

Problem statement:

1. Create a Bot for Excel Automation
2. Create a Bot for PDF automation

Controls used:

1. Excel Advance: Open
2. Excel Advance: Switch to sheet
3. Excel Advance: Set cell formula
4. Excel Advance: Go to cell
5. Excel Advance: set cell
6. Excel Advance: go to next empty cell
7. Loop
8. String: trim
9. String: to number
10. If
11. Pdf: encrypt document
12. PdfUtils: read form fields
13. Number: Assign

14. Dictionary: get

1. Steps to create and execute bot for Excel Automation

Step 1: Create a new bot by clicking on Home page of Automation Anywhere, Click on Create bot option. Give the bot name and click on “Create an edit”.

Create Task Bot

Use a Task Bot for desktop and cloud applications. It can be invoked from a Process or another Task Bot.

Name: Practical 7 (Maximum = 50 characters)

Description (optional): (Maximum = 255 characters)

Folder: \Bots\ (Choose...)

Step 2: Add Excel advance: open option to open the excel file

Assistant Run Debug Close Save

Flow List Dual

Excel advanced: Open

Opens a Microsoft Excel spreadsheet or a CSV file. You can open the spreadsheet in read-only or read-write mode, with a password, and so on.
Required bot agent version: 21.112 or above

File SharePoint

Variable Control Room file Desktop file

Bots\Case Study for batch C (Exp 7A).xlsx (Choose...)

e.g. C:\Working\Excel1.xlsx

☐ Sheet contains a header

Step 3: Add Excel advance: Switch to sheet option and give the index of the sheet

Flow List Dual

Excel advanced: Switch to sheet

Activates a particular sheet in a Microsoft Excel file.
Required bot agent version: 21.112 or above

Activate sheet by

☒ Index

1 (e.g. 1 or 3)

☐ Name

Required (e.g. Original)


Session name

Step 4: Then go to the cell and set formula for the cell using the given action


Assistant Run

Flow List Dual


2 to \$counters

4. 

Excel advanced: Go to cell
: Go to the Specific cell "H2"

5. 

Excel advanced: Set cell form...
"=SUM(C\$counter\$:D\$counte..."

6. 

Excel advanced: Go to cell

Moves the cursor to a specific cell in a Microsoft Excel spreadsheet.
Required bot agent version: 21.112 or above

Cell option

☒ Specific cell

☐ Active cell

Session name


Session name Variable

Default


The name you gave the session when you opened it

Flow List Dual

2 to \$counters

4. 

Excel advanced: Go to cell
: Go to the Specific cell "H2"

5. 

Excel advanced: Set cell form...
"=SUM(C\$counter\$:D\$counte..."

Excel advanced: Set cell formula

Sets a formula in the active cell or a specific cell in a Microsoft Excel spreadsheet.
Required bot agent version: 21.112 or above

