

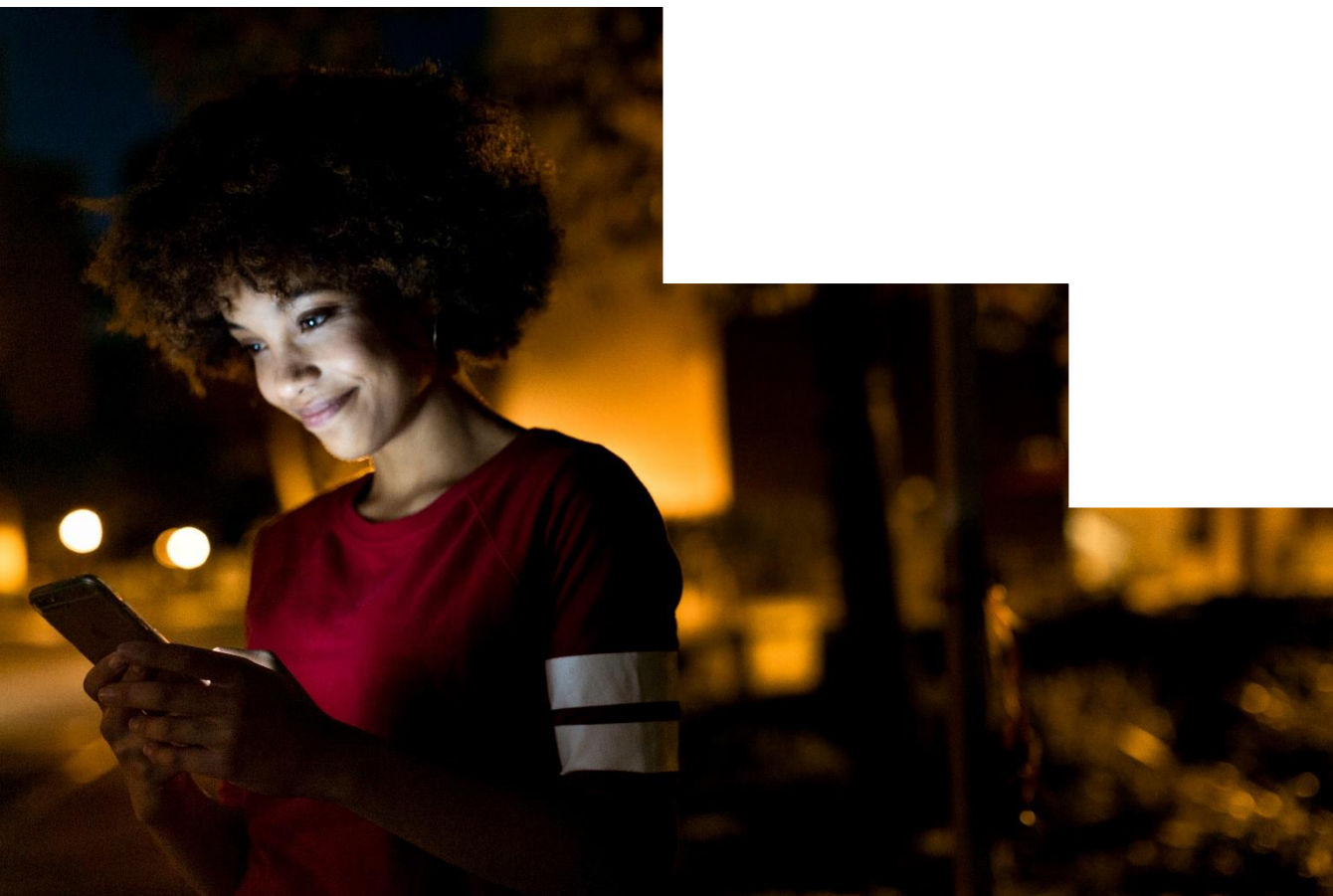


Robotic Process Automation in a Day

Lab 4 – Use Input and Output Parameters

30 mins

April 2021



This document is provided “as-is.” Information and views expressed in this document, including URL and other Internet Web site references, may change without notice. You bear the risk of using it. Some examples are fictitious and are for illustration only. No real association is intended or inferred. This document does not provide you with any legal rights to any intellectual property in any Microsoft product. You may copy and use this document for your internal reference purposes.

© 2020 Microsoft Corporation. All rights reserved.

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

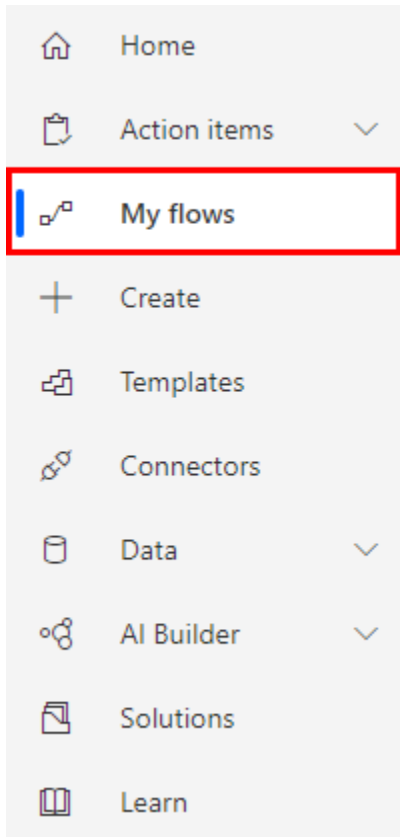
Prerequisites

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

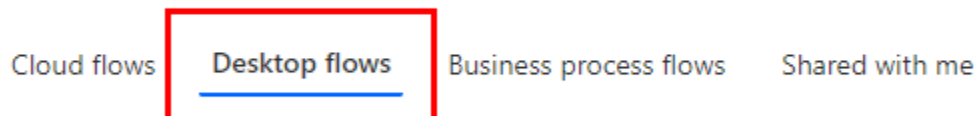
Important Additional Prerequisite: As you will be recording actions performed in your UI in this lab, **you will have the best experience if you view the lab instructions on a separate device or in a printout.** You can still complete the lab while pursuing the instructions during UI action recording, 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 powerautomate.microsoft.com
2. Open Contoso Invoicing app.
3. Select **My flows** > **Desktop flows**.



