



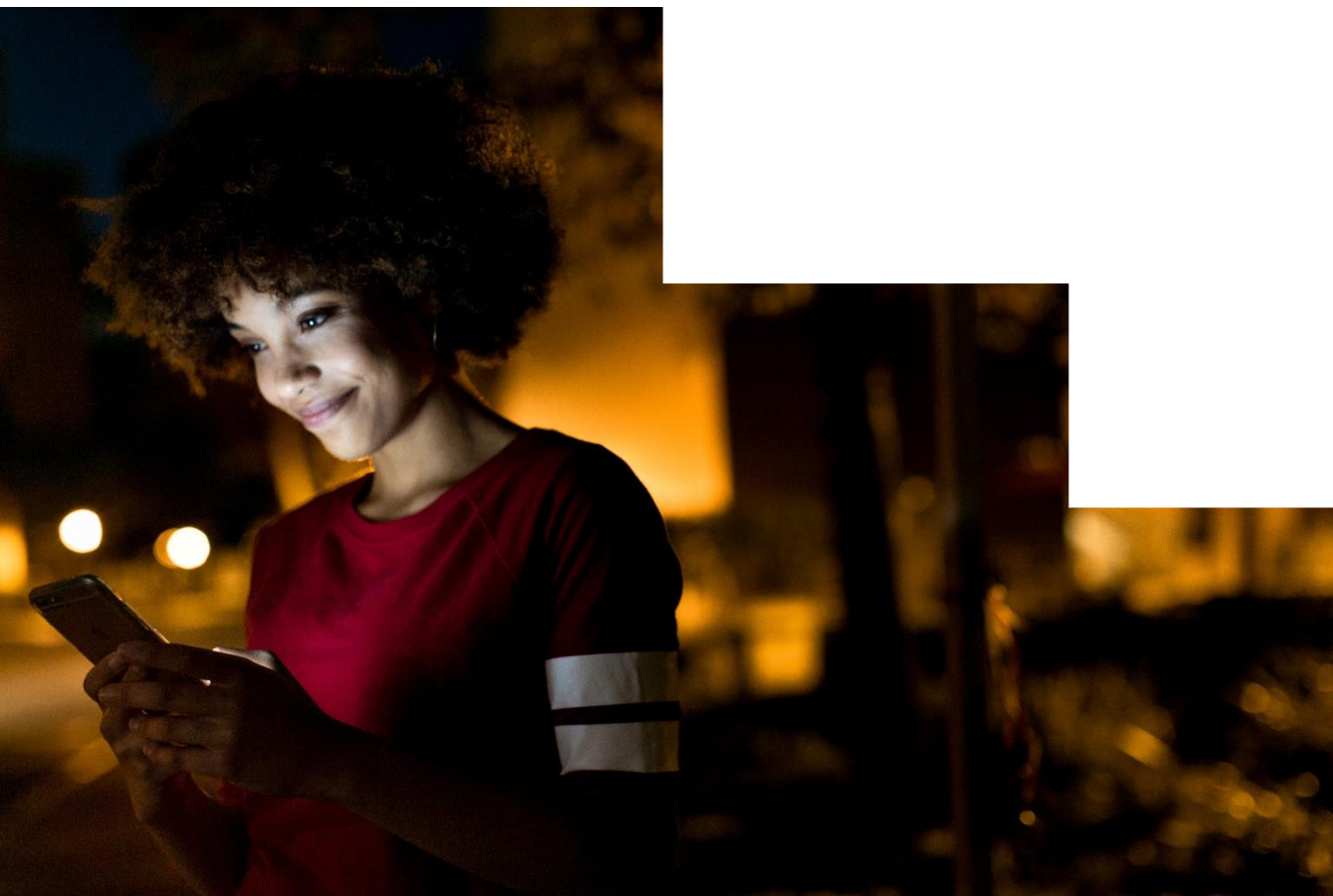
Robotic Process Automation in a Day

Lab 3 – Use Input and Output Parameters

30 mins

April 2023

Applies to Power Automate Desktop v. 2.31.105.23101 ([more](#))



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Lab Overview

You will complete the following tasks in this lab:

- Create a new Power Automate Desktop flow with predefined inputs
- Record actions performed in the desktop-based Contoso Invoicing application using these inputs, and capturing application data for output
- Perform a test run of the new desktop flow with a new set of inputs

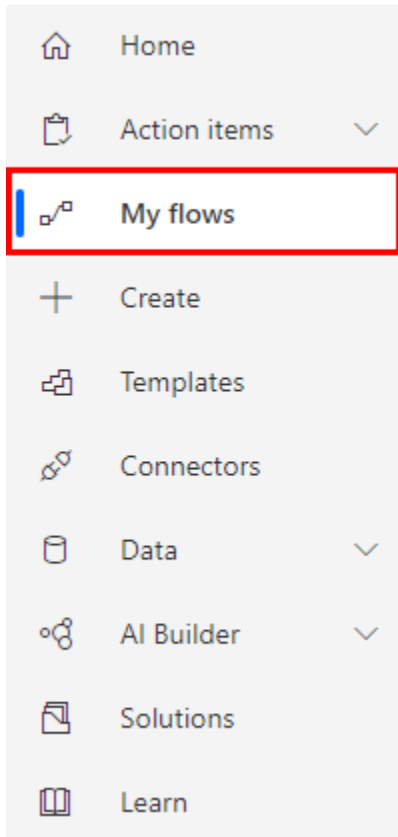
Prerequisites

This lab builds on the initial setup lab (Lab 1) – ensure all tasks are complete.

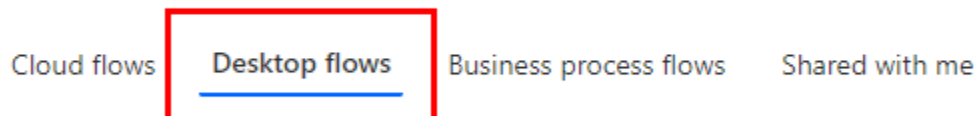
Important Additional Prerequisite: As you will be recording actions performed in your UI in this lab, **you will have the best experience if you view the lab instructions on a separate device or in a printout.** You can still complete the lab while pursuing the instructions during UI action recording, but you will have to perform extra work to cut the recorded actions of viewing the instructions from the UI flow.