Set cell formula for

☒ Active cell

☐ Specific cell

Required

e.g. A5 or B10

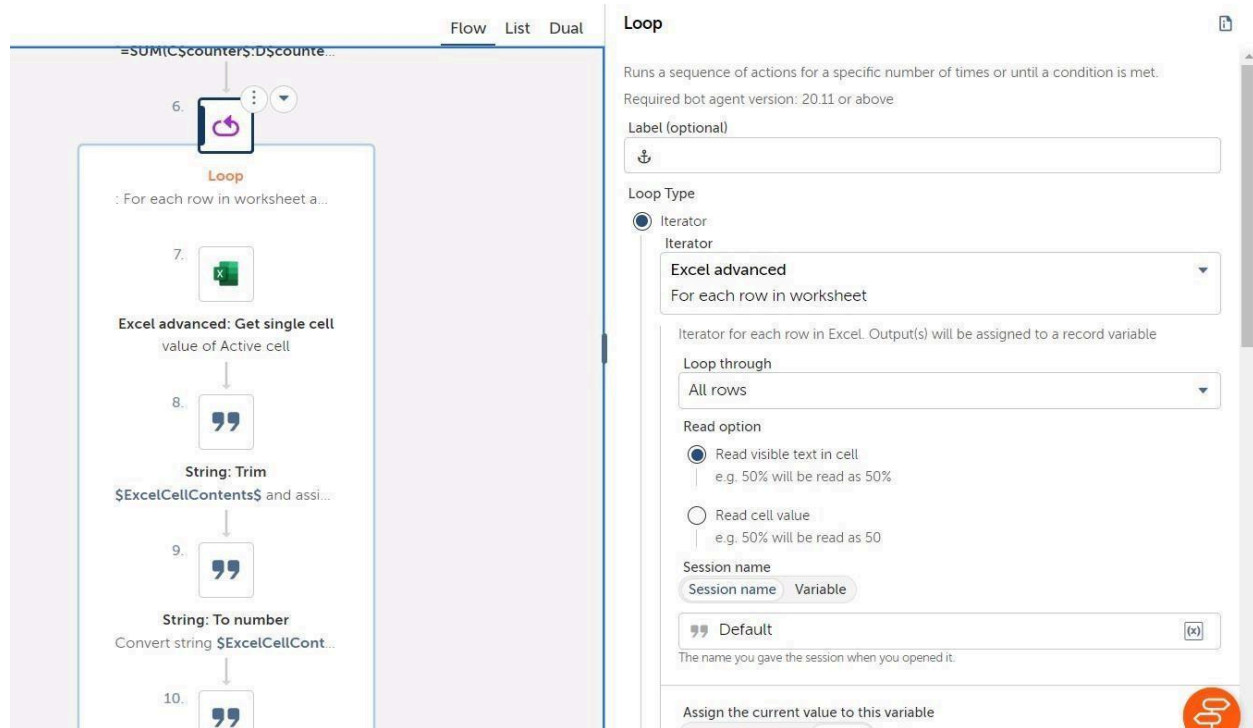
Enter formula for specific cell

=SUM(C\$counter\$:D\$counter\$)

Session name

Session name Variable

Step 5: Add a Loop for it to iterate through all the row in the sheet



Step 6: Include Excel advance: get single cell in a Microsoft Excel spreadsheet or a CSV file and stores them in a string variable and perform the required actions on it

The screenshot displays the Microsoft Power Automate interface. On the left, a flow is shown within a 'Loop' block. The flow consists of the following steps:

- Step 7: 'Excel advanced: Get single cell' with the description 'value of Active cell'.
- Step 8: 'String: Trim' with the description '\$ExcelCellContents\$ and assi...'.
- Step 9: 'String: To number' with the description 'Convert string \$ExcelCellCont...'.
- Step 10: 'String: To number' with the description 'Convert string \$counter\$ to a ...'.

On the right, the configuration pane for the 'Excel advanced: Get single cell' action is visible. It includes the following settings:

- Retrieves the values from a single cell in a Microsoft Excel spreadsheet or a CSV file and stores them in a string variable.**
- Required bot agent version:** 21.112 or above
- Cell option:** ☒ Active cell, ☐ Specific cell
- Cell address:** "Required" (e.g. A5 or B10)
- Read option:** ☒ Read visible text in cell (e.g. 50% will be read as 50%), ☐ Read cell value (e.g. 50% will be read as 50)
- Session name:** (x)
- Store cell contents to:** (x)

Step 7: Add Excel Advance: Go to next empty cell in the current worksheet. You can specify whether to find the empty cell toward the left, right, up, or down.

Practical /

12. **Number: Increment**
\$counter_int\$ by 1 and assign...

#

13. **Number: To string**
convert \$counter_int\$ to a str...

Excel advanced: Go to next e...
from active cell towards down

14.

If
number \$excel_int\$ Not equa...

15.

Excel advanced: Go to next empty cell

Finds the next empty cell in the current worksheet. You can specify whether to find the empty cell toward the left, right, up, or down.