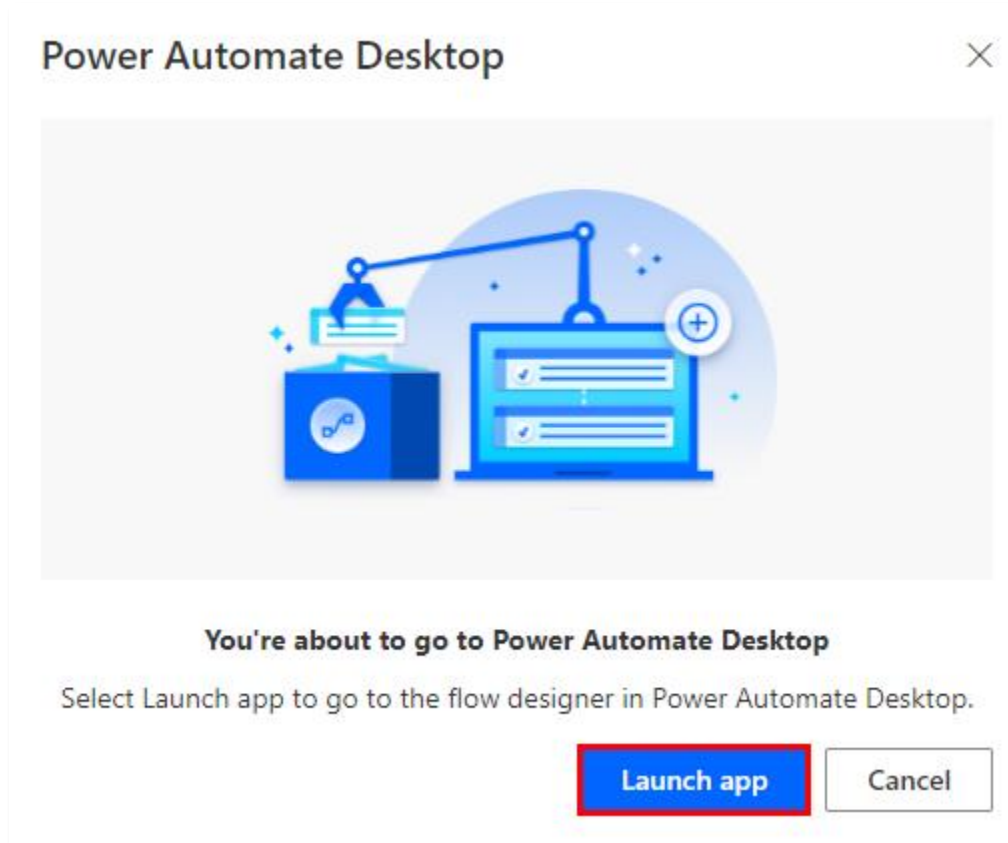
Flows



4. Edit **Enter an invoice** flow by clicking 

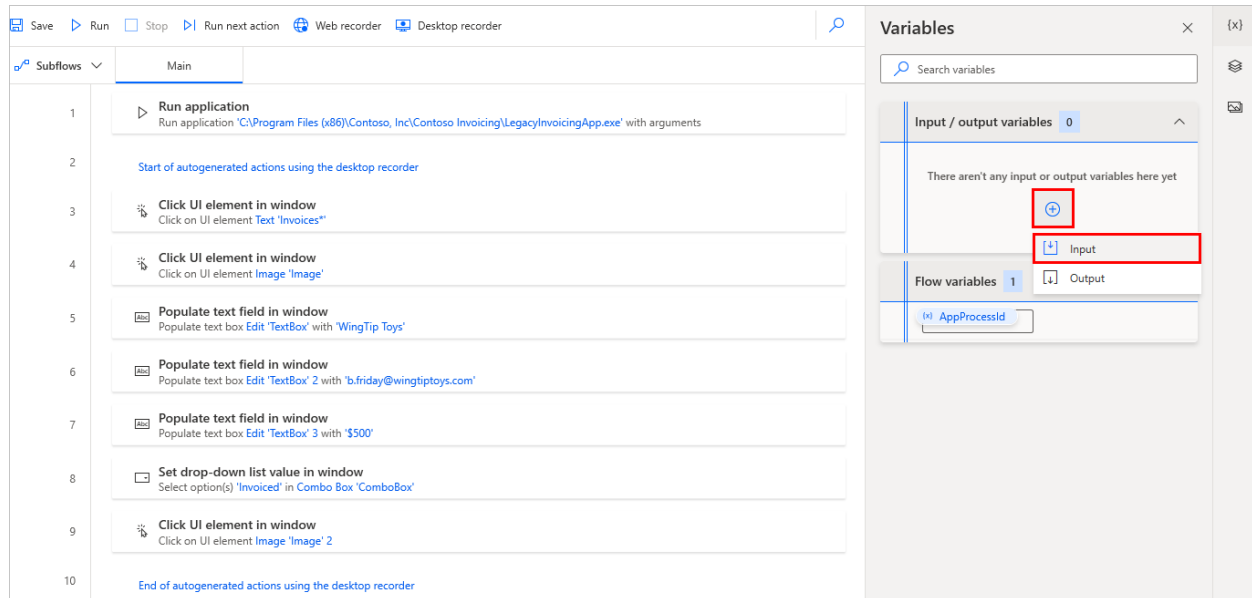
	Name	Edit	Modified	Built with
<input type="radio"/>	 Enter an invoice		2 min ago	Power Automate Desktop

- 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.



The screenshot displays the Power Automate Desktop interface. On the left, a workflow is shown with 10 steps: 1. Run application (Run application 'C:\Program Files (x86)\Contoso, Inc\Contoso Invoicing\LegacyInvoicingApp.exe' with arguments), 2. Start of autogenerated actions using the desktop 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 'WingTip Toys'), 6. Populate text field in window (Populate text box Edit 'TextBox' 2 with 'b.friday@wingtip toys.com'), 7. Populate text field in window (Populate text box Edit 'TextBox' 3 with '\$500'), 8. Set drop-down list value in window (Select option(s) 'Invoiced' in Combo Box 'ComboBox'), 9. Click UI element in window (Click on UI element Image 'Image' 2), and 10. End of autogenerated actions using the desktop recorder. On the right, the Variables pane is open, showing 'Input / output variables' (0) and 'Flow variables' (1). The 'Input / output variables' section has a red box around the plus icon and the 'Input' button. The 'Flow variables' section shows a variable named 'AppProcessId'.