Use input and output parameters



1. Open the test profile in a browser and navigate to <https://powerautomate.microsoft.com>
2. Open Contoso Invoicing app.
3. Select **My flows** > **Desktop flows**.



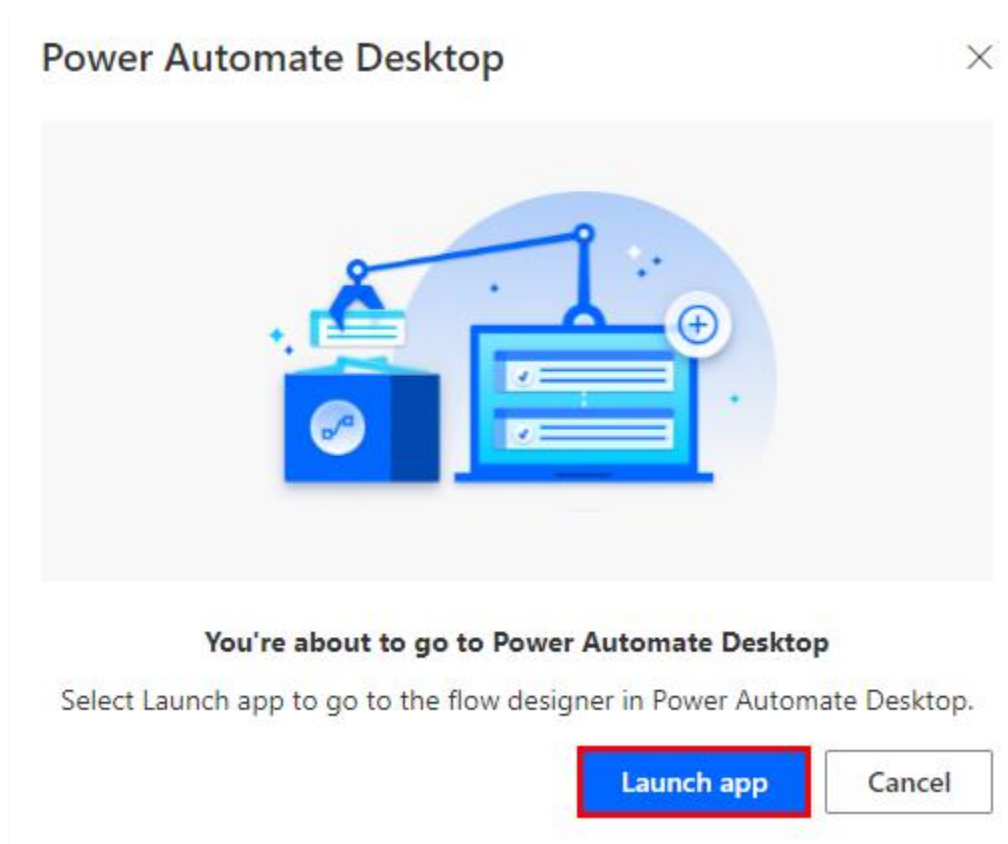
Flows




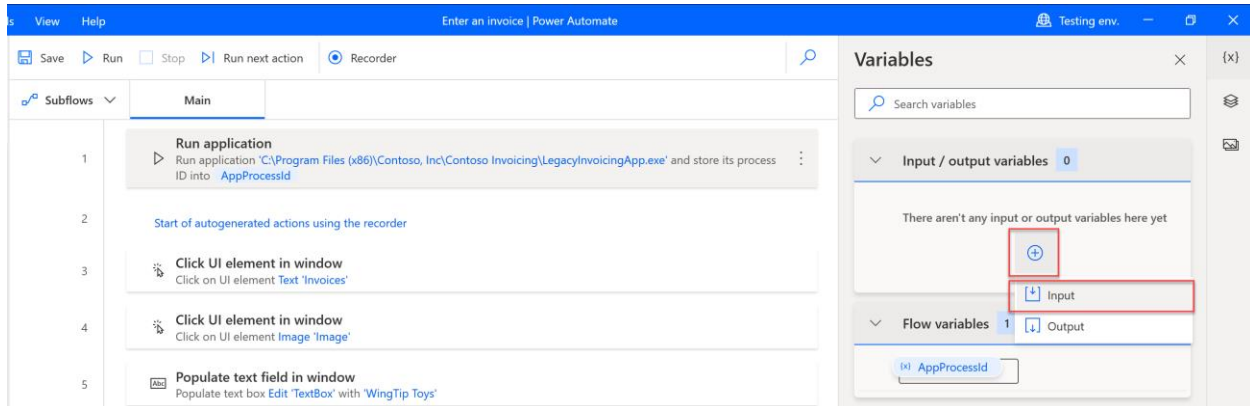
4. Edit Enter an invoice flow by clicking 

	Name	Edit	Modified	Built with
	Enter an invoice		2 min ago	Power Automate Desktop

5. Click Launch app.



6. Power Automate Desktop provides the ability to receive input values from Cloud flows and return values using output values. We will now create a series of input values by clicking **Input/output variables**, then click  - **Input** to add your first input.



