practice?"



"Thanks to the practice section, I think I can create scenarios that can be used in actual work! Loop processing was easy to understand, and decision processing was very easy to set up."



"That's great! The contents you have learned in the basics and practice sections cover the foundation of WinActor, so be sure to understand them clearly! From now on, use them in actual work and also try to use other functions!"

"The following are URLs of webpages that will be helpful for scenario creation. Take full advantage of them."

Description	Title	URL
WinActor official website	WinActor	https://winactor.biz/en/
Providing free sample scenarios	Sample Scenarios	https://winactor.biz/en/ (Preparing for delivery in English version)
Providing libraries that can be incorporated into a scenario	Petit Libraries	https://winactor.biz/library/ (Available only for Japanese version)
Certification training	Certification training for RPA tool "WinActor®"	https://winactor.biz/winactor_certification.html (Available only for Japanese version)
Q&A	WinActor FAQ	http://www.matchcontact.net/winactor_en/



- Advanced -



1

Scenario creation - Advanced prologue -

Case

Recently, it seems that employees other than William are also using WinActor to automate their work.

In such circumstances, it has become necessary to fix the scenarios created by other employees and to deal with problems.

This time, let's learn how to create a scenario that is easy to modify and how to deal with problems, which is a little advanced from scenario creation.



William Lee

A second-year employee of the procurement department.
Now he is quite good at using WinActor and can teach others.



Amanda Nessa

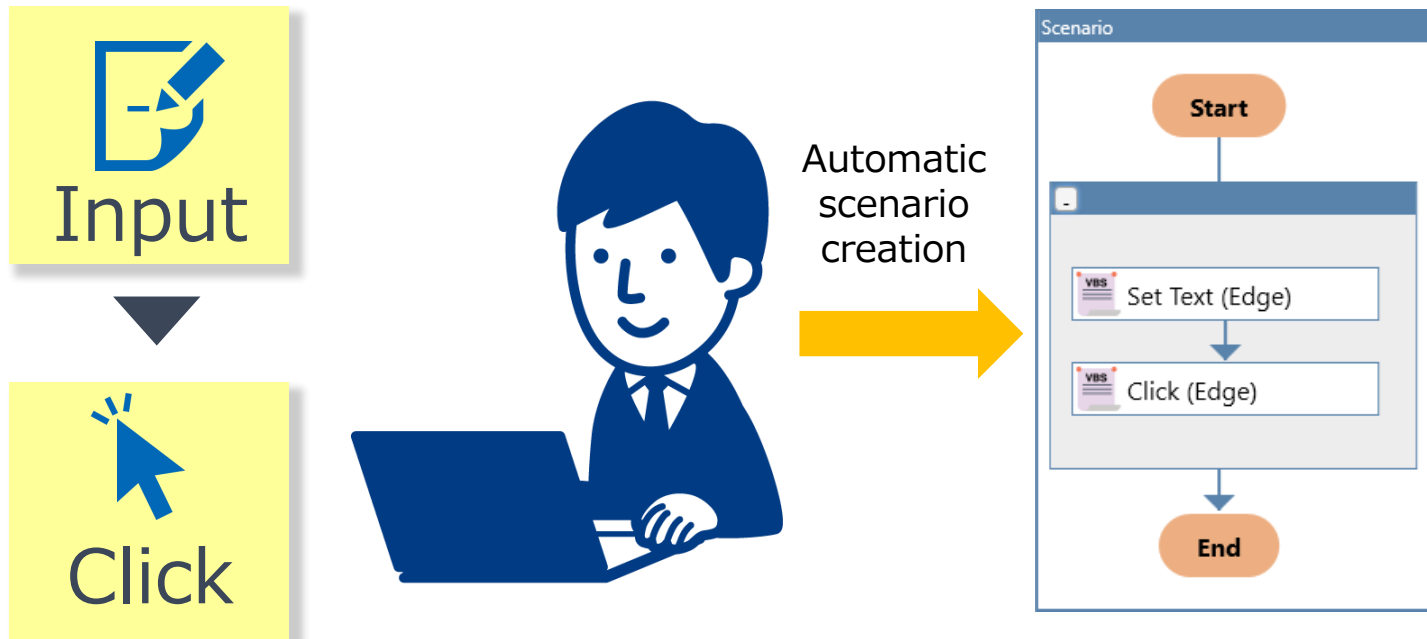
A first-year employee of the procurement department. Following William, she started using WinActor.



Maria Rodriguez

A senior employee in another department who is already using WinActor.
She has been supporting William since the basics and practice.

Advanced



**Scenario creation using
automatic recording**

2

Scenario creation - Advanced 1 -

Case

Amanda recently started using WinActor, and it seems that she is having a hard time creating a scenario.

William came over to see her situation.



"Hi, Amanda. How is your scenario creation going?"



"Well, it's quite difficult... I know what I want to do, but there are many nodes and libraries, and I don't know which one I should use."



"Then, let's try to use a function called automatic recording that automatically creates a scenario. I've never used it before, so let's learn together!"



"Yes, William. You used to create a scenario using nodes and libraries from the beginning. This time, let's use a function called automatic recording that automatically creates a scenario from human operations."

2

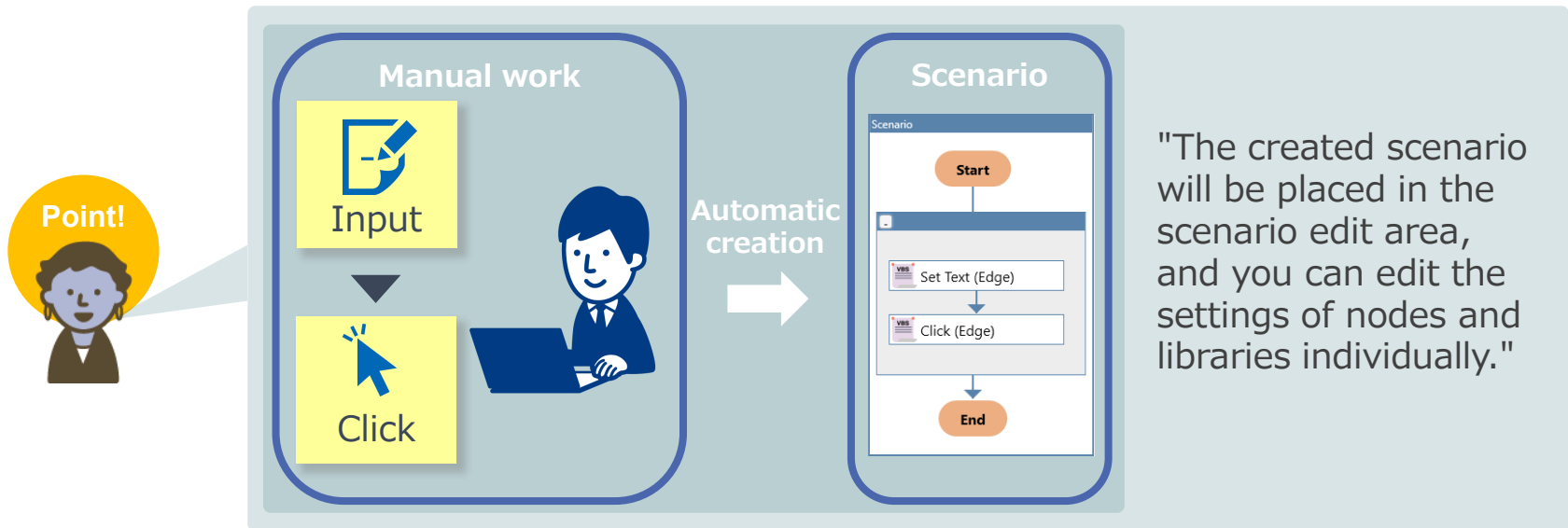
Scenario creation - Advanced 1 -



"So, what is automatic recording exactly?"