7. Use these values to setup the first input:

- Variable Type: Input
- Variable Name: Amount
- Data type: Text
- Default value: \$500
- External Name: Amount
- Description: Amount

Add a new input variable

×

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

Variable type:

Input

ⓘ

Variable name:

Amount

ⓘ

Data type:

Aa Text

ⓘ

Default value:

\$500

ⓘ

External name:

Amount

ⓘ

Description:

Amount

ⓘ

Create

Cancel

8. Click Create.

Add a new input variable

×

⌵

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

Variable type:

Input

ⓘ

Variable name:

Amount

ⓘ

Data type:

Aa Text

ⓘ

Default value:

\$500

ⓘ

External name:

Amount

ⓘ


Description:

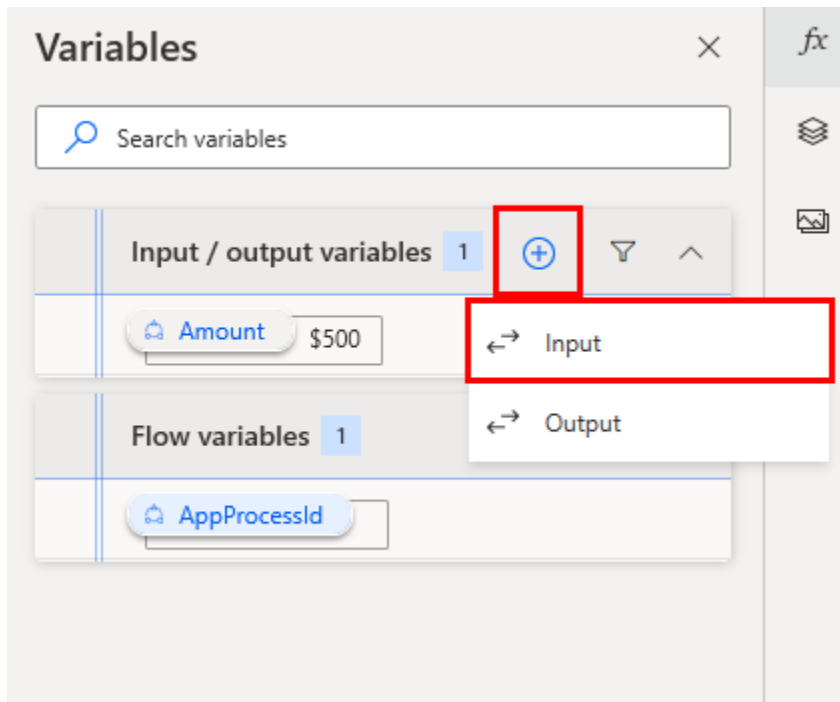
Amount

ⓘ

Create

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 email
- **Description:** Contact email

Add a new input variable



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

Variable type:

Input



Variable name:

Contact



Data type:

Aa Text



Default value:

b.friday@wingtiptoys.com



External name:

Contact



Description:

Contact email




Create







Cancel



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

Add a new input variable ×

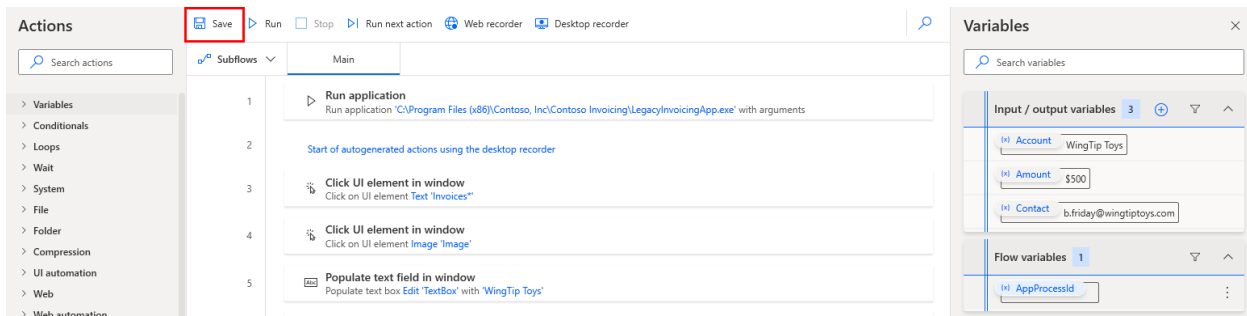
 Add a new variable to be used as input or output [More info](#)


Variable type:	<input type="text" value="Input"/>	
Variable name:	<input type="text" value="Account"/>	
Data type:	<input type="text" value="Aa Text"/>	
Default value:	<input type="text" value="WingTip Toys"/>	
External name:	<input type="text" value="Account name"/>	
Description:	<input type="text" value="Account name"/>	