7. Use these values to setup the first input:

- Variable Type: Input
- Variable Name: Amount
- Data type: Number
- Default value: 500
- External Name: Amount
- Description: Amount

New input variable

Add a new variable to be used as input or output [More info](#)

Variable name:

Amount

i

Data type:

Number

▼

i

Default value:

500

^

v

i

External name:

Amount

i

Description:

Amount

i

Mark as sensitive

☐

i

Save

Cancel

8. Click **Save**.

New input variable

✕

⌵ Add a new variable to be used as input or output [More info](#)

Variable name:

Amount

i

Data type:

Number

▼

i

Default value:

500

⬆⬇⬆

i

External name:

Amount

i

Description:

Amount

i


Mark as sensitive

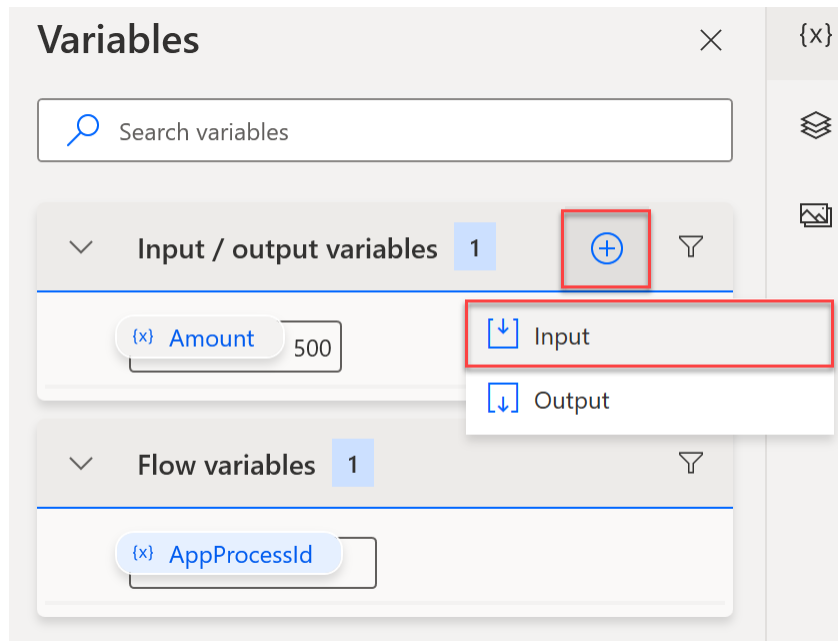
☐

i

Save

Cancel

9. Click  > **Input** to add 2 more inputs.



10. Use these values to setup two new added inputs.

- **Variable Type:** Input
- **Variable Name:** Contact
- **Data type:** Text
- **Default value:** b.friday@wingtiptoys.com
- **External Name:** Contact
- **Description:** Contact email

Edit input variable

×

⌵ Edit the properties of an existing input or output variable [More info](#)

Variable name:

Contact

i

Data type:

Text

▼

i

Default value:

b.friday@wingtiptoys.com

i

External name:

Contact

i

Description:

Contact email

i

Mark as sensitive

☐

i

Save

Cancel

- **Variable Type:** Input
- **Variable Name:** Account
- **Data type:** Text
- **Default value:** WingTip Toys
- **External Name:** Accountname
- **Description:** Account name

New input variable

×

⌵

 Add a new variable to be used as input or output [More info](#)

Variable name:

Account

i

Data type:

Text

▼

i

Default value:

WingTip Toys

i

External name:

Accountname

i

Description:

Account name

i

Mark as sensitive

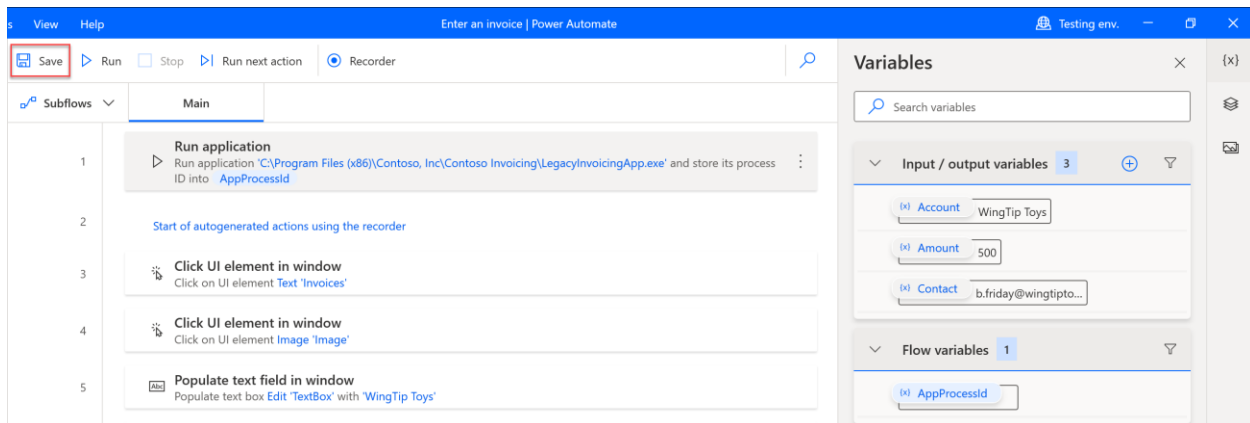
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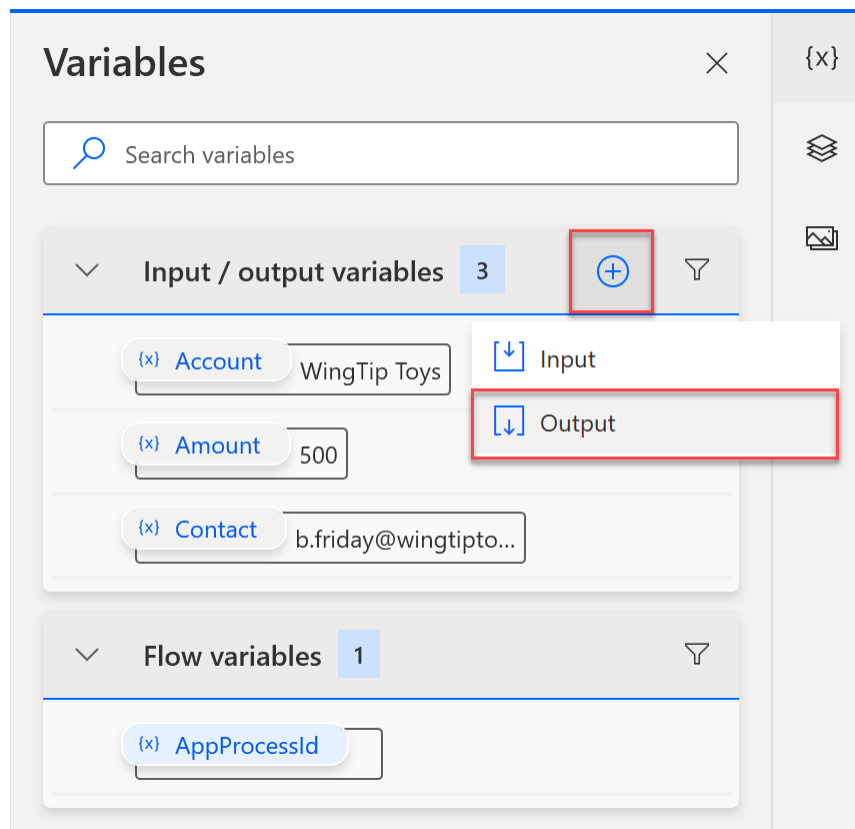
Save

