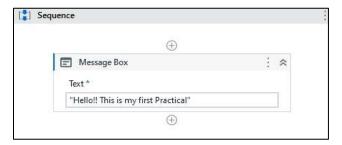
### PRACTICAL NO. 1

## A. Aim: Create a Sequence based project.

## Steps: -

- **Step 1:** Open UiPath Studio. Start a Blank Process and give a name to it.
- **Step 2:** Drag and Drop a Sequence Activity from the Activity Panel in the workflow.
- **Step 3:** Drag and drop a Message Box Activity in the Sequence Activity and type anything that you want to print. (e.g."Hello!This is my first Practical".)

Step 4: Run



# **Output:**



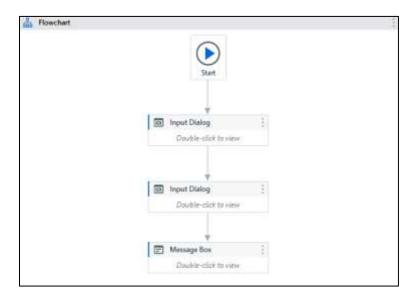
### **Conclusion:**

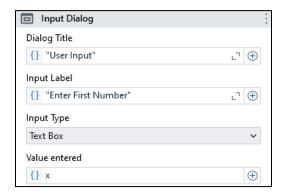
The practical to demonstrate Sequence based project was successfully executed.

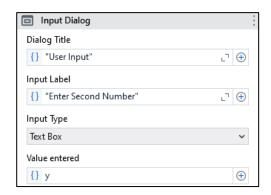
## B. Aim: Create a Flowchart based project.

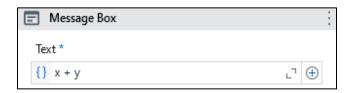
- **Step 1:** First, add a Flowchart from the Activities panel into the Designer panel.
- Step 2: Take two Input dialog activities (for entering the numbers to be added) inside flowchart
- **Step 3:** Create the variables x and y to save the values.
- **Step 4:** Next, add a Message box activity to perform a mathematical operation (addition). To show sum of the two numbers write: x + y

Step 5: Run



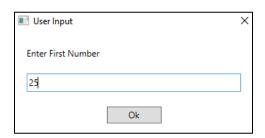


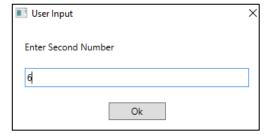




# **ROBOTIC PROCESS AUTOMATION**

# **Output:**





# Addition of two numbers:

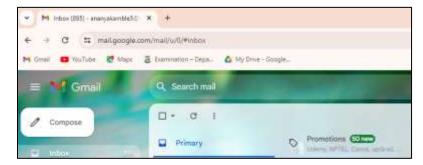


# **Conclusion:**

The practical to demonstrate Flowchart based project was successfully executed.

C. Aim: Create an UiPath Robot which can empty a folder in Gmail solely on basis of recording.

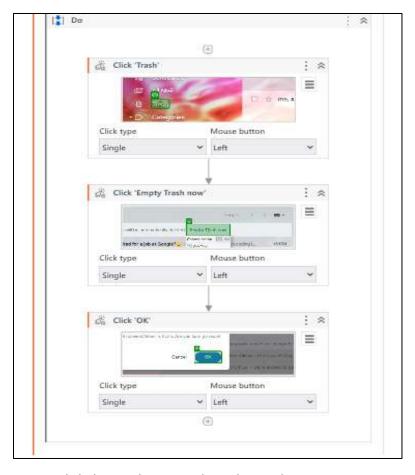
- **Step 1:** Open UiPath Studio. Start a blank Process and give it a meaningful name.
- **Step 2:** Drag and drop "Sequence" activity in the designer panel.
- Step 3: Open Gmail.



**Step 4:** Click on "App/ Web Recorder" Icon to record the following steps using the "Use Browser" Activity.



**Step 5:** Record the following steps Click on the "Bin", then click on "Empty Bin" and Click on Yes to Confirm the Empty Bin action. Save and confirm to return back to UiPath Studio. This will create a Recorder Sequence in the workspace.



**Step 6:** Click the Run button and see the result.

# **Output:**



# **Conclusion:**

The practical to empty a folder in Gmail solely on basis of recording was successfully executed.

#### PRACTICAL NO. 2

A. Aim: Automate UiPath Number Calculation (Addition, Subtraction, Multiplication, Division of numbers).

Steps: -

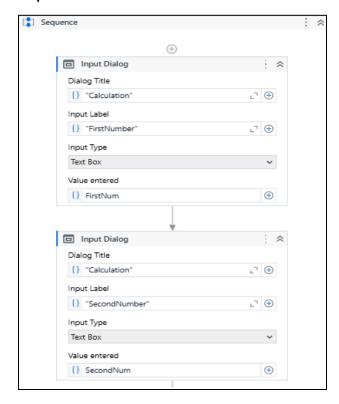
Step 1: First Drag and Drop a two input Activity in the sequence from the Activity Panel.