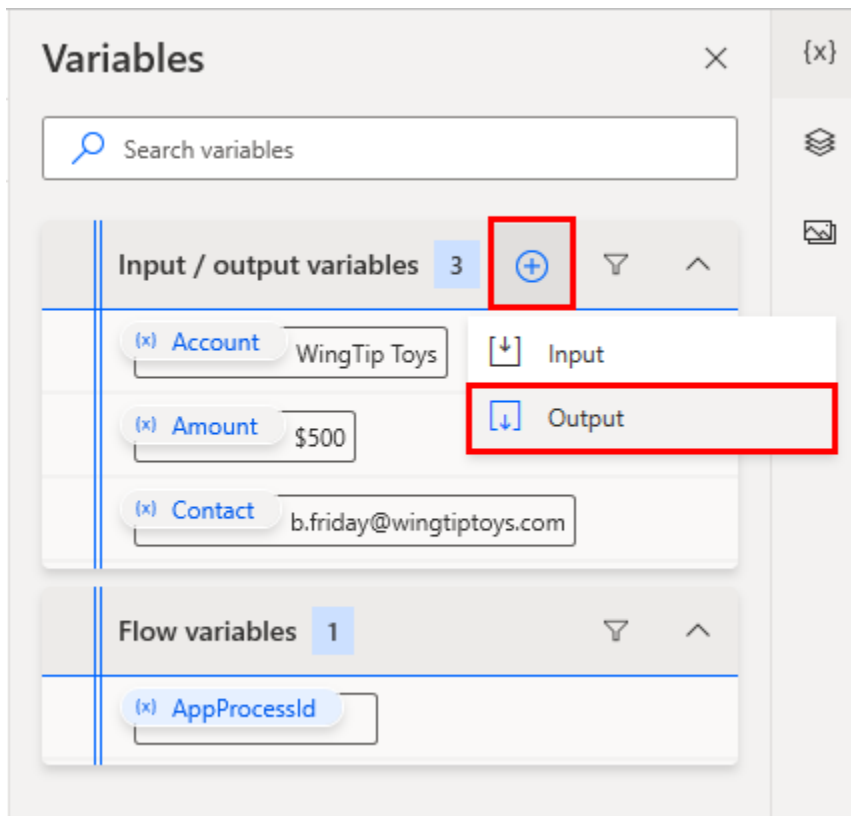
Create

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 Type:** Output
- **Variable Name:** InvoiceID
- **External Name:** InvoiceID
- **Description:** InvoiceID

Add a new output variable ×

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

Variable type:	<input type="text" value="Output"/>	i
Variable name:	<input type="text" value="InvoiceID"/>	i
External name:	<input type="text" value="InvoiceID"/>	i
Description:	<input type="text" value="InvoiceID"/>	i

Create

Cancel

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

Add a new output variable

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

Variable type:

Output

i

Variable name:

InvoiceID

i

External name:

InvoiceID

i

Description:

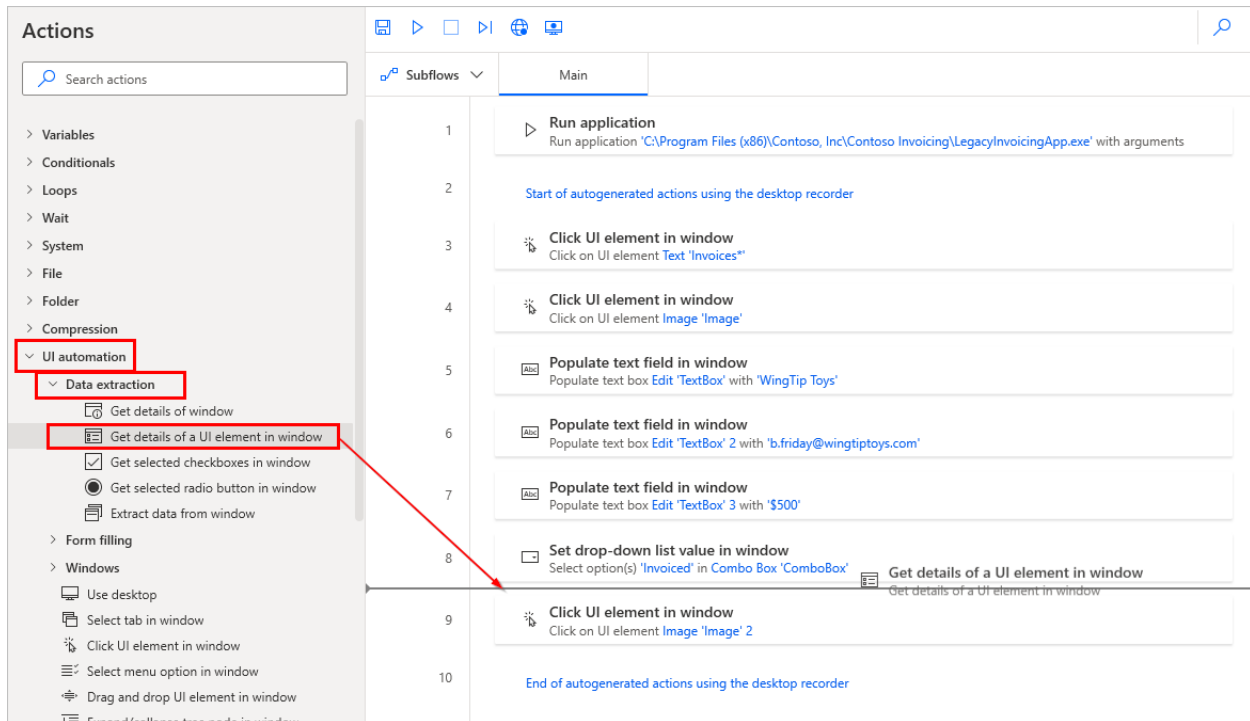
InvoiceID

i

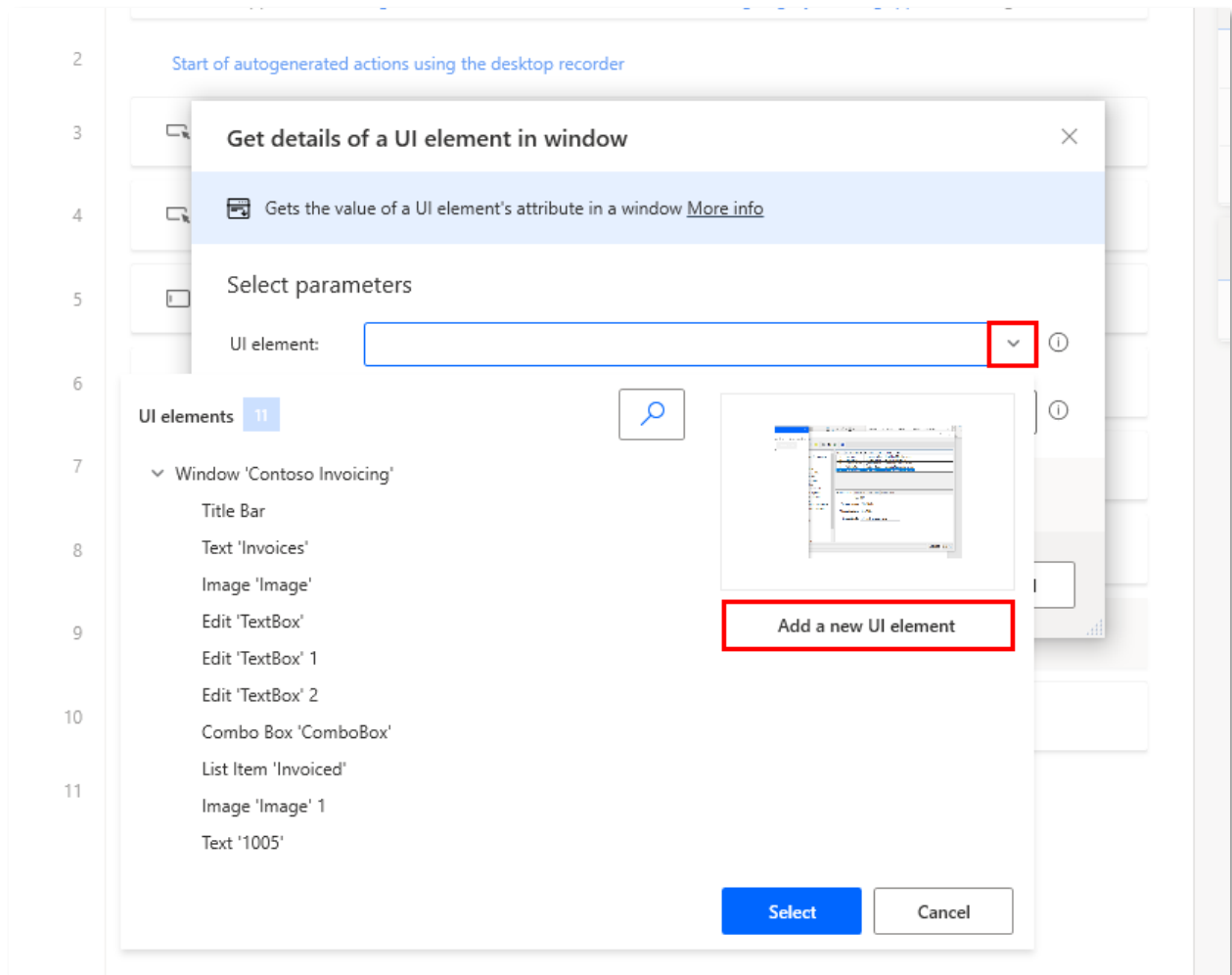
Create

Cancel

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 in window** from **UI automation > Data extraction** folder under **Step 8** in your actions.