Cancel

11. Click Save.



12. On the right-side Input/output variables, click > Output to add your first output.



13. Use these values to setup the first output:

- **Variable Name:** InvoiceID
- **Data type:** Number
- **External Name:** InvoiceID
- **Description:** InvoiceID

New output variable ×

⌵ Add a new variable to be used as input or output [More info](#)

Variable name: InvoiceID ⓘ

Data type: Number ⓘ

External name: InvoiceID ⓘ

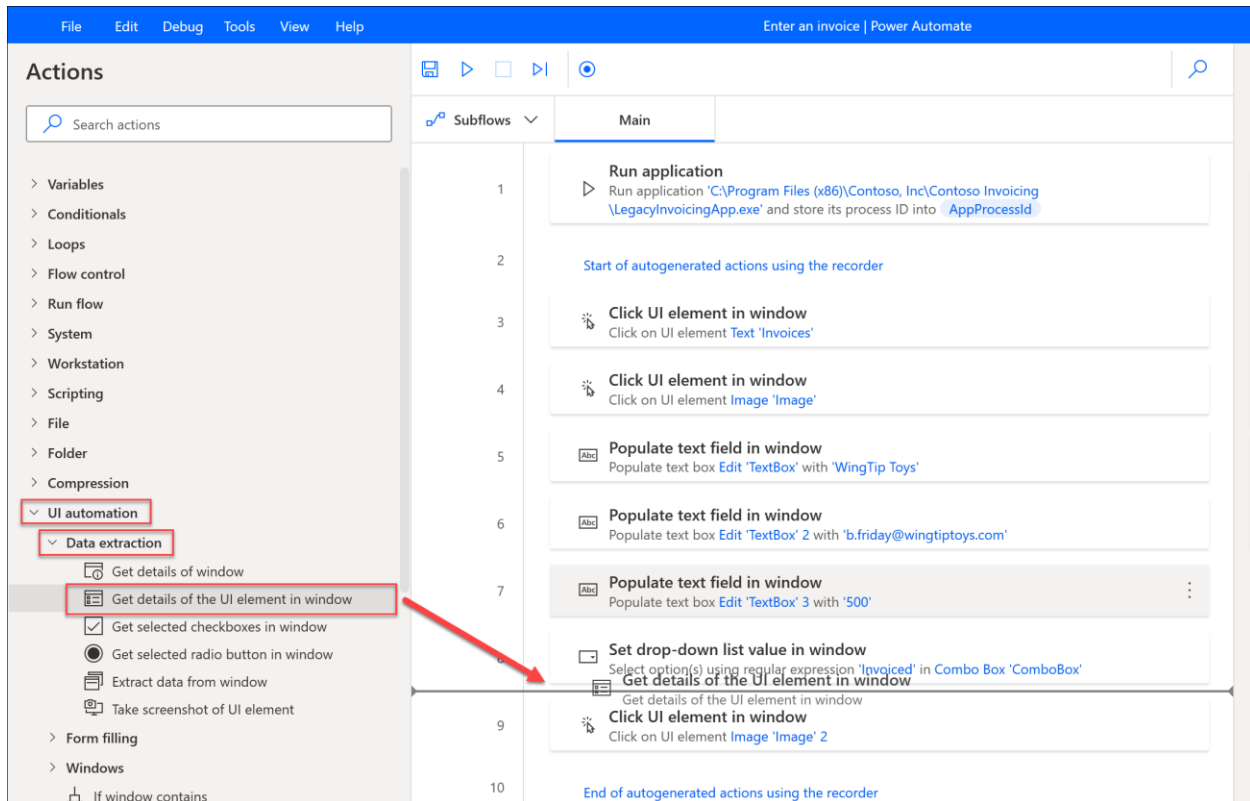
Description: InvoiceID ⓘ

Mark as sensitive ⓘ

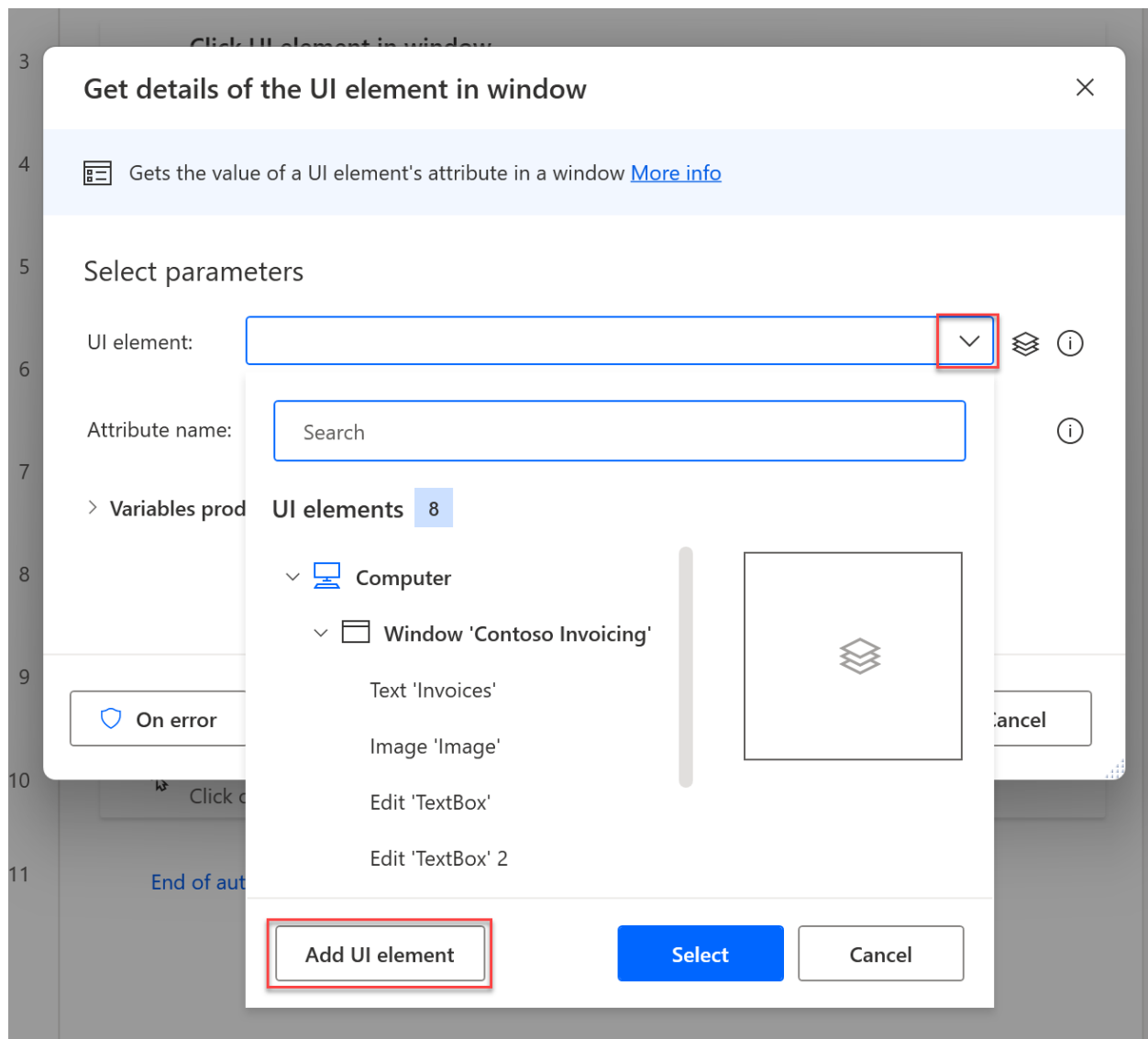