"Automatic recording is a **function that automatically records user operations and creates its scenario**. You can create a scenario just by operating the mouse and keyboard as you do every day."

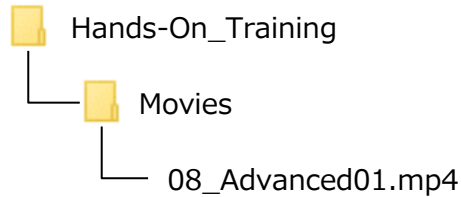


2

Scenario creation - Advanced 1 -



"Let's watch the actual movement of automatic recording. Double-click the file named 08_Advanced01.mp4 in the following folder to play it."



"Automatic recording is a function that can improve the efficiency of scenario creation. However, it is not possible to create loop processing or branch processing, so it's a good idea to **use a scenario created by automatic recording as an aid in scenario creation**, such as using it as a base of or a part of a scenario."

Tips

Automatic recording errors



Conditions where automatic recording fails

Automatic recording could fail, where a vacant 'Group' node is created, in some conditions.

Although such conditions and countermeasures are listed up below, you may need to consult a professional person who might be in charge of managing your computer because these conditions may be too difficult to solve.

Cond. 1 : The recording application is launched with the administrator permissions.

Countermeasure : Launch the application with a nonadministrator permissions if possible, or launch WinActor with the administrator permissions.

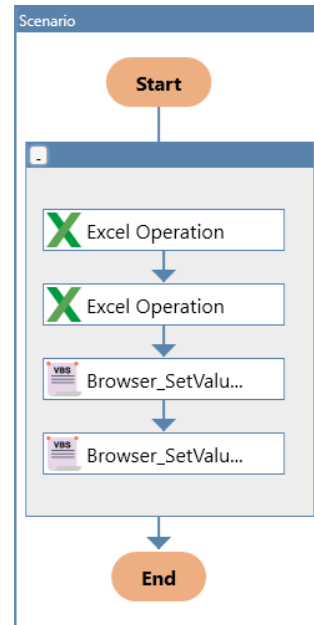
Cond. 2 : The recording application is in the protected mode.

Countermeasure : The IE mode in Edge or the Acrobat Reader can be in this mode. Disable the protected mode on the settings.

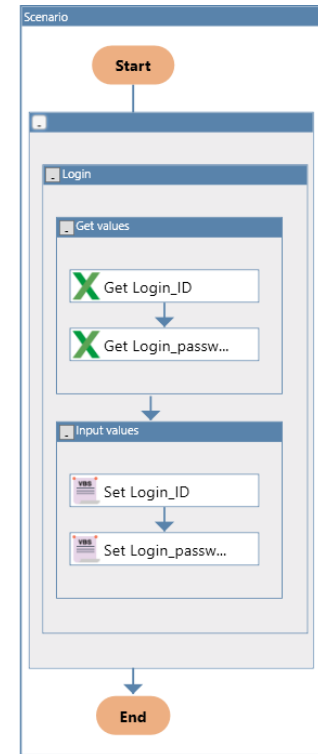
Cond. 3 : The recording application is launched on a remote desktop.

Countermeasure : The scenario cannot be created with automatic recording. Use the 'Emulate' and 'Image Matching' nodes.

Advanced



Modify



How to create a scenario that is easy to modify

3

Scenario creation - Advanced 2 -

Case

The scenario made by Amanda doesn't work for some reason. William decided to help her.



"Let me see your scenario... well, it's quite a mess and hard to understand..."



"I can understand... but do you think it's hard to understand?"



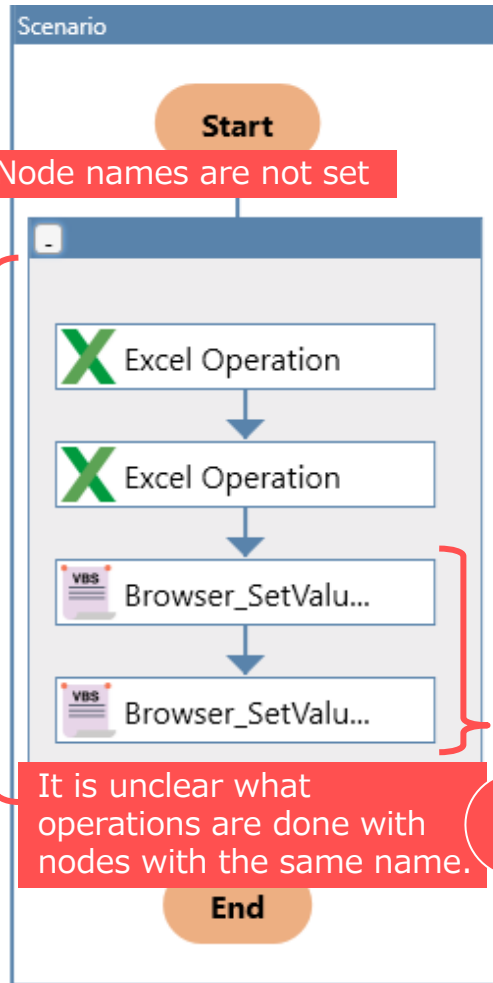
"I want to help you, but for that, the scenario needs to be a little easier to understand. This 'easy to understand' is something you should keep in mind when creating a scenario, which is something I say to myself."



"To create a scenario, it is important to make full use of nodes and libraries, but there are many points to be aware of, such as making it easier for others to understand and making it easy to modify later. Let's learn how to do that."

3

Scenario creation - Advanced 2 -



"This is a bit hard to understand. If you don't open each property, you don't know what it is for..."



"Yeah, I think you are right..."



"① It's hard to understand which node is doing what. ② It's also hard to understand that the nodes with the same name continue. The person who created it may not notice, but this can be a little more user-friendly scenario. Let's modify it to the following form!"

3

Scenario creation - Advanced 2 -

Before

1 Node names are not set

X Excel Operation

X Excel Operation

VBS Browser_SetValu...

VBS Browser_SetValu...

2 It is unclear what operations are done with nodes with the same name.

End



After

1 Node names are set

X Get Login_ID

X Get Login_passw...

VBS Set Login_ID

VBS Set Login_passw...