**Step 2:** In First input dialog type "Calculation" for Dialog Title and then Input Label as a "FirstNumber" and Value entered as FirstNum.

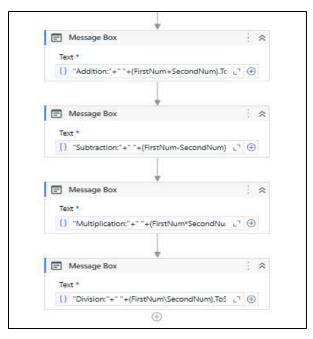
**Step 3:** In Second input dialog Dialog Title same as First Input dialog and then Input Label as a "SecondNumber" and Value entered a SecondNum.

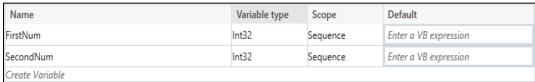
**Step 4:** Again, take four message box from Activity Panel. In the text field type "Addition:"+" "+(FirstNum+SecondNum).ToString and It is same for all Subtraction, Division and Multiplication.

Step 5: Run.

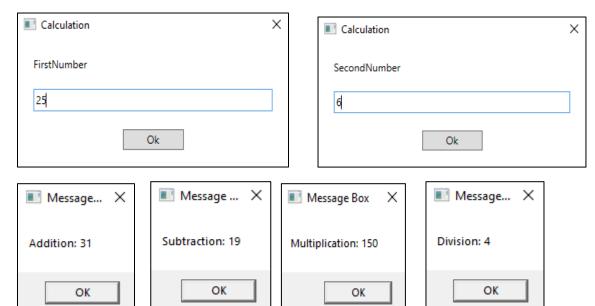


### **ROBOTIC PROCESS AUTOMATION**





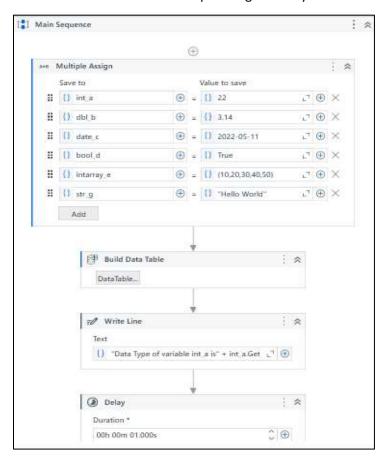
## Output:



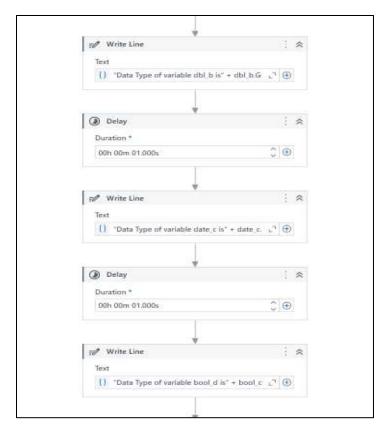
### **Conclusion:**

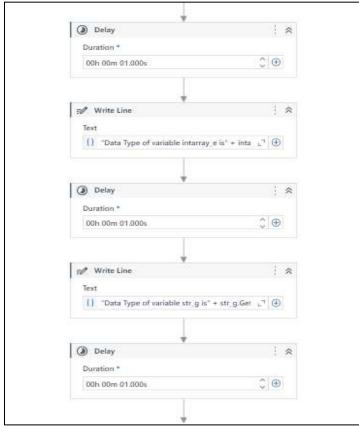
The practical to automate UiPath number calculation for Addition, Subtraction, Multiplication, Division was Successfully executed.

- B. Aim: Create an automation UiPath project using different types of variables (number, datetime, Boolean, generic, array, datatable).
- Steps: -
- **Step 1:** Drag and drop Sequence Activity from the Activity Panel.
- **Step 2:** Now drag and drop a Multiple Assign Activity in the flowchart.
- **Step 3:** Add six Multiple Assign Activity (assign int\_a, dbl\_b, date\_c, bool\_d intarray\_e, str\_g, variables). Create a variable for each Multiple Assign Activity and save it.

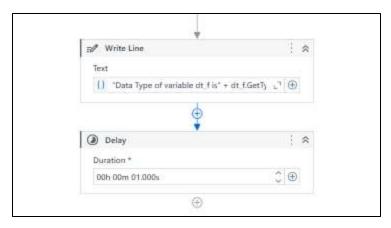


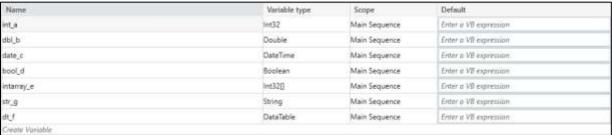
## **ROBOTIC PROCESS AUTOMATION**





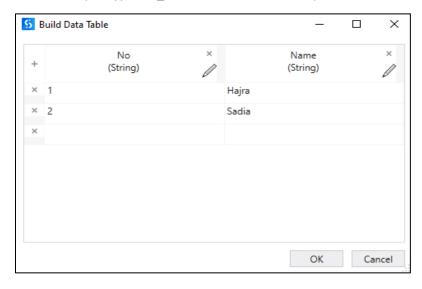
#### **ROBOTIC PROCESS AUTOMATION**





Step 4: For Data Table drag and drop Build Data Table Activity under Multiple assign activity.