Save Cancel

14. After providing the required values in each field, click **Save** to proceed.

15. Within our process, we now need to add an action to set this output. Please ensure the Contoso application is still running. Drag the **Get details of a UI element's attribute in a window** from **UI automation > Data extraction** folder under **Step 8** in your actions.

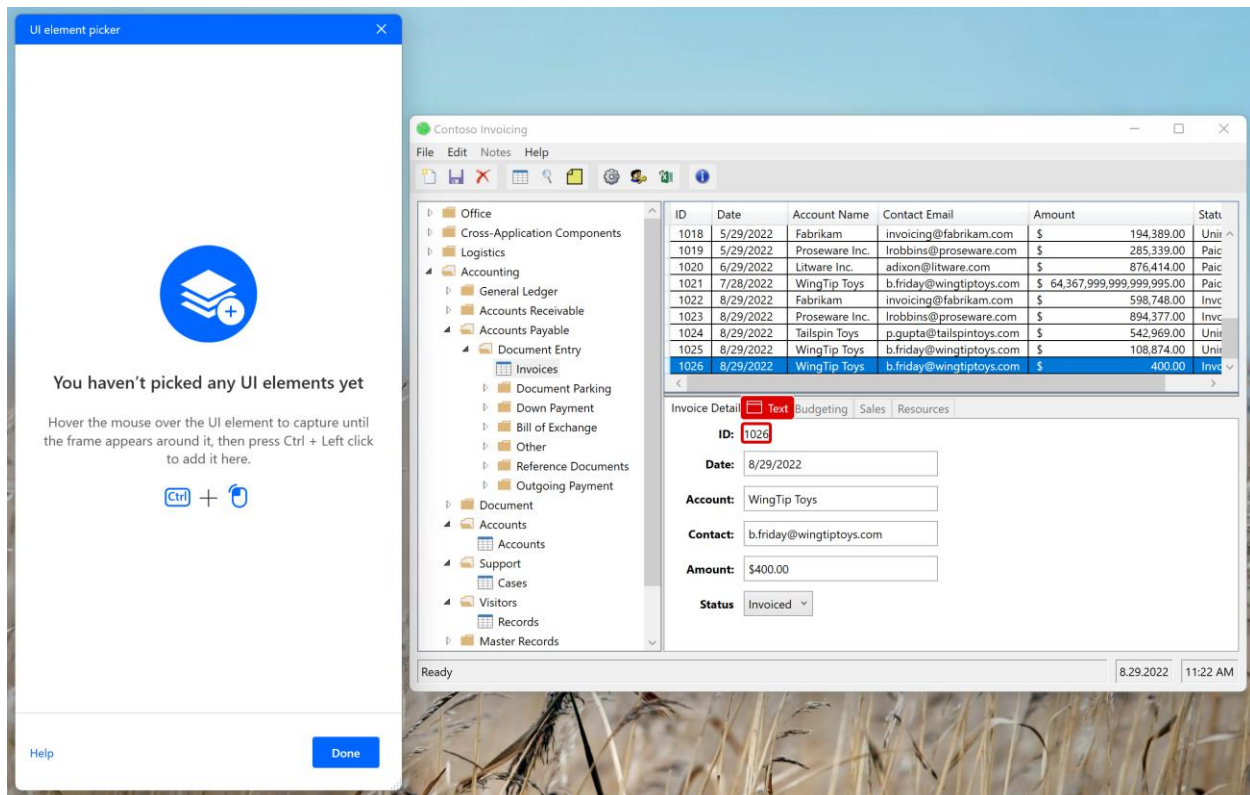


16. Click on the **UI element** dropdown and then click **Add UI element**.



Note: A red rectangle appears on the desktop while hovering the mouse over the elements.