Required bot agent version: 21.112 or above

Start from
☒ active cell
☐ specific cell
Cell address
Required
e.g. A5 or B10

Towards
☐ left
☐ right
☐ up
☒ down

Session name

Default (x)

The name you gave the session when you opened it.

Step 8: Add If condition that specifies until it is not equal to 0 do the following actions

The screenshot displays a workflow editor interface. On the left, a vertical timeline shows steps 14 through 18. Step 14 is an 'If' condition block. Step 15 is an 'Excel advanced: Switch to sheet by index = 3' block. Step 16 is an 'Excel advanced: Go to cell : Go to the Specific cell "C1"' block. Step 17 is an 'Excel advanced: Go to next e... from active cell towards down' block. Step 18 is an 'Excel advanced: Set cell' block. On the right, the 'If' condition configuration panel is open. It shows the condition type as 'Number', the source value as '\$excel_int\$', the operator as 'Not equal to(≠)', and the target value as '0'. Below the configuration panel are buttons for 'Add condition' and 'Add group'.

If

Specifies a condition and holds a sequence of actions to run if the condition is true.

Required bot agent version: 20.11 or above

Condition

▼ Condition

Number
Number condition

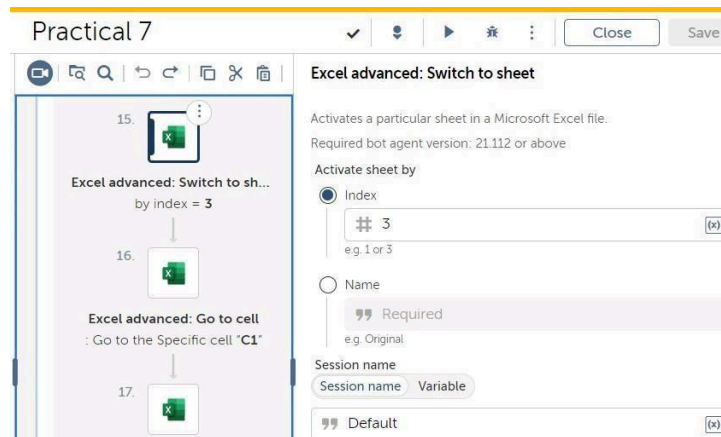
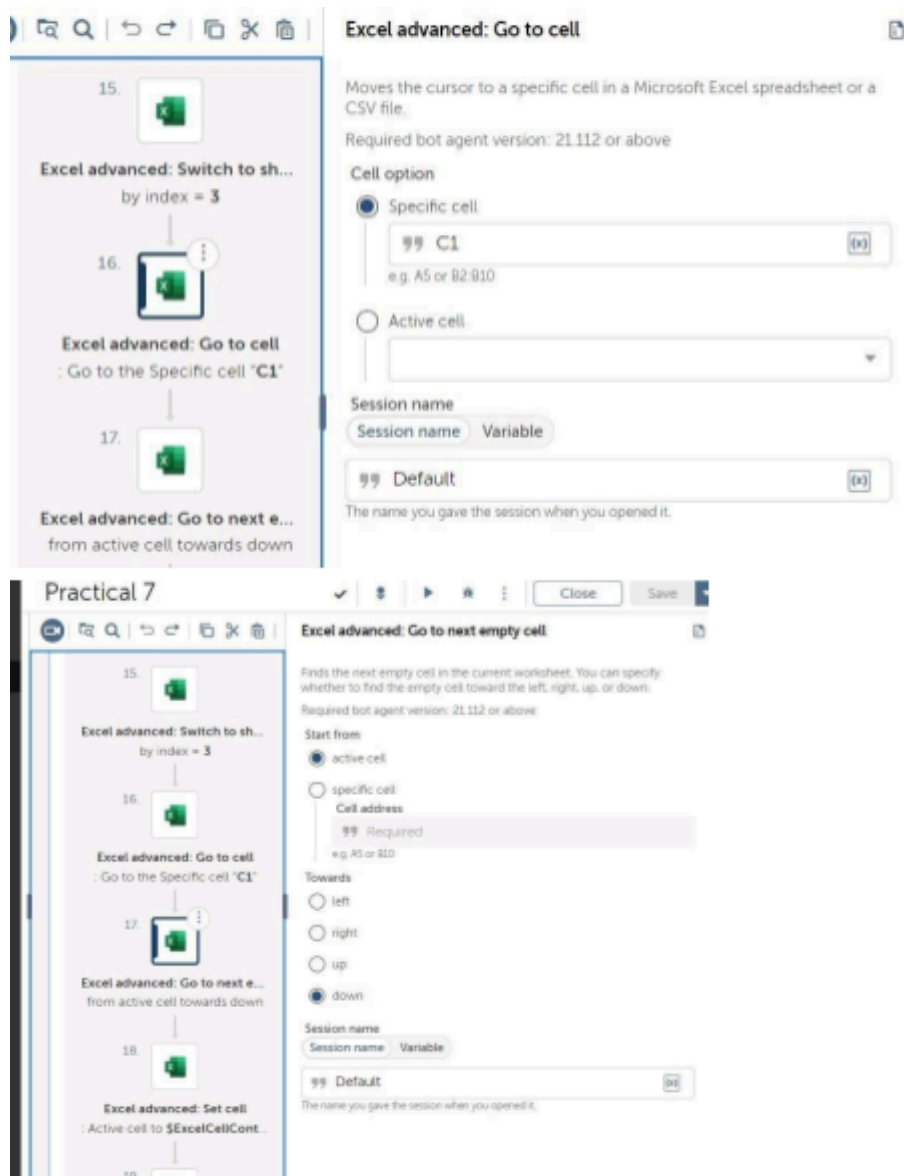
Checks the number variable condition.