**Step 5:** Add a column in Build Data Table and name it as No and Name. In Property Panel of Build Data Table in output type dbl\_b.(variable created in Step 5).



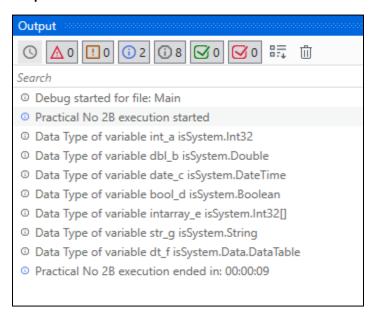
**Step 6:** Now take a Write Line and Delay Activity.

**Step 7:** In the text Field of Write line Activity for number type "Data type of variable int\_a is " + int\_a.GetTypeOf.ToString and set duration property if Delay Activity.

**Step 8:** Repeat Step 8 and Step 9 for other Multiple Assign Activity as well(dbl\_b, bool\_d, intarray\_e, dt\_f, str\_g).

Step 9: Run

## **Output:**



## **Conclusion:**

The practical to automate UiPath project using different types of variables (number, datetime, Boolean, generic, array, datatable) was successfully executed.

#### PRACTICAL NO. 3

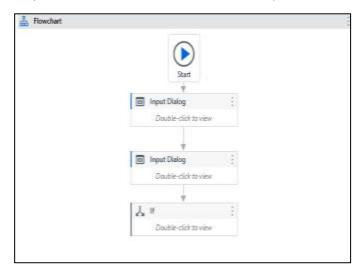
A. Aim: Create an automation UiPath using decision statements.

### i. If Activity:

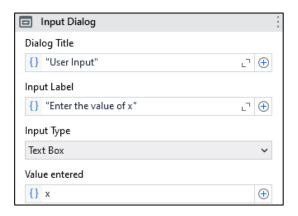
Steps: -

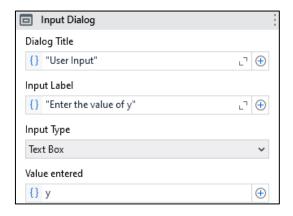
**Step 1:** Open UiPath Studio. Start a BlankProcess.

**Step 2:** Add a Flowchart from the Activities panel.



**Step 3:** Add two Input dialog activities. Create two integer variables, x and y.

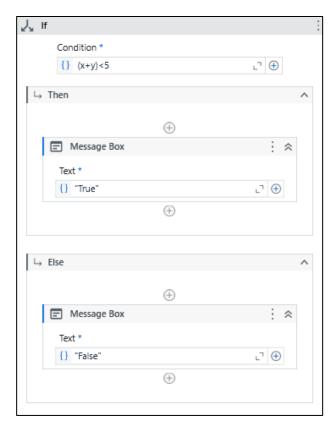




**Step 4:** In the Properties panel, change the label name and title name of both the Input dialog activities.

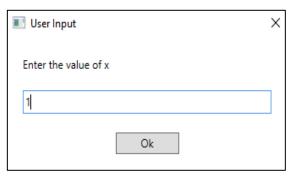
- **Step 5:** Now, specify these names of these two variables in the Result property of both the Input dialog activities.
  - **Step 6:** Now add the If activity to the Designer panel:
- **Step 7:** In the condition part, x+y<2, check whether it is true or false. Add two Write line activities and type "True" in one and "False" in the other:

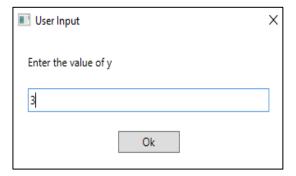
# **ROBOTIC PROCESS AUTOMATION**



Step 8: Run

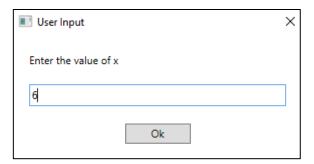
# **Output:**







# **ROBOTIC PROCESS AUTOMATION**

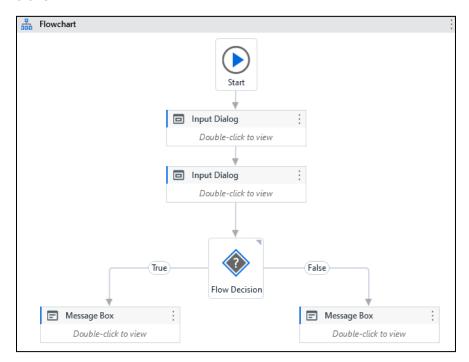


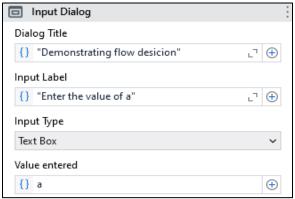


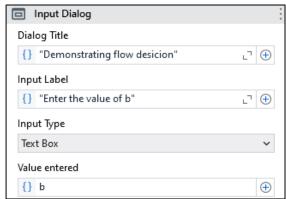


#### ii. Flow decision:

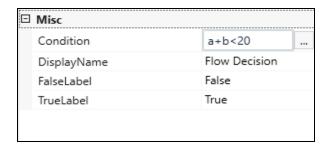
- Step 1: First, add a Flowchart from the Activities panel into the Designer panel.
- Step 2: Add a Sequence activity within the Flowchart.
- Step 3: Take two Input dialog activities (for entering the numbers to be added) inside the Sequence activity.
- Step 4: Create the variables a and b to save the values. Assign these variables in Input dialog activity.
- Step 5: Next, add a Message box activity to perform a mathematical operation. In our case, the sum of the two numbers is less than 20: a + b < 20
- Step 6: Now, add a Flow Decision activity to check the mathematical operation.
- Step 7: If true, the Flow Decision will flow toward the true branch. Otherwise, it will flow towards false branch.







### **ROBOTIC PROCESS AUTOMATION**

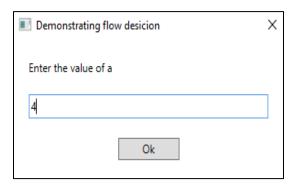


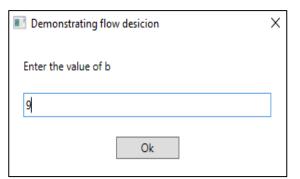




# **Output:**

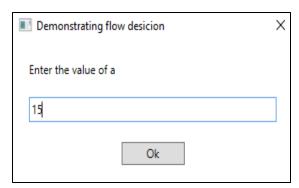
# 1) Sum is less than 20:

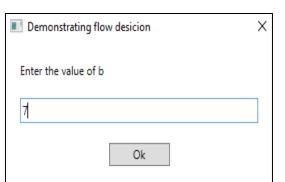






# 2) Sum is greater than 20:





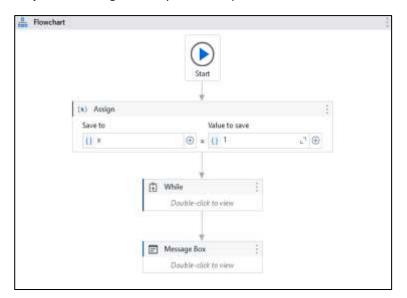
# **ROBOTIC PROCESS AUTOMATION**



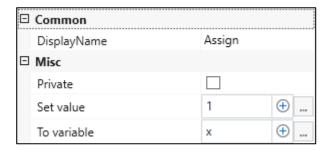
# **Conclusion:**

The practical to demonstrate an automation in UiPath using decision statements was successfully executed.

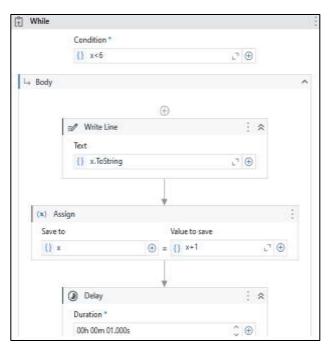
- B. Aim: Create an automation UiPath using looping statements.
- i. While:
- Steps: -
- **Step 1:** Open UiPath Studio. Start a BlankProcess. Give it a name.
- **Step 2:** Add flowchart in the Designer Panel, then add a Sequence.
- **Step 3:** Add Assign Activity under sequence.







Step 4: Create an integer variable x in the result under property panel and save it. Assign x=1



**Step 5:** Add a While activity from the Activities panel.

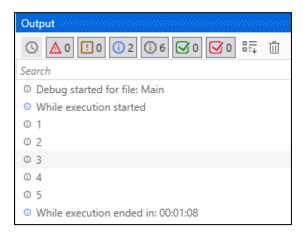
**Step 6:** In the body section of the While activity, add an Writeline activity and type in text field as: x.ToString.

**Step 7:** Under Writeline Activity again take Assign Activity. Set x = x+1 in the value section of the Assign activity to increment the result each time by 1 until the loop is executed.

**Step 8:** In the condition section, set the condition x<6. The loop will continue until the condition holds true.

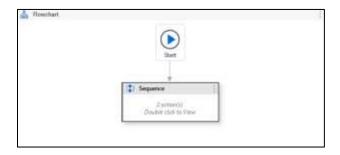
Step 9: Run.

## **Output:**



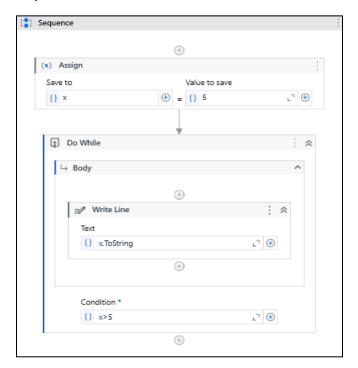
### ii. Do...While:

- Step 1: Open UiPath Studio. Start a BlankProcess. Give a name to it.
- **Step 2:** Add flowchart in the Designer Panel, then add a Sequence.
- **Step 3:** Add Assign Activity under sequence.