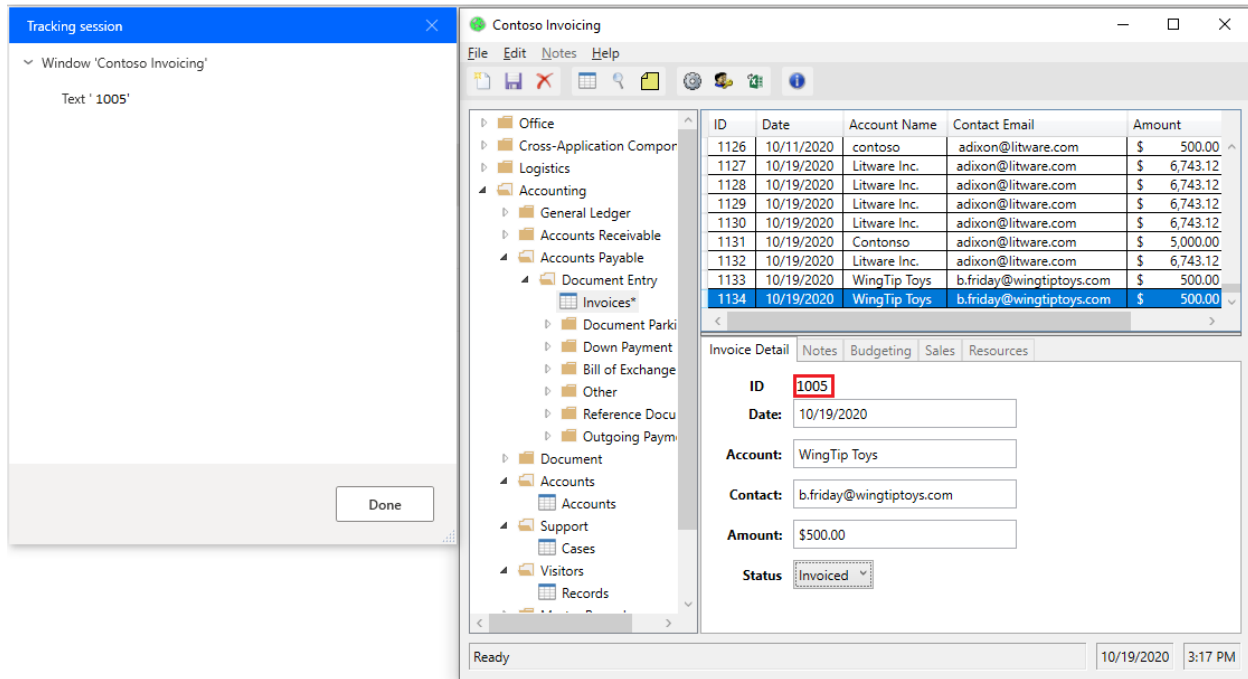


16. Click on the **UI element** dropdown and then click **Add a new UI element**.

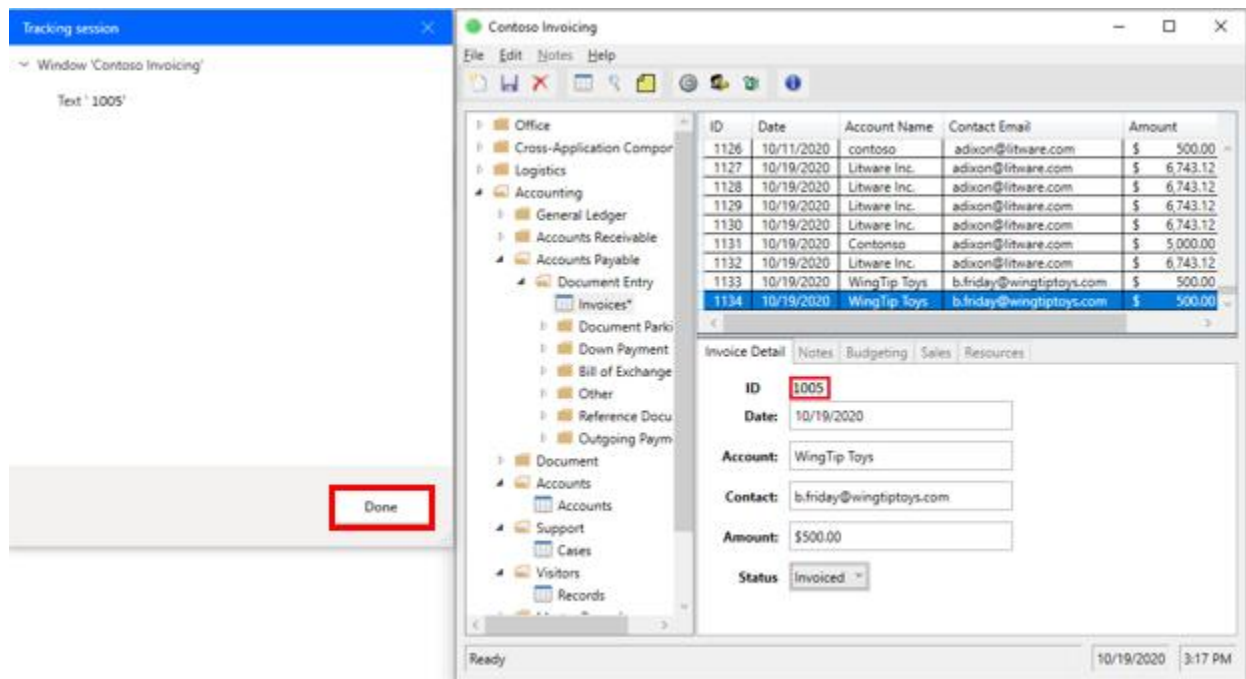


Note: A red rectangle appears in the browser while hovering the mouse over the elements.

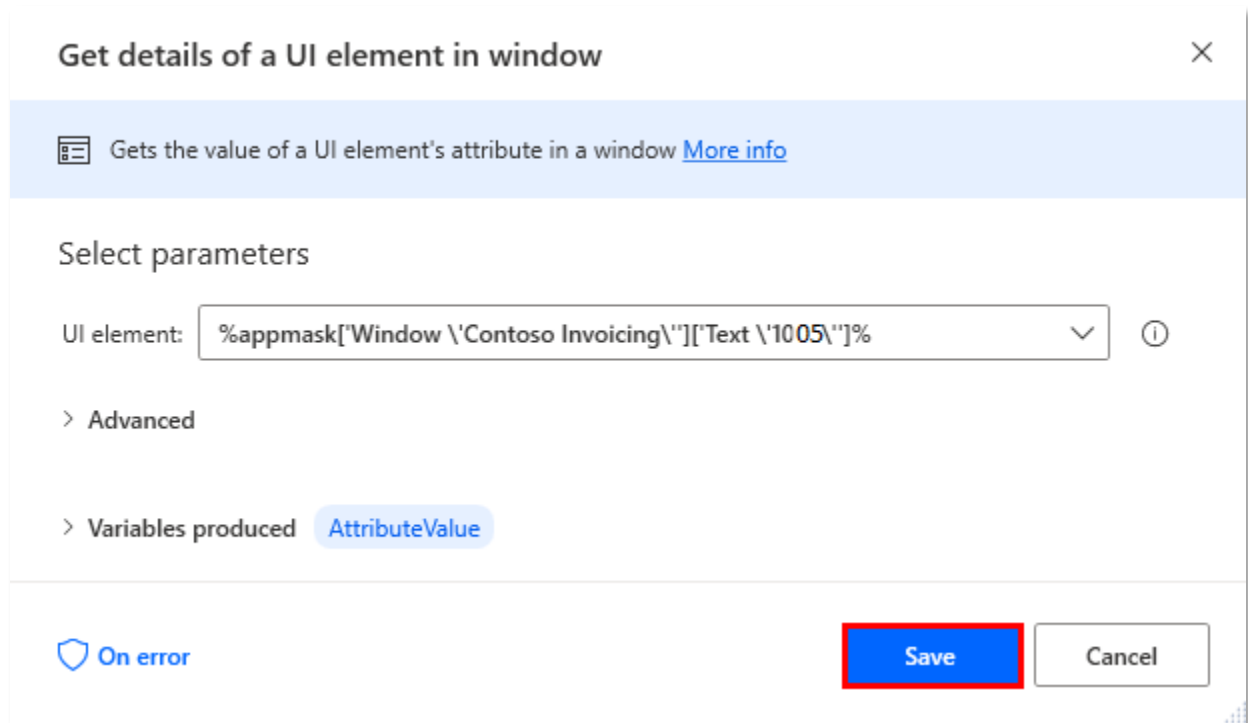
17. Go to **Contoso Invoicing app**, move the mouse over the value that belongs to ID number. Hold the **CTRL** key on your keyboard and then **Left-Click** to select the element (You may have a different ID than the number displayed here).