Source value
\$excel_int\$ (x)

Operator
Not equal to(≠)


Target value
0 (x)

Add condition Add group

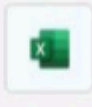
Step 9: Add Excel advance: Switch to sheet option to switch sheet**Step 10:** Add steps to go to cell then to next empty cell and set the cell value and switch back again to sheet 1

Practical 7


✓ 🔊 ▶ 📌 ⋮ Close Save

18.  ⋮

Excel advanced: Set cell
: Active cell to \$ExcelCellCont...

19. 

Excel advanced: Switch to sh...
by index = 1

20. 

Excel advanced: Set cell form...
*=SUM(C\$counter\$:G\$counte...

Excel advanced: Set cell

Sets a value in the Active cell or Specific cell in a Microsoft Excel spreadsheet or a CSV file. You can also use this action to set a formula

Required bot agent version: 21.112 or above

Cell option

☒ Active cell

☐ Specific cell

🔔 Required
e.g. A5 or B2:B10

Cell value

🔔 \$ExcelCellContents\$ (x)

e.g. Original

Session name

Session name Variable

🔔 Default (x)

The name you gave the session when you opened it.

Excel advanced: Switch to sheet

Activates a particular sheet in a Microsoft Excel file.

Required bot agent version: 21.112 or above

Activate sheet by

☒ Index

1 (x)
e.g. 1 or 3

☐ Name

🔔 Required
e.g. Original

Step 11: Repeat same steps for sheet 2

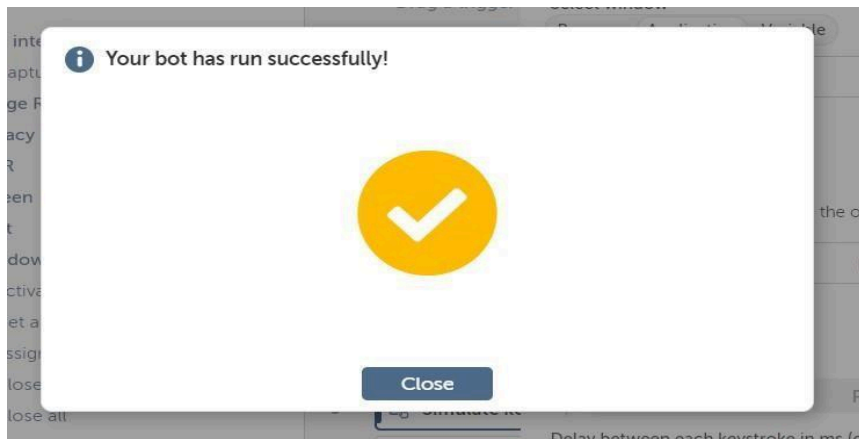
The screenshot shows a workflow editor interface. On the left, a vertical list of steps is visible: step 33 is an 'If' condition, step 34 is 'Excel advanced: Switch to sheet by index = 3', step 35 is 'Excel advanced: Go to cell : Go to the Specific cell "D1"', and step 36 is an Excel icon. The 'If' condition is selected, and its configuration panel is open on the right. The panel has a title 'If' and a description: 'Specifies a condition and holds a sequence of actions to run if the condition is true. Required bot agent version: 20.11 or above'. Below this is the 'Condition' section, which is expanded. It contains a 'Condition' dropdown set to 'Number', a 'Source value' field with '# \$excel_int\$', an 'Operator' dropdown set to 'Not equal to(≠)', and a 'Target value' field with '# 0'. Each value field has a small '(x)' icon to its right.

Step 12: Now go to final sheet and add set sum of all the cell using following formula