17. Go to **Contoso Invoicing app**, move the mouse over the value that belongs to ID number. Hold the **CTRL** key on your keyboard and then **Left-Click** to select the element (You may have a different ID than the number displayed here).



18. Once you selected the element, you will see the value is being recorded and the UI element picker disappears.

19. Click Save.

Get details of the UI element in window

Gets the value of a UI element's attribute in a window [More info](#)

Select parameters

UI element:

Computer > Window 'Contoso Invoicing' > Text '1026'

Attribute name:

Own Text

> Variables produced

AttributeValue

On error

Save

Cancel

Note: This action will automatically create a variable called **AttributeValue** as an output that we can refer to in subsequent actions within Power Automate Desktop.

20. Add Convert text to number action from Text folder.

The screenshot displays the UiPath Actions pane on the left and the workflow editor on the right. In the Actions pane, the 'Text' folder is expanded, and the 'Convert text to number' action is highlighted with a red box. A red arrow points from this action to the workflow editor. The workflow editor shows a sequence of actions: 'Run application', 'Start of autogenerated actions using the recorder', 'Click UI element in window' (Invoices), 'Click UI element in window' (Image 'Image'), 'Populate text field in window' (Edit 'TextBox' with Account), 'Populate text field in window' (Edit 'TextBox' 2 with Contact), 'Populate text field in window' (Edit 'TextBox' 3 with Amount), 'Set drop-down list value in window' (Invoiced in Combo Box 'ComboBox'), 'Get details of the UI element in window' (Own Text of UI element Text '1026' and store it into AttributeValue), 'Click UI element in window' (Image 'Image' 2), and 'End of autogenerated actions using the recorder'. The status bar at the bottom indicates 'Status: Ready', '1 Selected action', '11 Actions', '1 Subflow', and a 'Run delay' of 100 ms.

21. We will now set an **InvoiceID** variable that will be used to capture the Invoice ID that we previously captured in step 21. This allows us to use the Invoice ID in downstream processes or from our API flow that will be created in a future lab. Use below information to fill out **Set variable**:

- Text to convert: %AttributeValue%
- Variables produced: %InvoiceID%

Note: You can also use the {x} button to assign our **AttributeValue** from a dropdown list.

Convert text to number [X]

Converts a text representation of a number to a variable that contains a numeric value [More info](#)

Select parameters

Text to convert: [] {x} ⓘ

> Variables produced

Search variables

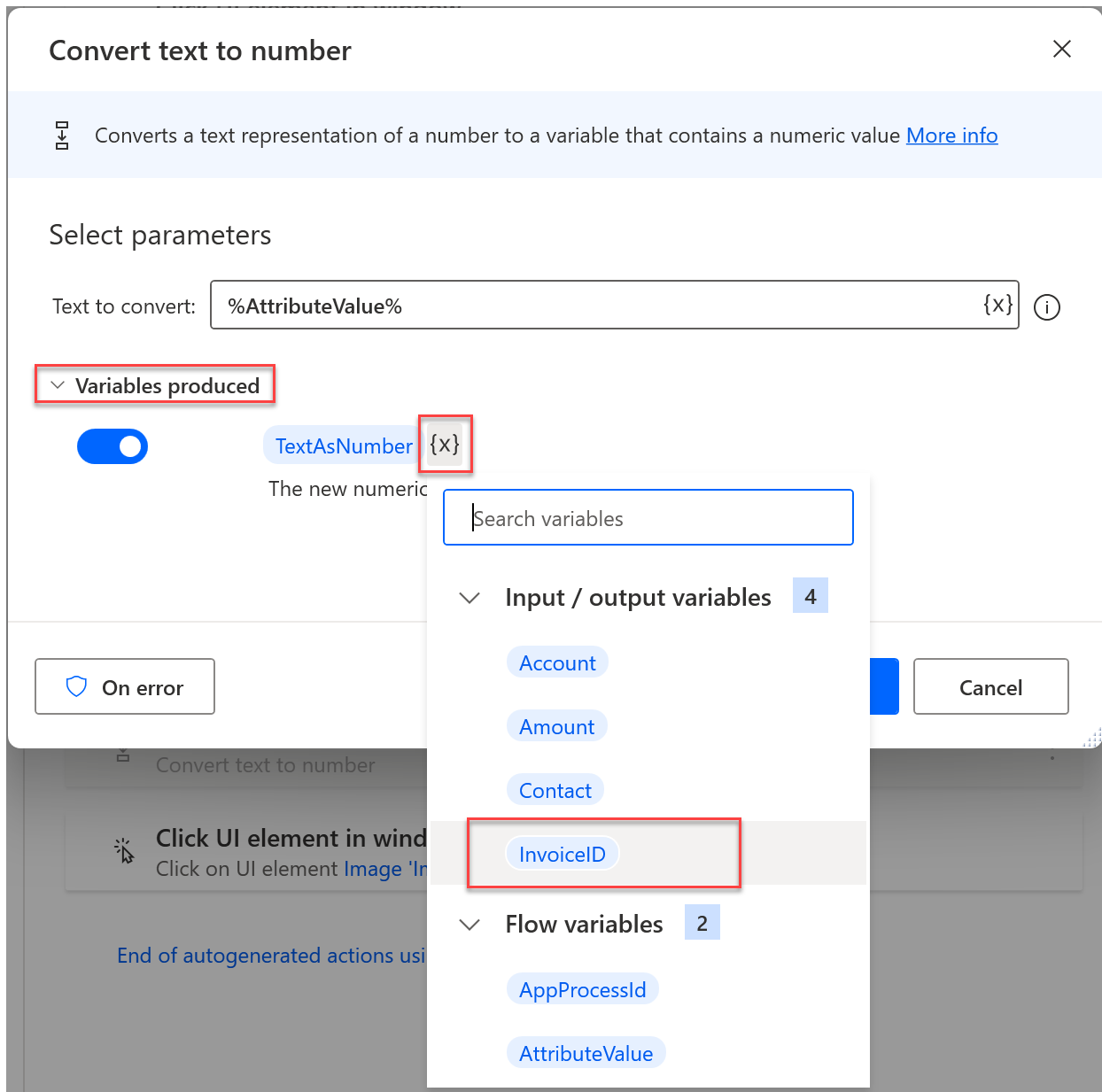
Name	Type
> Account	Text value
Amount	Numeric value
> Contact	Text value
> InvoiceID	Text value
▼ Flow variables 2	
AppProcessId	Numeric value
> AttributeValue	Text value