18. Once you selected the element, you will see the value appeared in tracking session. Click Done.

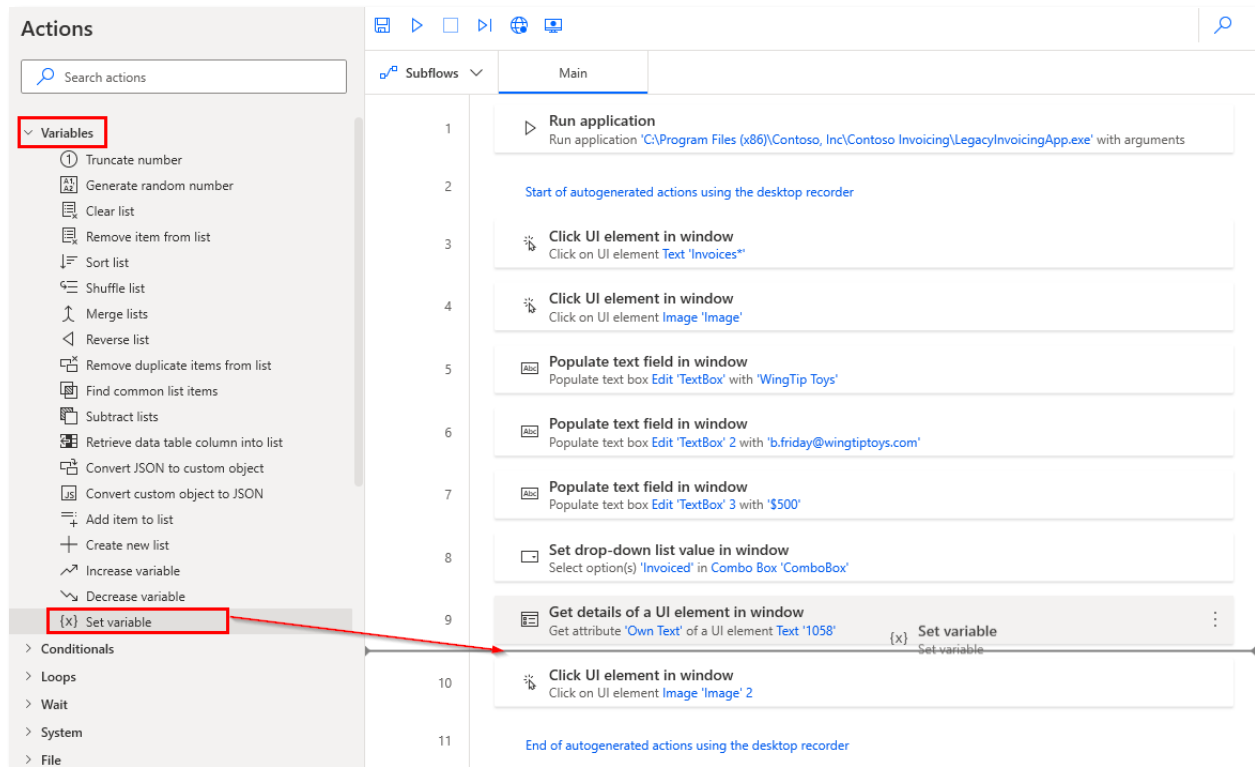


19. Click Save.



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 **Set variable** action from **Variables** folder under **Step 9**.



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**:

- **Set:** %InvoiceID%
- **To:** %AttributeValue%

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

22. Click **Save** to complete this step.

Set variable



{x} Set the value of a new or existing variable, create a new variable or overwrite a previously created variable [More info](#)

Set: **InvoiceID** {x}

To:

{x}



Save

Cancel

23. Go back to **Step 5** of your UI flow, click ... icon. Select **Edit**.

The screenshot shows the UI flow editor with a list of steps on the left and a right-hand panel. Step 5, 'Populate text field in window', is highlighted with a red box. A context menu is open over this step, also with a red box around the 'Edit' option. The right-hand panel shows a list of input/output variables, including 'Account', 'Amount', 'Contact', and 'InvoiceID'.

Subflows ▾ Main

- 1 Run application
Run application 'C:\Program Files (x86)\Contoso, Inc\Contoso Invoicing\LegacyInvoicingApp.exe' with arguments
- 2 Start of autogenerated actions using the desktop 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 'WingTip Toys'
- 6 Populate text field in window
Populate text box Edit 'TextBox' 2 with 'b.friday@wingtiptoy.com'
- 7 Populate text field in window
Populate text box Edit 'TextBox' 3 with '\$500'
- 8 Set drop-down list value in window
Select option(s) 'Invoiced' in Combo Box 'ComboBox'
- 9 Get details of a UI element in window
Get attribute 'Own Text' of a UI element Text '1058'
- 10 {x} Set variable
Set InvoiceID to AttributeValue
- 11 Click UI element in window
Click on UI element Image 'Image' 2
- 12 End of autogenerated actions using the desktop recorder