2 Nodes are grouped together to make it clear what operations are done.

3

Scenario creation - Advanced 2 -



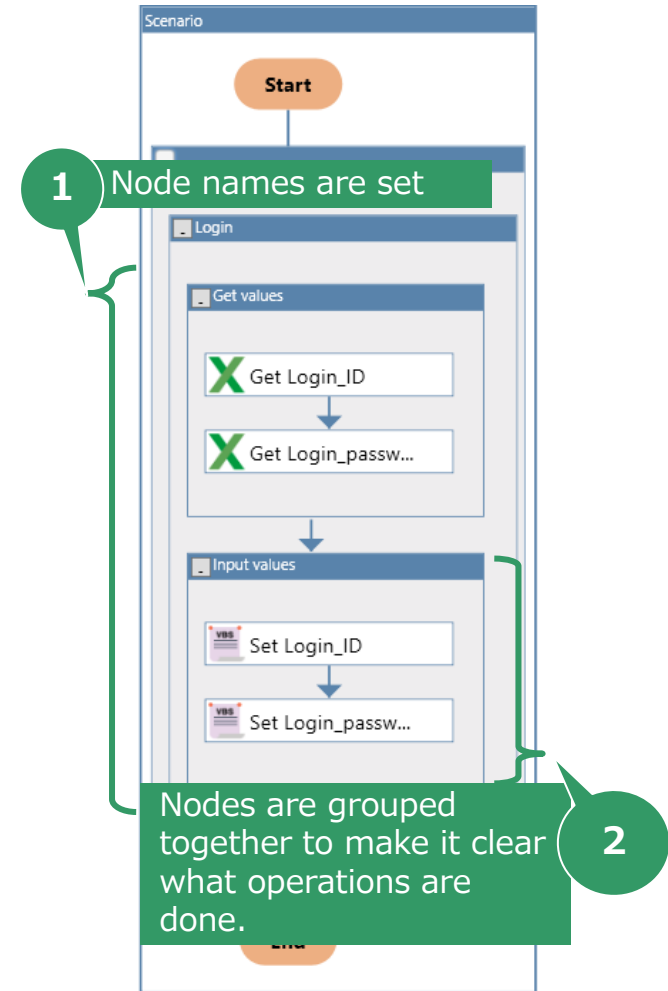
"Ah! It's easier to understand!"



"Compared to the previous scenario, it's much clearer. It's easy to understand even for me who hasn't created this scenario!"



"It became much easier to understand! That's because ① the node names are changed to represent the operations, and ② the nodes are grouped by what they do. I will explain how to create such a scenario from the next slide, so let's learn it together!"



3

Scenario creation - Advanced 2 -



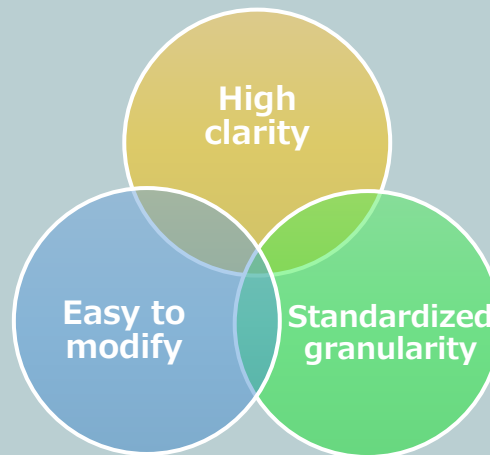
"What are the points for an easy-to-understand scenario?"



"There are several, and examples are including **high clarity**, **easy to modify**, and **standardized granularity** (finess/roughness of description). This is generally called **high maintainability**."



Example of points for an easy-to-understand scenario



"A scenario with high maintainability has the following advantages."

- It will be easier to explain to others and possible to be shared.
- It can be modified quickly in case of trouble.
- The existing scenario nodes and libraries can be reused when automating a new task.



- Column -

What is maintainability?

Maintainability refers to the following:

- Ease of finding and correcting errors
- Ease of adding and modifying functionalities
- Ease of keeping things work correctly

Originally, it came from the meaning of "maintenance," that is to maintain a normal state. In the case of WinActor, the ease of finding and correcting errors in a scenario, ease of adding functions, and ease of understanding a scenario are the main focus. In other words, it is easy to maintain.

Various problems may occur when you start running a scenario. By improving maintainability, it is possible to solve problems efficiently without stress.



"What exactly should I do to create a highly maintainable scenario?"



"First, it is important to decide rules when creating a scenario. By deciding rules, you can have the following merits."

1. By determining rules (common understanding),
2. The granularity of words used in scenarios and documents will be standardized, and
3. Maintainability will be improved.



"This time, I will explain the following basic rules."

1. Decide the naming rules for the scenario storage location and scenario name
2. Change the name of the node/library to a name that represents its operation
3. Group nodes/libraries
4. Use variables and external files to set values in node properties (Don't enter values directly)

"I will provide the rule template at the end of the explanation, so let's make your own rules based on the template! "

3

Scenario creation - Advanced 2 -

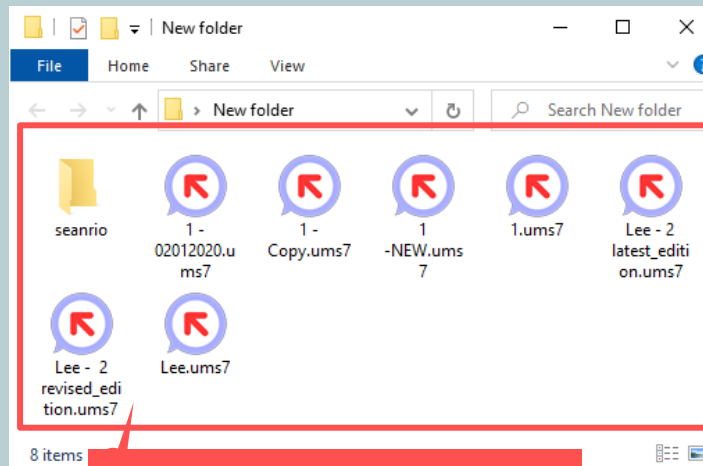


"1. Decide the naming rules for the scenario storage location and scenario name is the basics of improving maintainability."

Point!



"Not only in scenarios, when working with multiple people, it is inefficient if the filename, folder name, and file storage locations are not standardized. As for WinActor, **you can create a scenario more efficiently by setting the naming rules for the scenario storage location and scenario name.**"



Names are not standardized

"In addition to efficiency, **it is easier to prevent mistakes such as accidentally modifying other scenarios or creating scenarios with the same operation.**"

3

Scenario creation - Advanced 2 -

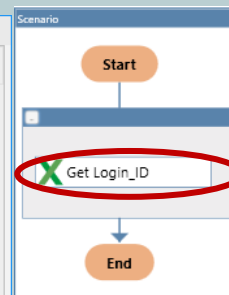


"For 2. Change the name of the node/library to a name that represents its operation, follow the procedure below."

Point!



"Double-click the target node and change [Name] property to a name that represents the operation. It updates the node name in the scenario edit area."



"You may use multiple same nodes such as Excel Operation in one scenario. In such a case, you can **change the node name to improve the readability in the scenario edit area.**"

3

Scenario creation - Advanced 2 -

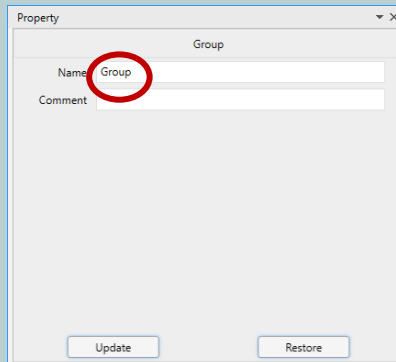
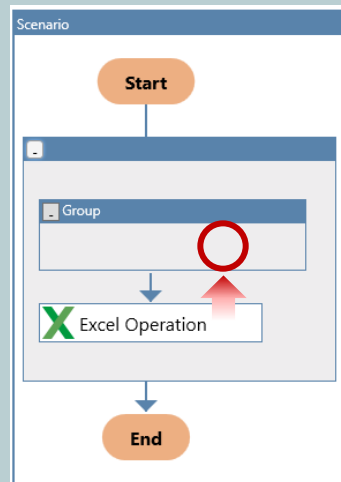


"For 3. Group nodes/libraries, follow the procedure below."