Practical 7

The screenshot shows a workflow editor interface. On the left, a vertical list of steps is visible: step 49 is 'Excel advanced: Go to next e... from active cell towards down', and step 50 is 'Excel advanced: Set cell form... "=SUM(C\$counter_3\$:D\$cou...'. The 'Excel advanced: Set cell formula' step is selected, and its configuration panel is open on the right. The panel has a title 'Excel advanced: Set cell formula' and a description: 'Sets a formula in the active cell or a specific cell in a Microsoft Excel spreadsheet or a CSV file. Required bot agent version: 21.112 or above'. Below this is the 'Set cell formula for' section, which has two radio buttons: 'Active cell' (selected) and 'Specific cell'. The 'Specific cell' option is disabled and has a 'Required' error message below it: 'e.g. A5 or B10'. Below this is the 'Enter formula for specific cell' field, which contains the formula '=SUM(C\$counter_3\$:D\$counter_3\$)' and has a small '(x)' icon to its right. At the bottom, there is a 'Session name' field with a dropdown menu showing 'Session name' and 'Variable'.

Step 13: Save and run the bot



2. Steps to create and execute bot for PDF Automation

Design a bot to automate task of encrypting pdf document:

Step 1: Create a new bot by clicking on Home page of Automation Anywhere, Click on Create bot option. Give the bot name and click on “Create an edit”.

Create Task Bot

Use a Task Bot for desktop and cloud applications. It can be invoked from a Process or another Task Bot.

Name	Description (optional)
<input type="text" value="Practical7b"/>	<input type="text"/>
<small>Maximum = 50 characters</small>	<small>Maximum = 255 characters</small>
Folder	<input type="button" value="Choose..."/>
<input type="text" value="\Bots\"/>	

Step 2: Add a pdf: encrypt pdf to encrypt the pdf and choose the pdf you want to encrypt

capabilities to unleash your organization's full potential.

✓ Saved

Assistant

▶ Run


⚙ Debug


⋮

Close

Save

Flow List Dual

1. 
Comment
"Q1"

2. 
PDF: Encrypt document
"Bots\flyer_sample.pdf". Save ...
↓
End

PDF: Encrypt document

Encrypts a PDF file
Required bot agent version: 20.11 or above

PDF path
Variable Control Room file Desktop file
Bots\flyer_sample.pdf X Choose...