On error

Set variable [x] Assign

Click [x] Click

Select Cancel



22. Click **Save**.

23. Go back to **Step 5 (Edit 'TextBox' with 'WingTip Toys')** of your UI flow, click ... icon. Select **Edit**.

The screenshot displays the UiPath Studio interface. On the left, a sequence of actions is listed in a 'Main' subflow. The action 'Click UI element in window' at step 3 is highlighted with a red box. A context menu is open over this action, with the 'Edit' option also highlighted with a red box. The context menu includes options like 'Run from here', 'Undo', 'Redo', 'Cut', 'Copy', 'Paste', 'Move up', 'Move down', 'Disable action', and 'Delete'. The right sidebar shows 'Input / output variables' with a count of 0.

Step	Action
1	Run application Run application 'C:\Program Files (x86)\Contoso, Inc\Contoso Invoicing\LegacyInvoicingApp.exe' and store its process ID into <code>AppProcessId</code>
2	Start of autogenerated actions using the recorder
3	Click UI element in window Click on UI element <code>Text 'Invoices'</code>
4	Click UI element in window Click on UI element <code>Image 'Image'</code>
5	Populate text field in window Populate text box <code>Edit 'TextBox'</code> with <code>'WingTip Toys'</code>
6	Populate text field in window Populate text box <code>Edit 'TextBox' 2</code> with <code>'b.friday@wingtip toys.com'</code>
7	Populate text field in window Populate text box <code>Edit 'TextBox' 3</code> with <code>'500'</code>
8	Set drop-down list value in window Select option(s) using regular expression <code>'Invoiced'</code> in <code>Combo Box 'ComboBox'</code>
9	Click UI element in window Click on UI element <code>Image 'Image' 2</code>

24. Delete the value in **Text to fill-in**. Double click **Account** (One of the inputs we created earlier) by clicking **{x}** > **Account**.

Populate text field in window

Abc Fills a text box in a window with the specified text [More info](#)

Select parameters

Text box: Computer > Window 'Contoso Invoicing' > Edit 'TextBox' ▼

Text To fill-in: Input as text, variable or expression **{x}**

Invalid value

Search variables

Name	Type
Input / output variables 4	
> Account	Text value
Amount	Numeric value
> Contact	Text value
> InvoiceID	Text value
Flow variables 2	
AppProcessId	Numeric value

Select Cancel

25. Click **Save**.

Populate text field in window [X]

[Abc] Fills a text box in a window with the specified text [More info](#)

Select parameters

Text box: Computer > Window 'Contoso Invoicing' > Edit 'TextBox' [v] [stack icon] [info icon]

Text To fill-in: [dropdown icon] [v] Input as text, variable or expression {X} [info icon]

%Account%

> Advanced

[On error] [Save] [Cancel]

26. Follow the same steps above to change the value in **Text to fill-in** in **Step 6** and **Step 7**.

- Use **Input Contact** for **Step 6**
- Use **Input Amount** for **Step 7**

6 [Abc] **Populate text field in window**
Populate text box Edit 'TextBox' 2 with 'b.friday@wingtiptoys.com'