Point!



"After dragging the Group node into the scenario, collect the nodes of the same operation into the Group node. By doing this, **you can group nodes for each process such as login, and the readability will be improved.**"



"As with nodes and libraries, you can change the Group name in the scenario edit area by changing the [Name] in the property."

3

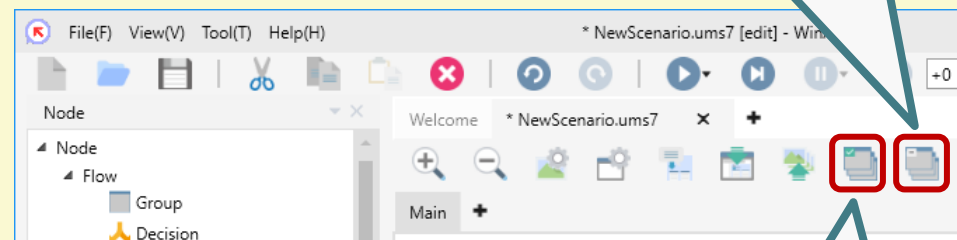
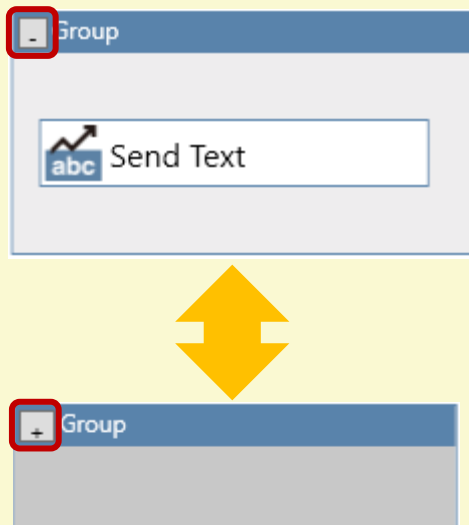
Scenario creation - Advanced 2 -

Tips Close and open groups

Multiple nodes and libraries can be displayed compactly by closing groups.



A group, which holds nodes and libraries, can be closed or opened with the left-upper button to be displayed compactly or to be displayed in original size respectively. Use the 'Close all groups' and the 'Open all groups' buttons to display a scenario in the readable state when a lot of groups have been created in it.



3

Scenario creation - Advanced 2 -



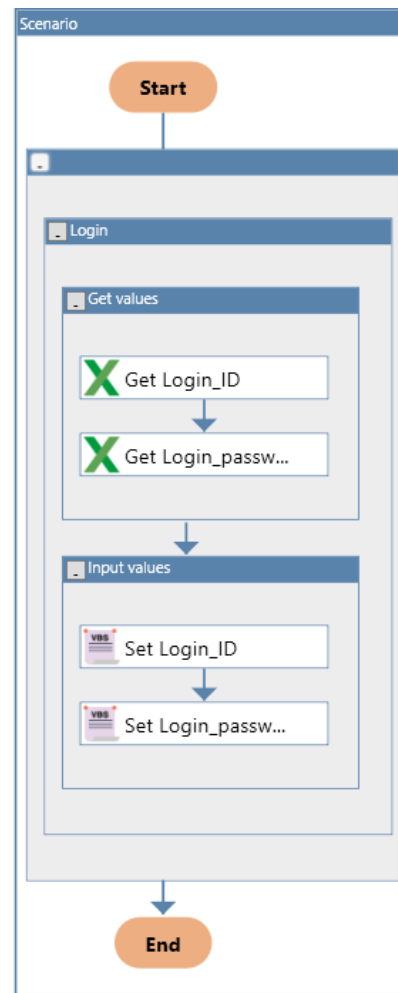
"Applying the rules so far to the previous scenario, it became an easy-to-understand scenario."



"If we can see the operations at a glance, we don't need to open each property to check the settings."



"The readability of the scenario has been improved by renaming and grouping nodes! Next, let's improve the ease of modification!"



3

Scenario creation - Advanced 2 -



"I will explain in detail about 4. *Use variables and external files to set values in node properties.*"



"In the scenarios created so far, you have set the login ID and the location of the input file directly in the node and library properties. With this method, if the login ID or the location of the file is changed, **you need to open the scenario and correct it one by one manually. It's not a very maintainable scenario, is it?**"

Source

Filename Value=> C:\temp\04_Basics05_Purchase_1

Sheet name Value=> Sheet1

Cell position Input variable name or value

Values are entered directly

"Try to create a scenario so that **you only need to modify the settings file without modifying the scenario itself even if the value is changed!**"

3

Scenario creation - Advanced 2 -



"Specifically, create a settings file as shown in the figure below. Here, we use the operation to input a login ID as an example. First, write the information whose values are likely to be modified in the Excel file as a settings file. The important thing here is to write the actual value to be used in the scenario and its meaning."

Point!



"By creating it as a separate file from the scenario in this way, you can **prevent the mistake of accidentally modifying other settings when modifying the scenario.**"

Setting				
Number	Item	Meaning	Value to be read in scenario	Variable
1	Login ID	ID for login to system	User01	Login_ID
2	Login password	Password for login to system	Password	Login_password
3	Folder for Purchase Order Book	Folder for Purchase Order Book used in registration	C:\temp\04_Basics05_Purchase_Order_Book.xlsx	Purchase_Order_Book_Folder

In the settings file, write a value to be read in the scenario.

"As mentioned in the previous slide, you only need to modify this settings file when modifying the value."

3

Scenario creation - Advanced 2 -

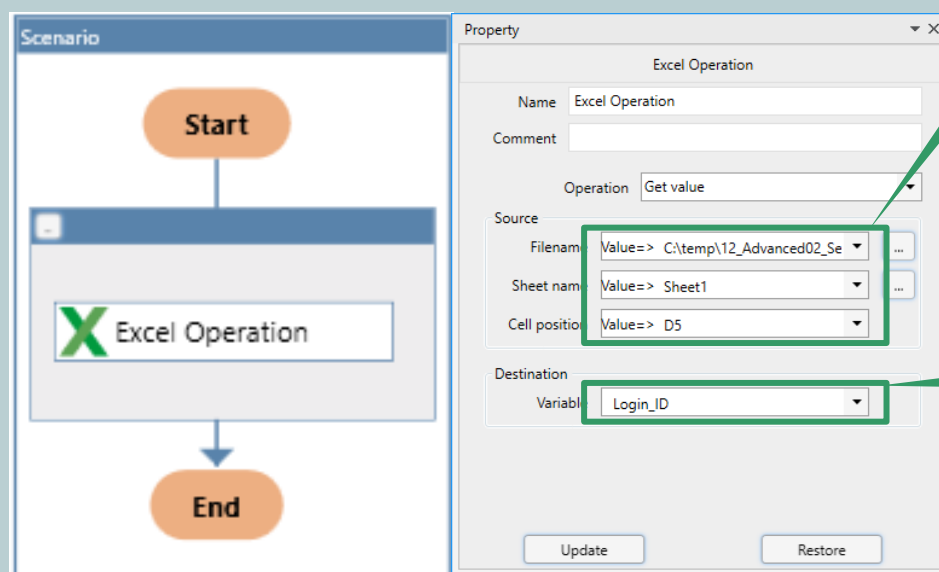


"Next, let's load the created settings file into WinActor! Use the Excel Operation node to read the login ID written in the settings file."

Point!



"Set the property items in the same way as the procedure to load Excel."