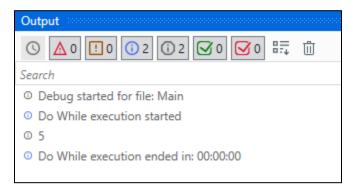
Name	Variable type	Scope	Default
х	Int32	Flowchart	5

- **Step 4:** Create an integer variable x in the result under property panel and save it. Assign x=5
- **Step 5:** Add a Do while activity from the Activities panel.
- **Step 6:** In the body section of the Do while activity, add an Writeline activity and type in text field as: x.ToString.
- **Step 7:** In the condition section, set the condition x>5.



## Step 8: Run

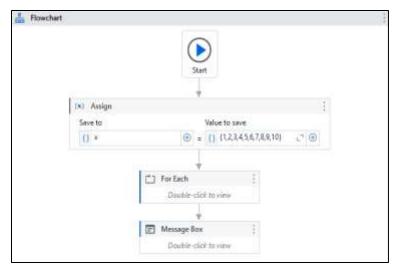
## **Output:**

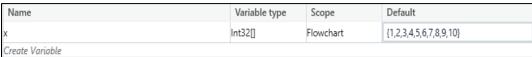


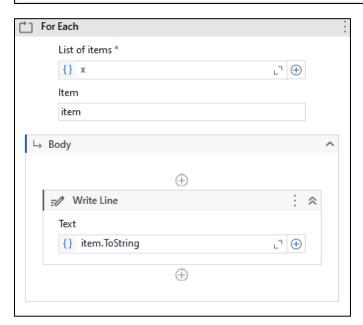
# iii. For each:

- Step 1: Open UiPath Studio. Start a Blank Process and give a name to it.
- Step 2: Add a Flowchart activity in the workflow.
- **Step 3:** Next, add a For each activity inside the flowchart.
- **Step 4:** Create two variables; an integer variable named item, and an array integer variable named x. Then, set them to the text field.
- **Step 5:** Now, assign a default value to the integer variable x.
- **Step 6:** Under the For Each activity, add a Write line activity.
- **Step 7:** In the Write line activity, type item. To String in the text field.
- Step 8: Run.

## **ROBOTIC PROCESS AUTOMATION**

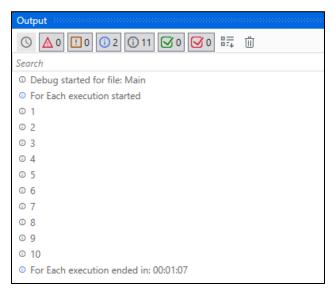








# **Output:**



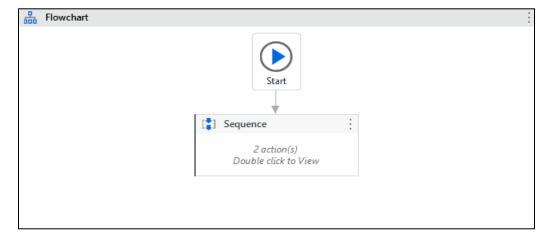


## iv. Switch:

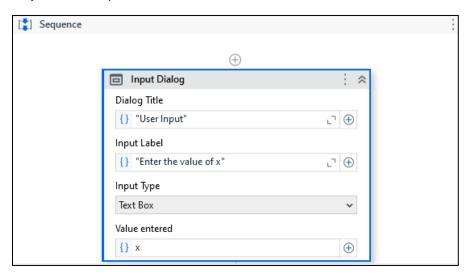
# Steps: -

**Step 1:** Open UiPath Studio.Start a Blank Process and give a name to it.

**Step 2:** Add flowchart and inside it add a Sequence activity.

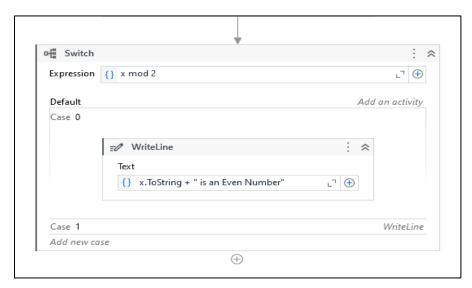


- Step 3: Add an Input dialog activity inside the Sequence. Create variable x of type int.
- **Step 4:** Add the Switch activity under the Input dialog activity.
- **Step 5:** In the Expression field, set x Mod 2 to check whether the number is divisible by 2 or not.

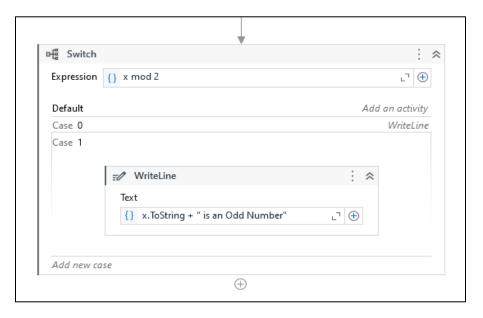




**Step 6:** Add a Write line activity to the Default section i.e. case 0 and type in the text field, x.Tostring + " is an even number.