User password (optional)
Credential Variable Insecure string
mylocker, Pdfcred, pdfpass X Pick...

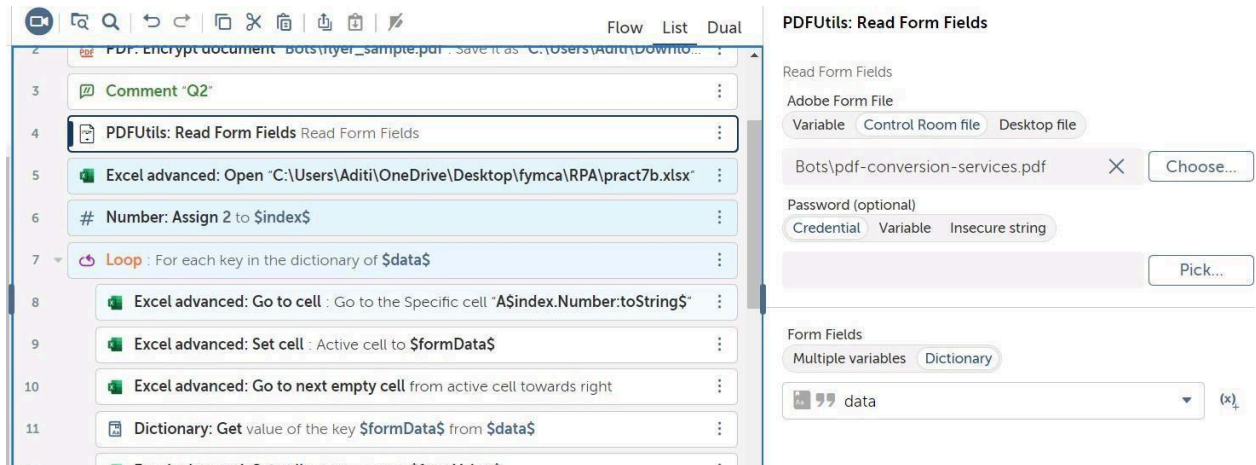
Owner password (optional)
Credential Variable Insecure string
Pick...

At least one password out of user password field and owner password field needs to be added.

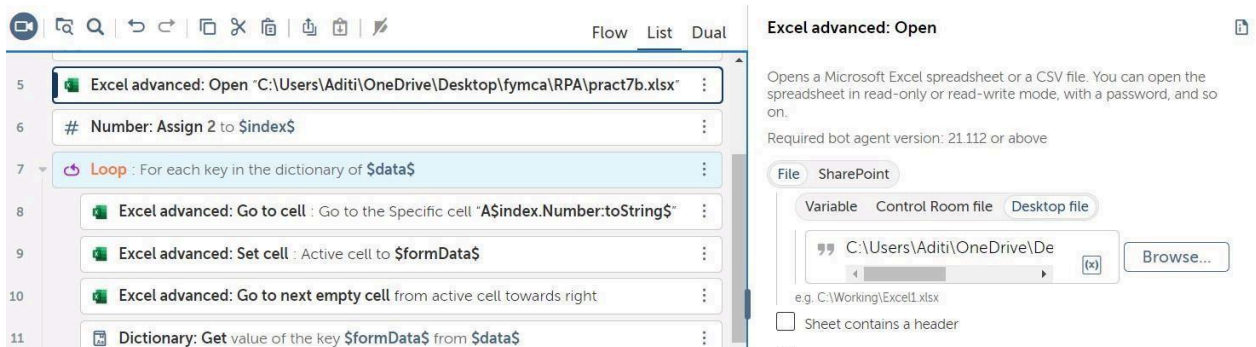
User Permissions to Apply
☒ Print
☒ Modify
☒ Copy
☒ Form Fill
☒ Document Assembly