Enter the path of the settings file and the sheet name and cell position where the value to be read is written.

The value will be loaded in the variable "Login_ID."

3

Scenario creation - Advanced 2 -

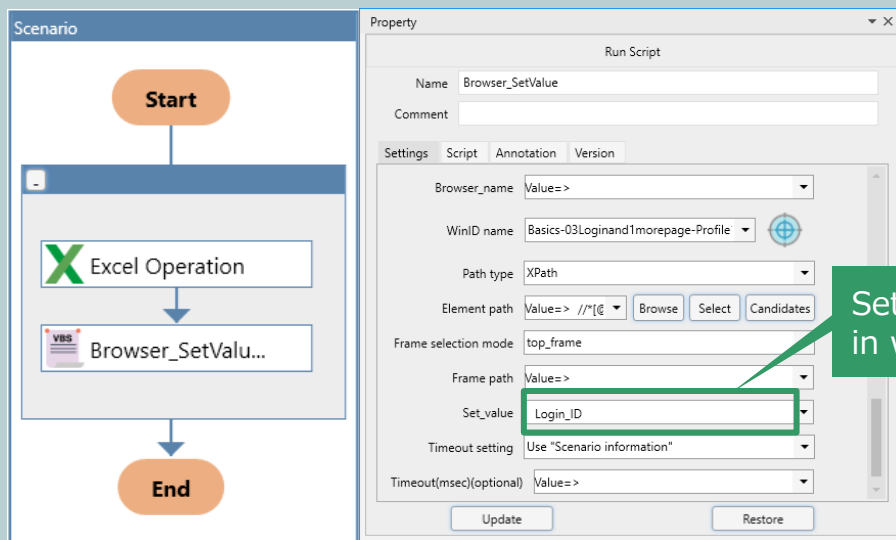


"Next, let's use the value just read! Use the Browser_SetValue library to set the variable read earlier."

Point!



"With this method, you can create a highly maintainable scenario in which **you only need to modify the settings file without modifying the scenario** even if the login ID is changed."



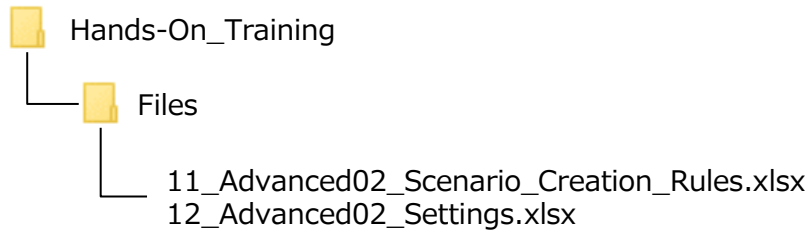
Set the variable "Login_ID" in which the value was read

3

Scenario creation - Advanced 2 -



"Now, let's create the rules based on the templates provided in the following folder! Consider what to write in the orange part based on the rule template. You can use the templates as they are."

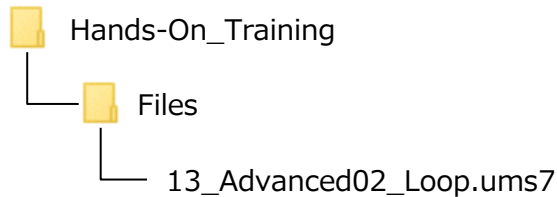


3

Scenario creation - Advanced 2 -



"Have you made the rules? Next, let's apply the created rules to the scenario created in *Practice 1. Loop processing for the same operation*. For your reference, the scenario file with rules applied has been provided in the following folder."



3

Scenario creation - Advanced 2 -



"What do you think? At first glance, don't you think there is a big difference in maintainability before applying the rules and after?"



"Well, I have never thought that it would be so easy to understand just by setting the rules and applying them!"



"This will help me fix Amanda's scenario too!"



"Maintainability becomes essential when multiple people create a scenario. Setting the rules you learned this time is one way, but there are other ways to improve maintainability. Understand the points and create a highly maintainable scenario!"

Advanced



Scenario does not run



Data is not input



File is not output

Actions for troubleshooting

4

Scenario creation - Advanced 3 -

Case

The scenario created by Amanda has suddenly stopped running. William came to help Amanda, but...



"The scenario that has been running suddenly stopped running!"



"Let's just open the scenario... It's stopped halfway through the scenario, what's the cause...?"



"I have heard from another department that the file used for work has not been output... what should I do..."



"Anyone can panic in dealing with trouble. This time, let's learn what to do when trouble occurs and measures to prevent the same trouble."

4

Scenario creation - Advanced 3 -



"What should I do when trouble occurs?"

"Broadly divided, the following three steps are required."

1. Realize what happened in the scenario (Realizing problem)
2. Find out the reason why the scenario does not run properly (Cause analysis)
3. Take actions such as correcting the scenario (Taking actions)

Flow of actions when trouble occurs



Point!



"If you work on these three steps in order, you can proceed smoothly with troubleshooting. Let's take a closer look at the next few slides."

4

Scenario creation - Advanced 3 -



"For 1. Realizing problem, first **see what is happening.**"

"Examples of possible problems are; Files that should be output have not been output, Information that should be input to the in-house system has not been input, Necessary documents have not been printed, Emails have not been sent, etc."

Examples of possible problems



Files have not been output



Information has not been input



Documents have not been printed



Emails have not been sent



Data has not been transferred



Processing result has been strange

"The actual problem is often not just one but multiple. **If you cannot see the problem, you will not be able to analyze the cause properly.** Take your time to determine the problems."

Point!



4

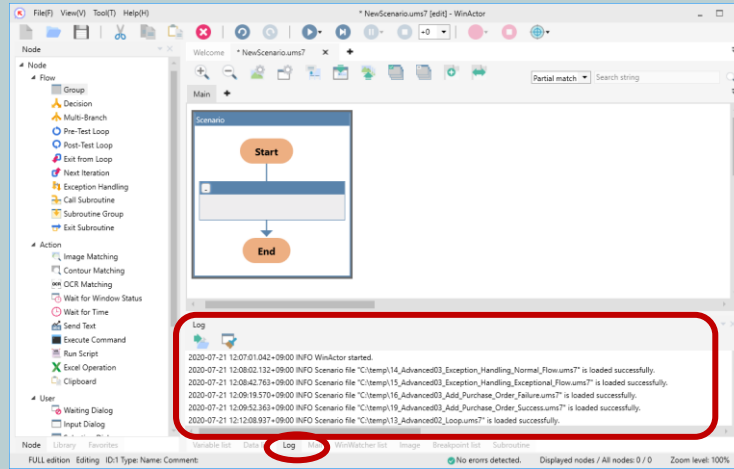
Scenario creation - Advanced 3 -



"Next, for 2. Cause analysis, **check the scenario execution log.**"

"A log is a record of WinActor operations such as execution date and time of each node and related information."

Point!



"A log is also recorded in the case of trouble, including the node ID that did not run properly and the reason why it did not run."

4

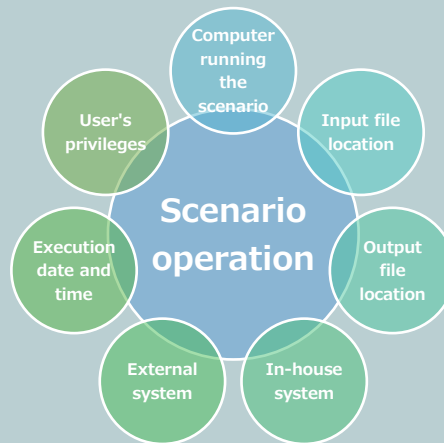
Scenario creation - Advanced 3 -



"After identifying the node causing the trouble from the log, check the property items of that node."