**Step 7:** Now, create Case 1, add the one other Write line activity to it, and in the text field, x.Tostring + " is an odd number.

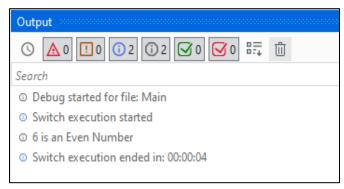


Step 8: Run

# **Output:**

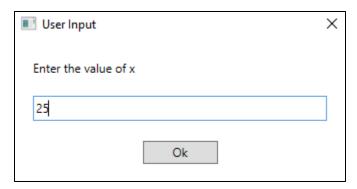
Checking the condition for an Even number:

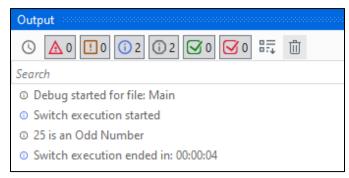




### **ROBOTIC PROCESS AUTOMATION**

Checking the condition for an Odd number:





# **Conclusion:**

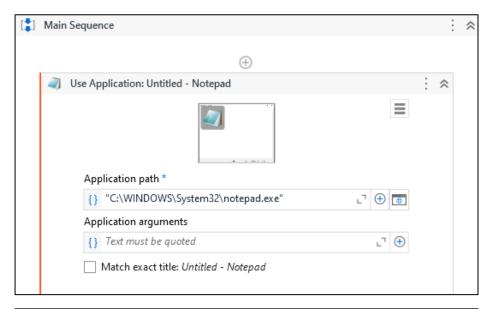
The practical to create an automation in UiPath project using decision statements was successfully executed.

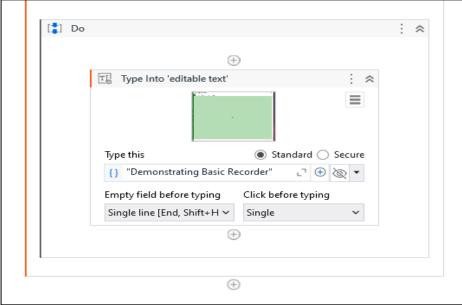
### **PRACTICAL NO. 4**

A. Aim: Automate any process using basic recording.

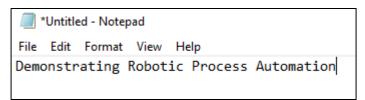
- **Step 1**: Open UiPath Studio. Start a BlankProcess. Give it a name.
- **Step 2:** Drag and drop a Flowchart activity. Now, click on the Recording icon and choose Basic recording. You can record your actions on the desktop on your own and then save it.

Step 3: Click on basic recorder.





**Step 4:** Next, type some text in the notepad.



**Step 5:** Pressed the Esc key to exit the recording and click on the Save and Exit button.



**Step 6:** Now, a recording sequence is generated in our Designer panel. Connect this sequence to the Start node.

### Step 7: Run

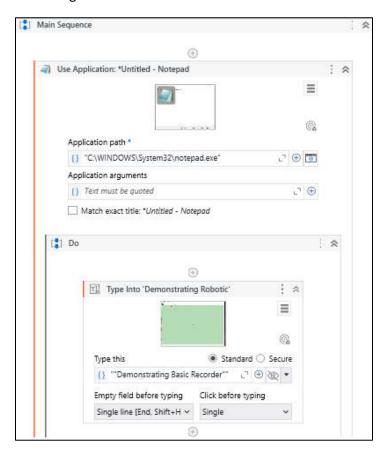


## **Conclusion:**

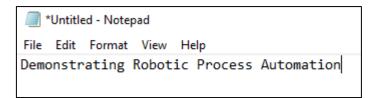
The practical to automate any process using basic recording was successfully executed.

## B. Aim: Automate any process using desktop recording.

- Step 1: Open UiPath Studio. Start a BlankProcess and give a name to it.
- **Step 2:** Drag and drop a Flowchart activity. Now, click on the Recording icon and choose Desktop recording.



**Step 3:** Next, type some text in the notepad.

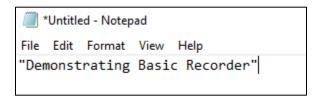


**Step 4:** Then, press the Esc key to exit the recording and clicked on the Save and Exit button.



**Step 5:** Now, a recording sequence is generated in our Designer panel. Connect this sequence to the Start node.

**Step 6:** Hit the Run button to see the result. In the following screenshot, you can see the sequence generated by the Basic recorder.