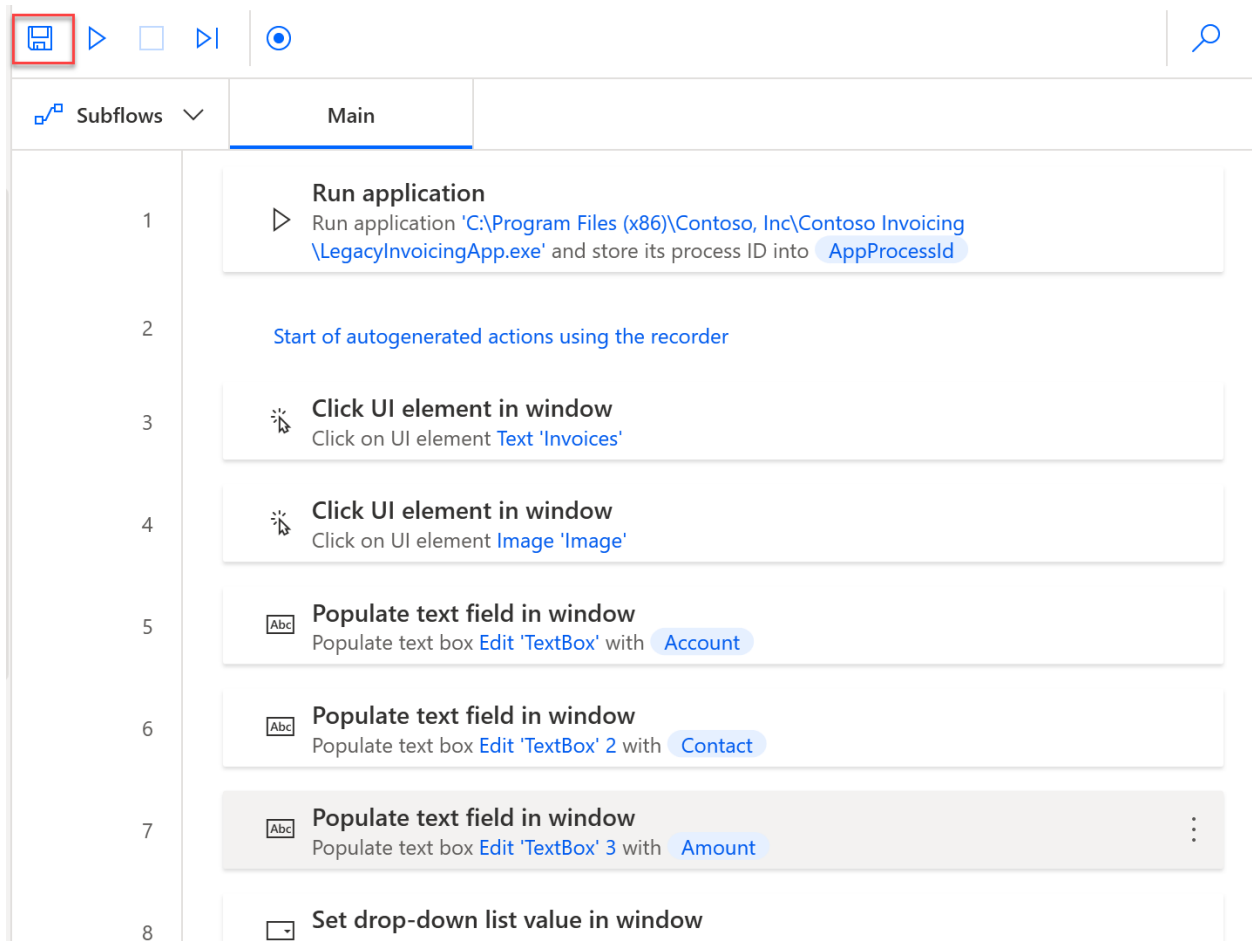
7 [Abc] **Populate text field in window**
Populate text box Edit 'TextBox' 3 with '\$500'

27. Once you're done, your actions should look like the screenshot below.

The screenshot displays a workflow editor interface with a top toolbar containing icons for saving, running, and pausing. Below the toolbar, a tab labeled 'Main' is selected under a 'Subflows' dropdown. The workflow consists of 12 numbered steps:

- Run application**: Run application 'C:\Program Files (x86)\Contoso, Inc\Contoso Invoicing\LegacyInvoicingApp.exe' and store its process ID into `AppProcessId`.
- Start of autogenerated actions using the recorder
- Click UI element in window**: Click on UI element `Text 'Invoices'`.
- Click UI element in window**: Click on UI element `Image 'Image'`.
- Populate text field in window**: Populate text box `Edit 'TextBox'` with `Account`.
- Populate text field in window**: Populate text box `Edit 'TextBox' 2` with `Contact`.
- Populate text field in window**: Populate text box `Edit 'TextBox' 3` with `Amount`.
- Set drop-down list value in window**: Select option(s) using regular expression 'Invoiced' in `Combo Box 'ComboBox'`.
- Get details of the UI element in window**: Get attribute 'Own Text' of UI element `Text '1026'` and store it into `AttributeValue`.
- Convert text to number**: Convert text `AttributeValue` to number and store it into `InvoiceID`.
- Click UI element in window**: Click on UI element `Image 'Image' 2`.
- End of autogenerated actions using the recorder


28. Click **Save**.



The screenshot shows the UiPath Studio interface. At the top, there is a toolbar with icons for Save, Run, Stop, and a search icon. The 'Save' icon is highlighted with a red box. Below the toolbar, there is a tab labeled 'Main'. The workflow is displayed in a list with 8 steps:

1. **Run application**
Run application 'C:\Program Files (x86)\Contoso, Inc\Contoso Invoicing\LegacyInvoicingApp.exe' and store its process ID into **AppProcessId**
2. **Start of autogenerated actions using the recorder**
3. **Click UI element in window**
Click on UI element **Text 'Invoices'**
4. **Click UI element in window**
Click on UI element **Image 'Image'**
5. **Populate text field in window**
Populate text box **Edit 'TextBox'** with **Account**
6. **Populate text field in window**
Populate text box **Edit 'TextBox' 2** with **Contact**
7. **Populate text field in window**
Populate text box **Edit 'TextBox' 3** with **Amount**
8. **Set drop-down list value in window**

29. Now you can test your flow by clicking **Run**.



The screenshot shows the same UiPath Studio interface as before, but now the 'Run' icon in the top toolbar is highlighted with a red box. The workflow steps remain the same.

Check your knowledge

Lab 3

10 mins

1. If you need to pass parameters from a Cloud flow into a Desktop flow, where do you define these values _____?

- A. Run
- B. Run next action
- C. Input/output variables
- D. None of the above

Answer: C. Input/output variables allow the maker to establish parameters that can be sent from a Cloud flow. In addition, output variables can be used to send data back to Cloud flows.

2. We need to hold the _____ key on keyboard and then _____ to select the element.

- A. Shift + Right-Click
- B. Shift + Left-Click
- C. CTRL + Left-Click
- D. CTRL + Right-Click

Answer: C. CTRL + Left-Click

3. Which of the following action allows us to use Invoice ID in downstream desktop flow actions or is required to return the value to a cloud flow?

- A. Create new list
- B. Convert text to number
- C. Add item to list
- D. Increase variable

Answer: B. Set Convert text to number - This will capture the Invoice ID and convert it to number, as that data type is expected by the output variable. It will allow us to use the Invoice ID in downstream processes or send back to our cloud flow that will be created in a future lab.

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