"Is the file path or the reference image described in the property correct? Have you changed it before you know it? If the scenario does not run even though you have not modified it, first **suspect a cause other than the scenario** as shown below."

Examples of external factors that affect scenario operation



Point!



"The causes other than the scenario are **not the problem of the scenario itself, but the problem of the external environment changes** including;

- The computer that runs the scenario has changed
- The input file path (folder) has changed
- The image of the in-house system used for image matching has changed"

4

Scenario creation - Advanced 3 -



"Once the cause is found, as 3. *Taking actions*, we will modify the scenario so that it runs properly. There are provisional and permanent measures, so first, as a provisional measure, **modify the scenario so that it runs**. The provisional measure is a 'urgent' response to run the scenario in the sense of first aid."



"What do we specifically need to do?"



"Since there are various troubles and problems, it is difficult to explain all the countermeasures here. Basically, check the log, understand the cause, and take actions. See the next slide for a list of frequently occurring troubles and their solutions."

Point!



"The following are some examples. For details, see WinActor Operation Manual."

Error log	Cause	Action to take
Failed to load a file. The file path is invalid.	The file specified in the property of Excel Operation node does not exist.	Check whether the file exists in the specified location, and if it does not exist, correct the location where the file exists.
Unable to find a window that matches WinID name ****.	The target application set in the node/library is not running.	Launch the application and rerun.
Failed to run script. Error code: 0x000000001 Description: The specified file can not be opened.	An attempt was made to open a password-protected Excel file using Excel-related nodes/libraries such as Excel Operation.	Remove the password of the Excel file.
Failed to run script. Error code: 0x000000001 Description: The specified sheet can not be found.	The specified Excel file sheet name is incorrect.	Correct the sheet name of the Excel file.
Failed to run script. Error code: 0x000000001 Description: This name is already in use. Enter another name.	The copy source sheet name and the copy destination sheet name of the Excel file are the same.	Change the copy destination sheet name.
Failed to run script. Error code: 0x000003ec Description: SaveAs method of Workbook class failed.	The destination for saving the Excel file is not specified correctly.	Check if there is a file with the same name in the destination for saving the Excel file, and if it exists, delete it.
Failed to run script. Error code: 0x0000000d Description: Type mismatch.	The value entered in the node/library is incorrect. (Example: Date format is broken)	Correct the entered value.



- Column -

Relationship between scenario maintainability and troubleshooting

The higher the maintainability of the scenario, the easier for troubleshooting. This is because the readability of the scenario is directly linked to the ease of the following three steps to be taken when a trouble occurs.

1. Realizing problem
2. Cause analysis
3. Taking actions

In particular, the maintainability is a very important factor when implementing provisional measures that require quick response.

The best way is to create a scenario in which troubles are unlikely to occur as much as possible. It is however not that easy, so it is important to create a scenario so that you can take actions immediately if something happens.

4

Scenario creation - Advanced 3 -



"Next, as a permanent measure, modify the scenario so that **the same trouble does not occur!** It is also called a recurrence prevention measure. In addition to modifying the property items of nodes and libraries, applying WinWatcher or adding Exception Handling may be effective."



"Exception Handling? WinWatcher? I haven't used either before..."



"Both are powerful features that make the scenario run properly. See the following slides for WinWatcher and Exception Handling features."

4

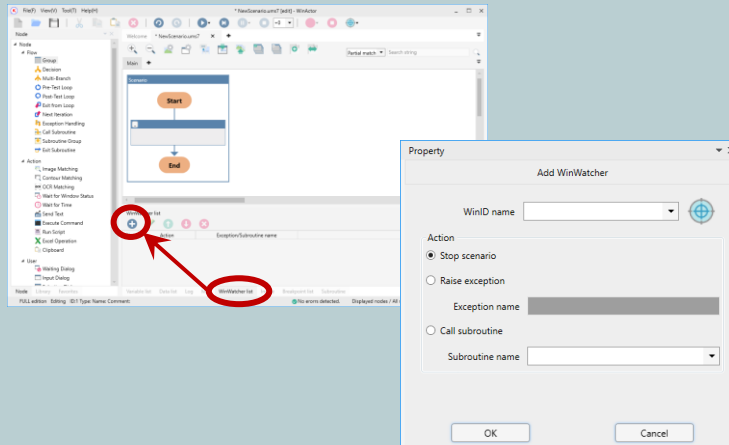
Scenario creation - Advanced 3 -



"WinWatcher is a function that can stop a running scenario or execute another process when the window with the preset name is displayed while the scenario is running."

"By setting WinWatcher, when another application or a notification dialog is displayed, the scenario can be stopped normally or the scenario can be continued by another process."

Point!



"It is better to set WinWatcher on a computer that has applications that are constantly running in addition to WinActor, such as Outlook and chat apps, or in an environment where dialogs may be displayed due to external factors."

4

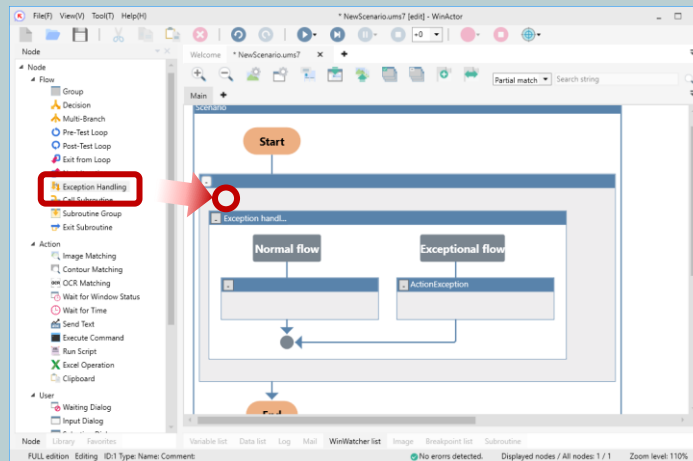
Scenario creation - Advanced 3 -



"In addition to WinWatcher, there is a node called Exception Handling for processing unexpected errors. Unlike WinWatcher, which affects the entire scenario, Exception Handling targets nodes/libraries set in the Exception Handling node."

"It has two flows, normal flow and exceptional flow. **If an error occurs during the process of the nodes/libraries in the normal flow, the normal flow will be stopped and exceptional flow will be executed.**"

Point!



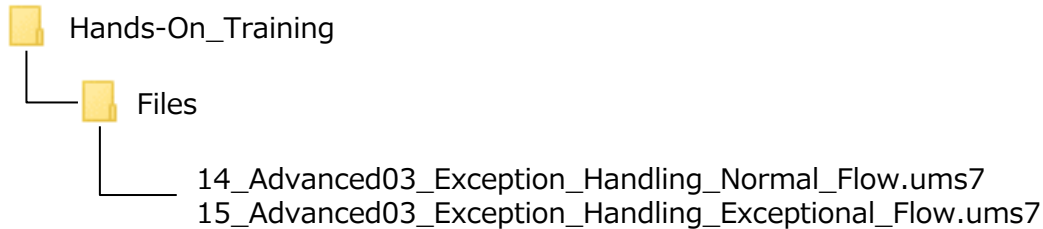
"It is recommended to put the normal processes in the normal flow and the processes when the error occurs in the exceptional flow."