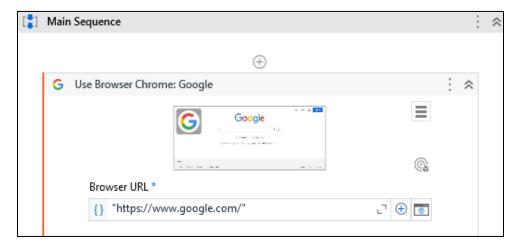


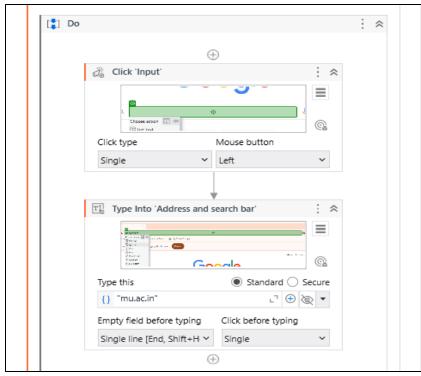
### **Conclusion:**

The practical to automate any process using desktop recording was successfully executed.

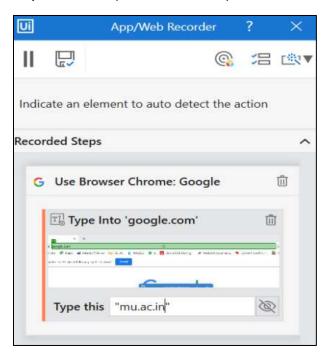
## C. Aim: Automate any process using web recording.

- **Step 1:** Open UiPath Studio. Start a BlankProcess. Give the BlankProcess a name.
- Step 2: Drag and drop a Flowchart activity.
- **Step 3:** Then, start the recording by clicking on the Record button of the web recorder.
- **Step 4:** Next, type some text in the search bar of Google and performed the Click activity.



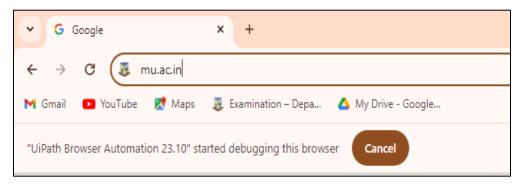


Step 5: Then, we pressed the Esc key to exit the recording and clicked on the Save and Exit button.



**Step 6:** Now, a recording sequence is generated in our Designer panel. Connect this sequence to the Start node.

**Step 7:** Hit the Run button to see the result. In the following screenshot, you can see the sequence generated by the Web recorder.



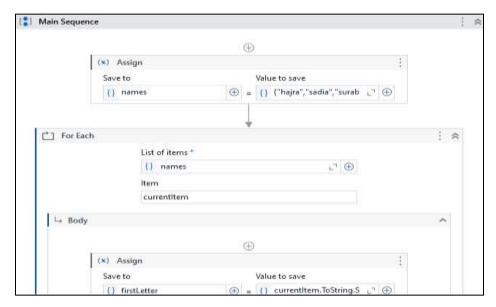
### **Conclusion:**

The practical to automate any process using web recording was successfully executed.

#### PRACTICAL NO. 5

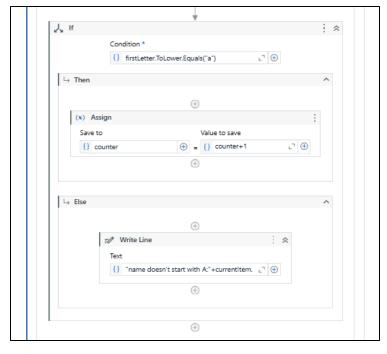
A. Aim: Consider an array of names. We have to find out how many of them start with the letter "a". Create an automation where the number of names starting with "a" is counted and the result is displayed.

- Step 1: Open UiPath Studio. Start a BlankProcess and give a name to it.
- **Step 2:** Drag and Drop Sequence Activity from the Activity Panel.
- **Step 3:** Add an Assign Activity from the Activities panel and assign a variable names with Array of String Type and assign name = {"hajra", "sadia", "surabhi", "ahmad", "abuzar", "arif", "aamna"}.



- **Step 4:** Now take a For Each Activity. Assign the default variable "currentitem" as name. For the body part drag and drop If Activity.
- **Step 5:** Set the condition for If Activity as firstLetter.ToLower.Equals("a") and assign a variable name as a firstLetter.
- **Step 6:** In the then part of If Activity drag and drop an Assign Activity and set it as counter = counter+1 and assign a variable name as a counter.
- **Step 7:** In the Else part of If Activity drag and drop Writeline Activity and set it as "name doesn't start with A:" +currentItem.ToString.
- **Step 8:** Now take Message Box Activity under Sequence Activity and in text field type "Total names starting with A is:"+counter.ToString.

#### **ROBOTIC PROCESS AUTOMATION**

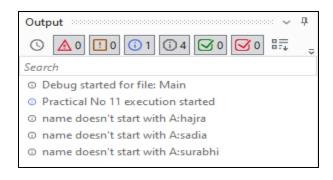


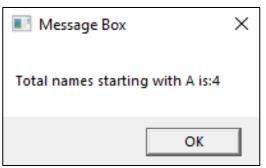




Step 9: Run.

## **Output:**





## **Conclusion:**

The practical to create an automation where the number of names starting with "a" is counted and the result is displayed successfully.