Design a bot to extract text from single pdf and store in excel sheet

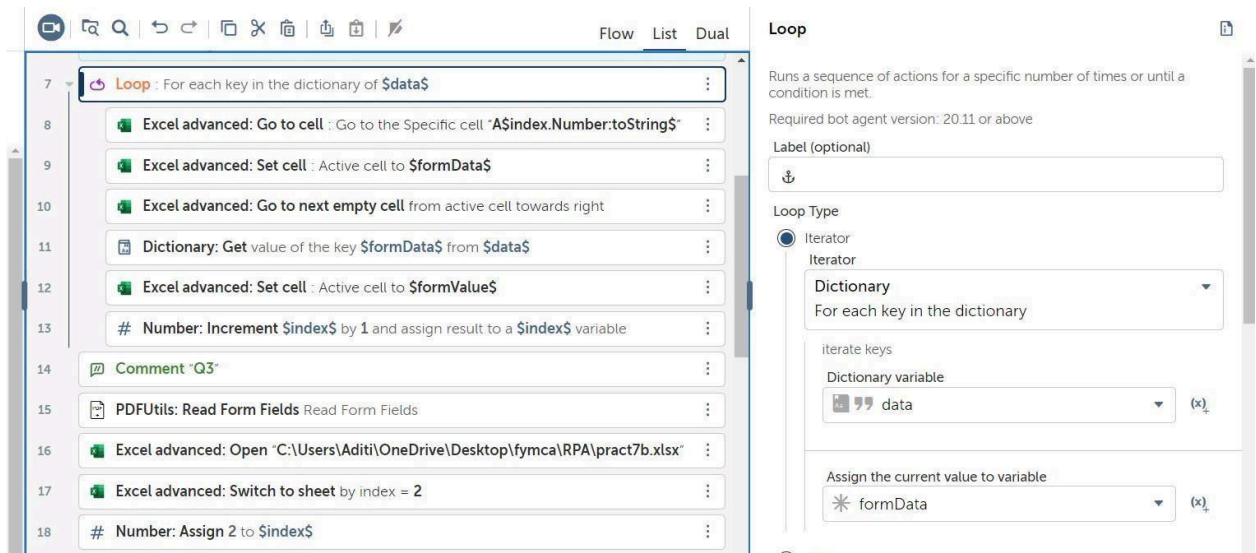
Step 1: Add PdfUtils: read form fields action to read from pdf and select the pdf you want to read from and save it in a dictionary



Step 2: Add excel:open action to open the excel sheet you want to write in



Step 3: Add loop to iterate through all the key in the dictionary



Step 4:

- Add excel advance: go to cell action to go to the specified cell you want to write in
- To set what has to be written in the cell use excel advance:set cell action and set the cell value as formdata

- Then go to next empty cell and select the direction of the next empty cell you want to goto using the excel advance:go to next empty cell action
- Then using the dictionary get action check if a key exists in a dictionary variable and returns the corresponding value
- Then using the same excel advance:set cell action and set the cell value as formValue

The screenshot displays the UiPath Studio interface with a workflow on the left and the configuration for the 'Excel advanced: Go to cell' action on the right.

Workflow (Left Panel):

- Step 7: Loop : For each key in the dictionary of `$data$`
- Step 8: Excel advanced: Go to cell : Go to the Specific cell "`A$index.Number.toString$`"
- Step 9: Excel advanced: Set cell : Active cell to `$formData$`
- Step 10: Excel advanced: Go to next empty cell from active cell towards right
- Step 11: Dictionary: Get value of the key `$formData$` from `$data$`
- Step 12: Excel advanced: Set cell : Active cell to `$formValue$`
- Step 13: # Number: Increment `$index$` by 1 and assign result to a `$index$` variable

Configuration (Right Panel):

Excel advanced: Go to cell

Moves the cursor to a specific cell in a Microsoft Excel spreadsheet or a CSV file.