4

Scenario creation - Advanced 3 -



"For Exception Handling, let's run the sample scenarios and check the operations."



"If you compare the operations of the normal flow scenario and the exceptional flow scenario, you can see that the running flow is switched to the exceptional flow when an error occurs in the exceptional flow scenario. It is a good idea to copy the scenario created so far into the normal flow of this sample scenario and try to operate it."

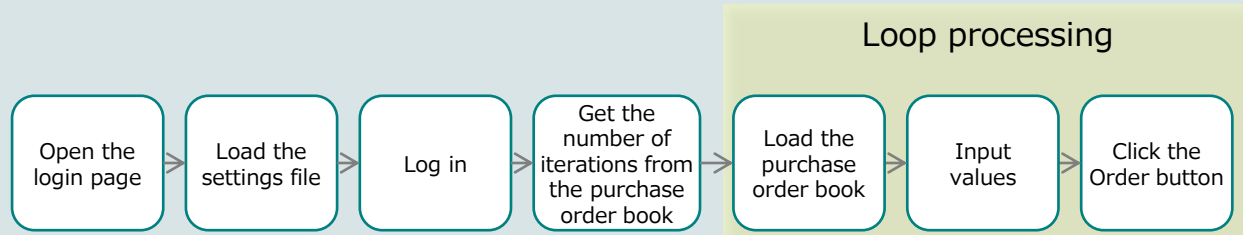
4

Scenario creation - Advanced 3 -



"Based on what we have learned so far, let's modify a scenario that does not run due to trouble! Let me first explain the scenario that was working properly. "

"When it was running normally, it was operated as follows."



"The files used are as follows."

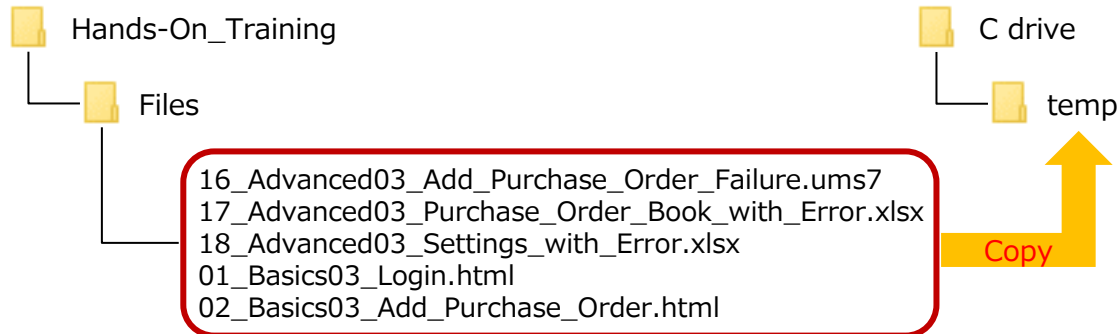
Type	Filename
Scenario file	16_Advanced03_Add_Purchase_Order_Failure.ums7
Settings file	18_Advanced03_Settings_with_Error.xlsx
Purchase order book	17_Advanced03_Purchase_Order_Book_with_Error.xlsx

4

Scenario creation - Advanced 3 -



"Now, copy the 'scenario that does not run and settings file' saved in the folder below to C:/temp and run the scenario."



"Some errors occur and it does not run properly. Let's modify the scenario remembering what we have learned so far!"

4

Scenario creation - Advanced 3 -



"How is it? If you are in trouble, check the following."



Error log	Actual trouble	Points to check
Failed to run script. Error code: 0x00000001 Description: The specified sheet can not be found.	An error message "The specified sheet can not be found." is displayed when reading the number of rows in the Purchase Order book.	Is the sheet name in the Purchase Order book file correct? Some other user may change the sheet name. Check it!
Failed to run script. Error code: 0x00000001 Description: Library execution (spv_Web) failed. The Browser of WinID 'Baiscs-03Login-Profile1-MicrosoftEdge' is not found.	Login ID is not input.	Is the displayed page changed to the Add Purchase Order page? First, let's modify it so that you can log in! The login ID can be found in the settings file. Review the settings file!
	Cannot log in.	Are the image matching settings correct? Check the mouse operation coordinates settings in the property!

4

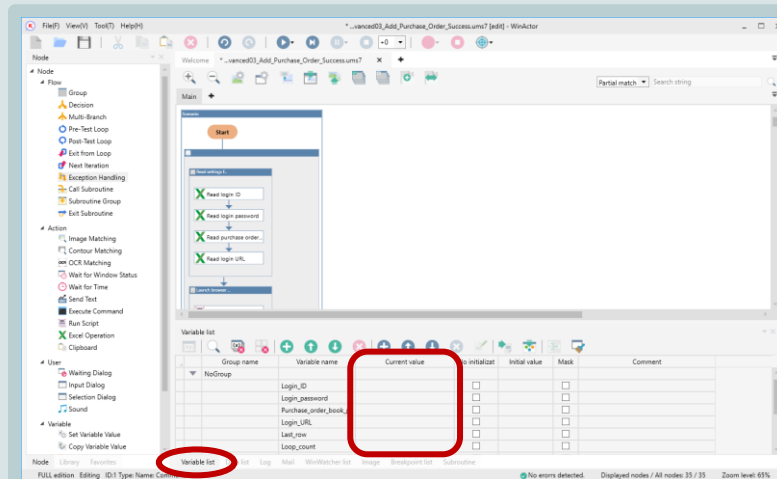
Scenario creation - Advanced 3 -



"You may want to check the current contents of variables when troubleshooting. In such a case, check [Current value] in the Variable list pane."

"[Current value] is linked with the operation of the scenario and is updated in real time. This is a **convenient feature to check how variables have changed after running a node that changes variable values**, such as the Excel Operation node."

Point!



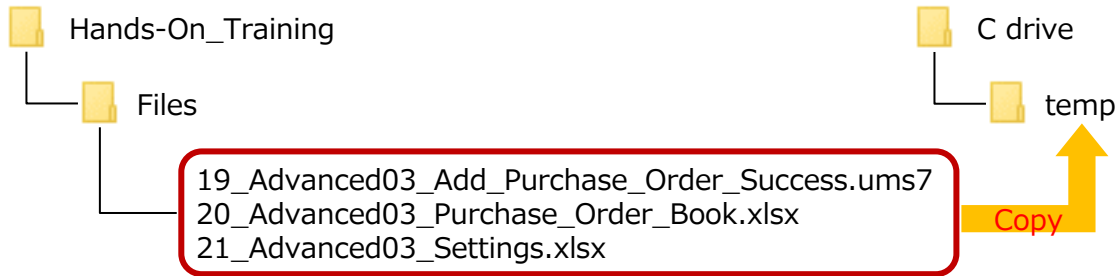
"In cases where the value is automatically input but the value is not as expected, the cause may not be found by checking the flowchart area or the Main window. If the scenario doesn't run properly, check the Variable list pane as well."

4

Scenario creation - Advanced 3 -



"Have you finished modifying the scenario? The scenario that runs normally is saved in the folder below. Compare it with the scenario you have modified."



"How was it? If you could not modify it properly, refer to the scenario that runs normally and modify it with your own hands!"

4

Scenario creation - Advanced 3 -



"We have learned about troubleshooting. I know that you needed a technique different from the one for scenario creation. How was it? "



"It's difficult... I'm a little panicked and confused..."