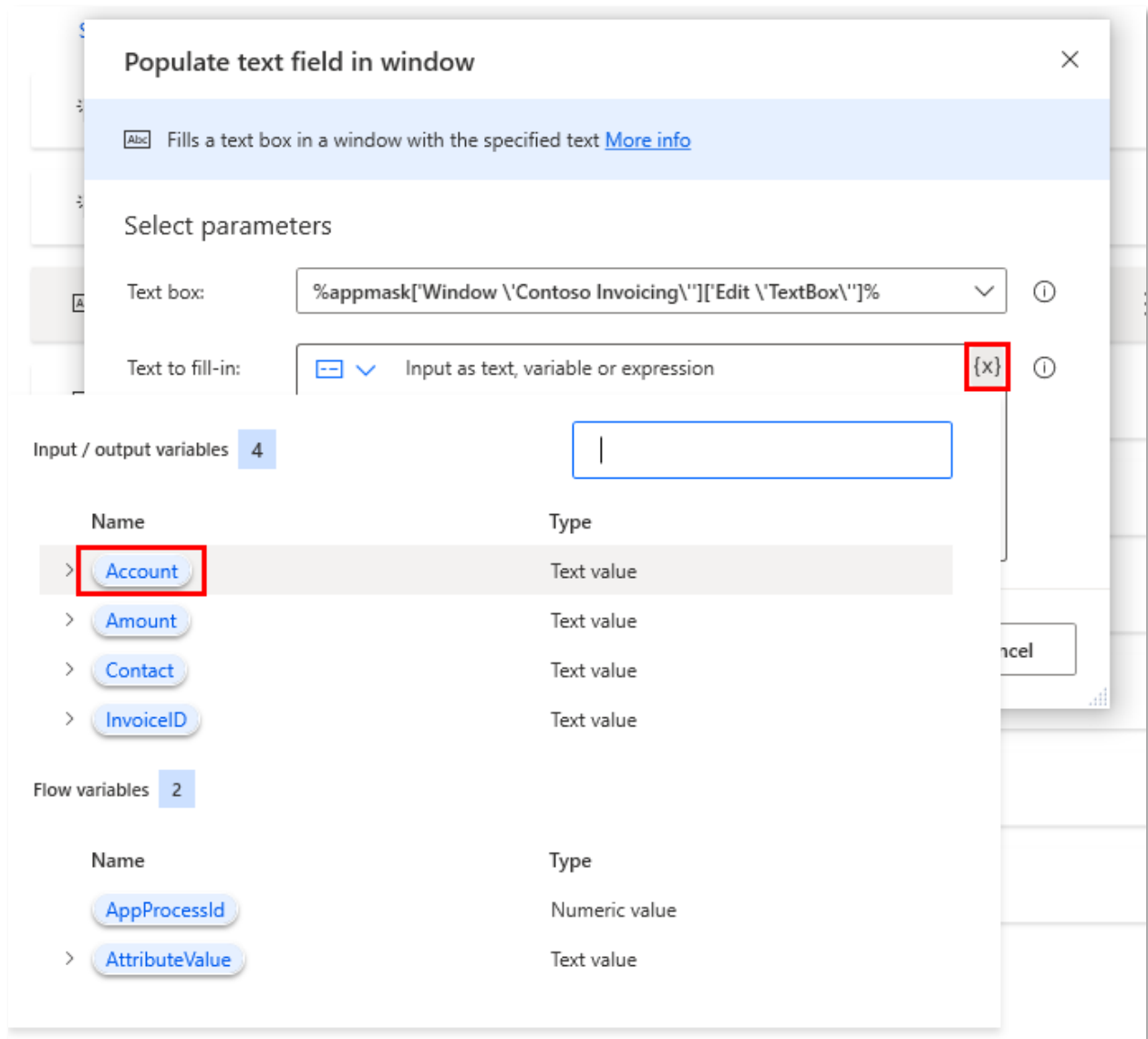
Input / output variables 4 +

- (x) Account WingTip Toys
- (x) Amount \$500
- (x) Contact b.friday@wingtiptoy.com
- (x) InvoiceID

Edit Enter


- Undo Ctrl+Z
- Redo Ctrl+Y
- Cut Ctrl+X
- Copy Ctrl+C
- Paste Ctrl+V
- Move up Ctrl+Alt+Shift+Up
- Move down Ctrl+Alt+Shift+Down
- Disable ☒
- Delete Delete

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



25. Click **Save**.

Populate text field in window ×



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

Select parameters


Text box:

ⓘ


Text to fill-in:

  Input as text, variable or expression {x} ⓘ

%Account%WingTip Toys

 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	<div> Populate text field in window Populate text box Edit 'TextBox' 2 with 'b.friday@wingtiptoy.com'</div>
7	<div> Populate text field in window Populate text box Edit 'TextBox' 3 with '\$500'</div>

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

1 **Run application**
Run application 'C:\Program Files (x86)\Contoso, Inc\Contoso Invoicing\Legacy\InvoicingApp.exe' with arguments

2 Start of autogenerated actions using the desktop 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**
Select option(s) 'Invoiced' in Combo Box 'ComboBox'

9 **Get details of a UI element in window**
Get attribute 'Own Text' of a UI element Text '1005'

10 **Set variable**
Set InvoiceID to AttributeValue


11 **Click UI element in window**
Click on UI element Image 'Image' 2

12 End of autogenerated actions using the desktop recorder

28. Click **Save**.

The screenshot shows the top toolbar of the Power Automate interface. The 'Save' button, represented by a floppy disk icon, is highlighted with a red rectangular box. Other buttons in the toolbar include 'Run' (play icon), 'Stop' (square icon), 'Run next action' (play icon with a vertical line), 'Web recorder' (globe icon), and 'Desktop recorder' (desktop monitor icon). Below the toolbar, the 'Subflows' dropdown is open, showing a list of subflows under the 'Main' tab. The subflows are numbered 1 through 7:

- 1. **Run application**
Run application 'C:\Program Files (x86)\Contoso, Inc\Contoso Invoicing\LegacyInvoicingApp.exe' with arguments
- 2. Start of autogenerated actions using the desktop 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

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

The screenshot shows the top toolbar of the Power Automate interface. The 'Run' button, represented by a play icon, is highlighted with a red rectangular box. Other buttons in the toolbar include 'Save' (floppy disk icon), 'Stop' (square icon), 'Run next action' (play icon with a vertical line), 'Web recorder' (globe icon), and 'Desktop recorder' (desktop monitor icon).

Check your knowledge

Lab 4

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 in order to return the value to a cloud flow?

- A. Create new list
- B. Set variable
- C. Add item to list
- D. Increase variable

Answer: B. Set variable - This will capture the Invoice ID. 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.

Information in this document, including URL and other Internet Web site references, is subject to change without notice. Unless otherwise noted, the example companies, organizations, products, domain names, e-mail addresses, logos, people, places, and events depicted herein are fictitious, and no association with any real company, organization, product, domain name, e-mail address, logo, person, place or event is intended or should be inferred. Complying with all applicable copyright laws is the responsibility of the user. Without limiting the rights under copyright, no part of this document may be reproduced, stored in or introduced into a retrieval system, or transmitted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise), or for any purpose, without the express written permission of Microsoft Corporation.

Microsoft may have patents, patent applications, trademarks, copyrights, or other intellectual property rights covering subject matter in this document. Except as expressly provided in any written license agreement from Microsoft, the furnishing of this document does not give you any license to these patents, trademarks, copyrights, or other intellectual property.

The names of manufacturers, products, or URLs are provided for informational purposes only and Microsoft makes no representations or warranties, either expressed, implied, or statutory, regarding these manufacturers or the use of the products with any Microsoft technologies. The inclusion of a manufacturer or product does not imply endorsement of Microsoft of the manufacturer or product. Links may be provided to third party sites. Such sites are not under the control of Microsoft and Microsoft is not responsible for the contents of any linked site or any link contained in a linked site, or any changes or updates to such sites. Microsoft is not responsible for webcasting or any other form of transmission received from any linked site. Microsoft is providing these links to you only as a convenience, and the inclusion of any link does not imply endorsement of Microsoft of the site or the products contained therein.

© 2020 Microsoft Corporation. All rights reserved.

Microsoft and the trademarks listed at

<https://www.microsoft.com/enus/legal/intellectualproperty/Trademarks/Usage/General.aspx>

are trademarks of the Microsoft group of companies. All other trademarks are property of their respective owners.