Required bot agent version: 21.112 or above

Cell option

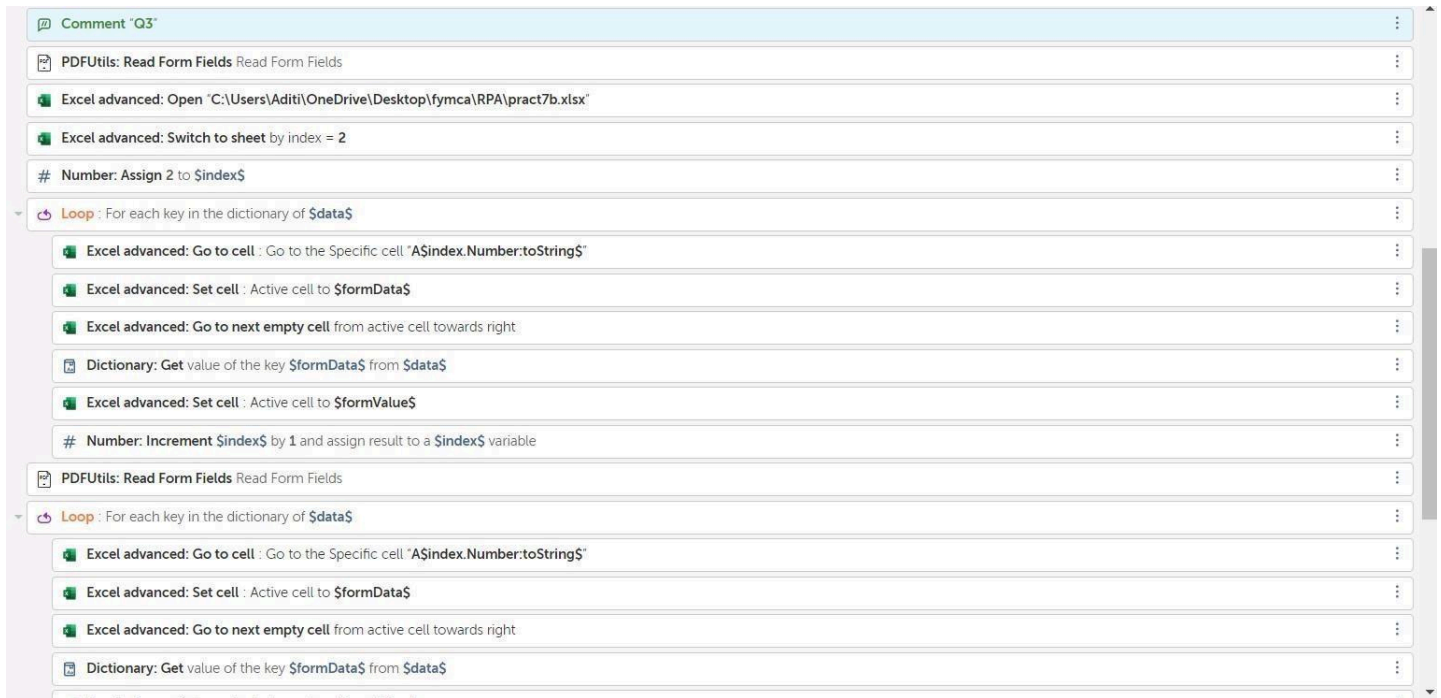
☒ Specific cell

`A$index.Number.toString$` (x)

e.g. A5 or B2:B10

☐ Active cell

To Design a bot to extract text from multiple pdf and store in excel sheet repeat the same step as above question 3 times as we are reading from 3 pdf.



Conclusion:

In conclusion, this practical demonstration showcases the power and efficiency of automation, particularly within the realms of data management and document processing. By leveraging Automation Anywhere, we seamlessly streamlined the process of writing data into Excel sheets, encrypting PDFs, and extracting both single and multiple PDFs into structured Excel formats. This not only enhances productivity by reducing manual intervention but also ensures accuracy and consistency in data handling.