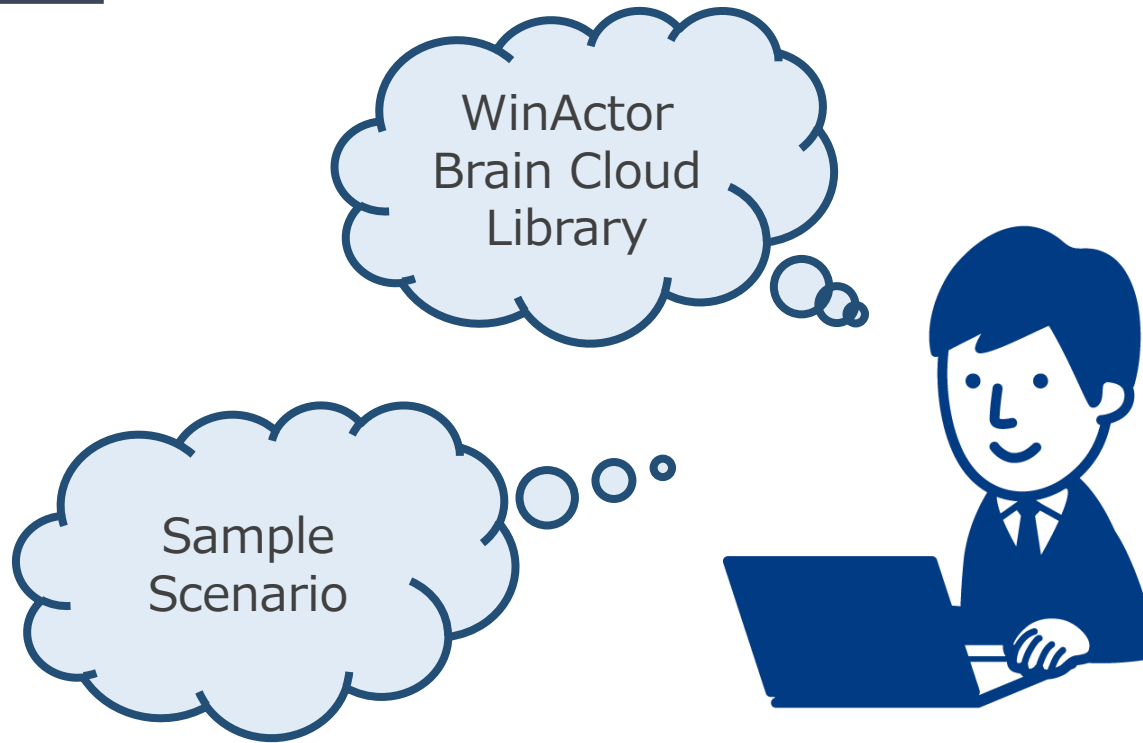


"I think I can do it if I know the tips! If we think about it carefully, the measures we learned last time to improve maintainability will be effective when dealing with problems!"



"That's right, William! In many cases, quick response is required when trouble occurs. After learning the knowledge in the training like this time, you can make the knowledge more useful in the field by actually modifying the scenario by yourself. Don't hesitate and take action to deal with it!"

Advanced



Expanding the knowledge of WinActor

Case

William, who has relied on Maria so far, has begun to want to learn more about WinActor. What kind of learning method is available?



"I've always relied on you, Maria, but I'm now in your position. I want to learn more about WinActor by myself. Is there anything available?"



"You are now a mentor to other employees. Yes, WinActor has various contents and tools for more convenient use."



"Is there anything other than the documentation that comes with the installer?"



"Of course! WinActor has more various functions available. You don't need to use all of them, but they all can be used for business. I will show you in the next slide."

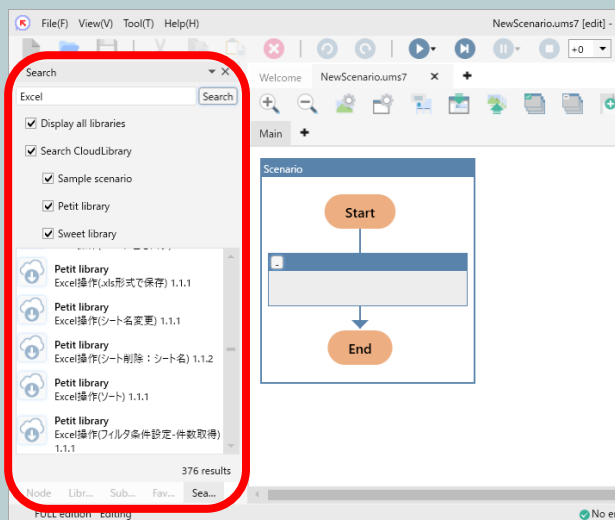
5

Scenario creation - Advanced 4 -



"The first one is WinActor Brain Cloud Library."

"WinActor Brain Cloud Library is a scenario creation support tool that runs on the cloud to create WinActor scenarios more easily and efficiently. As one of the provided functions, you can search and download the libraries included in WinActor and petit libraries* released on the WinActor official website."



"In the Petit Libraries page, there are many libraries that can be used in actual work are registered, such as a library to determine whether the specified date is a weekday or a holiday, a library to print an Excel file and more."

* The Petit Libraries are available only in Japanese.

5

Scenario creation - Advanced 4 -



"Petit libraries are libraries for creating scenarios. Scenarios are also available in the form of sample scenarios."

"On the WinActor official website, there is the Sample Scenarios page* that lists the ready-to-use scenario files. For example, there is a sample scenario that extracts and aggregates data from multiple Excel files, and a sample scenario that performs image matching while scrolling the web page. You can use those sample scenarios, too."



"For details on WinActor Brain Cloud Library and sample scenarios, visit the following URL."

WinActor official website

<https://winactor.biz/en/> (English)

<https://winactor.biz/> (Japanese)

* The Sample Scenarios page is available only in Japanese website.



"Well, William and Amanda, how was your learning in the advanced section?"



"I became a little big-headed after being able to create scenarios, but... besides creating scenarios, there are many things to learn such as improving maintainability and troubleshooting."



"I feel lucky that I was able to learn the advanced contents before learning more about scenario creation!"



"That's good. What we have learned this time is very important when using WinActor with multiple people. You may feel it is hard to improve maintainability at first. However, considering that the scenario you've created leaves your hands and is modified by others, it is a good idea to make it a little easier to understand. Such compassion leads to quick response when trouble occurs. From now on, make a scenario with this perspective in mind!"



We have learned a lot with William, Amanda, and Maria through the basics, practice, and advanced sections. In addition to those described in this training, WinActor has more functions and easy-to-use tools.

As mentioned earlier, you can also use WinActor Brain Cloud Library and the sample scenarios* posted on the official website to improve the efficiency of your work with WinActor!

WinActor's motto is "a partner who makes user-friendly business improvement." Although it is important to learn deeply about the function, it is more important to first try to operate it with your own hands just like William and Amanda did in this training. Start with a small idea that "Can I do this work with WinActor?" and then create a scenario. WinActor is there to support you!

Enjoy working with WinActor!

* The sample scenarios are available only in Japanese.

Update history



1

Update history

Version	Last update	Details
1.0	August 28, 2020	Initial version
1.1	March 4, 2021	Supports WinActor7.2.1, revised descriptions
1.2	July 28, 2021	Supports WinActor7.3.0
1.3	November 12, 2021	Demo scenarios use IE mode on Microsoft Edge
2.0	June 12, 2024	Demo scenarios use Microsoft Edge and Google Chrome
2.1	May 1, 2025	Supports WinActor7.6.0, revised descriptions



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