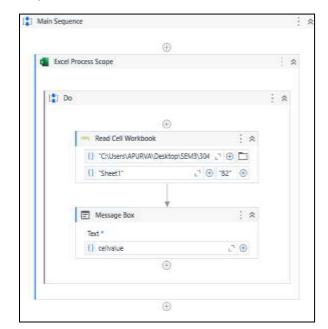
#### PRACTICAL NO. 6

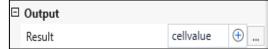
A. Aim: Create an application automating the read, write and append operation on excel file.

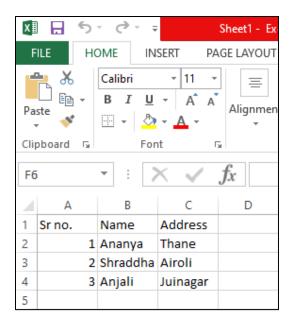
#### Read Cell

- **Step 1:** Drag and drop the Sequence Activity.
- Step 2: Drag and drop Excel Process Scope Activity in the Sequence Activity.
- **Step 3:** In Excel Process Scope drag and drop the Read Cell Workbook Activity.
- **Step 4:** Create an excel file with some data and save it. Give a desired path of excel file in the Read Cell Workbook. Also give the "sheet name" (Sheet1) and assign the cell you want to read("b2"). Create a variable cellvalue by pressing ctrl+k. In the output filed of Rad cell Activity write created variable: cellvalue
- **Step 5:** Add Message Box Activity and connect it to Read Cell Workbook. In the Text field, type variable "cellvalue" created in Step 5.

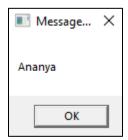
Step 6: Run.







# **Output:**

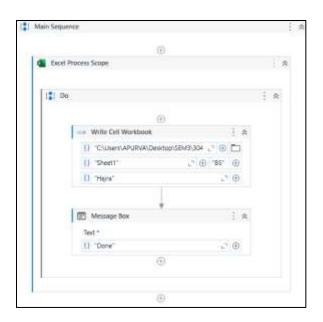


## Write Cell

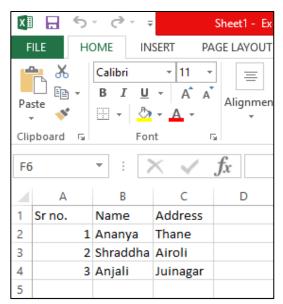
- **Step 1:** Drag and drop the Sequence Activity from the Activity Panel.
- **Step 2:** Drag and drop Excel Process Scope Activity in the Sequence Activity.
- **Step 3:** In Excel Process Scope drag and drop the Write Cell Workbook Activity.
- **Step 4:** Give a desired path of already existing excel file in the Write Cell Workbook. Also give the "sheet name" (Sheet1) and assign the cell you want to write("b5"). Type anything you want in quotes for text field.
- Step 5: Add Message Box Activity and connect it to Write Cell Workbook. Write "done"
- Step 6: Run.

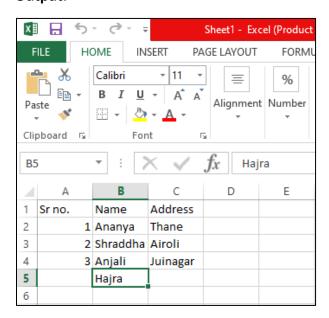
#### M.Sc.IT Part 2 Sem 3

#### **ROBOTIC PROCESS AUTOMATION**



## Existing workbook:





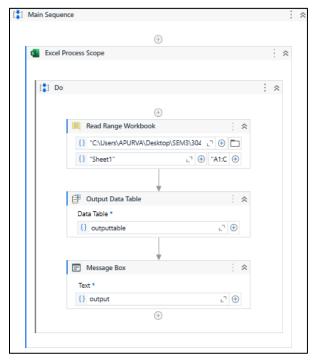


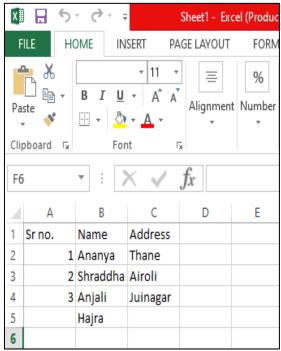
## • Read Range

Steps: -

- **Step 1:** Drag and drop the Sequence Activity from the Activity Panel.
- **Step 2:** Drag and drop Excel Process Scope Activity in the Sequence Activity.
- **Step 3:** In Excel Process Scope drag and drop the Read Range Workbook Activity.
- **Step 4:** Create an excel file with some data and save it. Give a desired path of excel file in the Read Range Workbook. Also give the "sheet name" (Sheet1) and assign the cell you want to read ("A1:C4"). Create a variable outputtable by pressing ctrl+k.
- **Step 5:** Add Output Data Table Activity under Read Range Workbook Activity. Set output of Read range activity-outputtable. Create a variable "output" of string type and set its input to outputtable and output to "output"
- **Step 6:** Add Message Box Activity and connect it to Read Range Workbook. In the Text field, type variable "output"

Step 7: Run.









## Write Range

#### Steps: -

**Step 1:** Drag and drop the Sequence Activity from the Activity Panel.

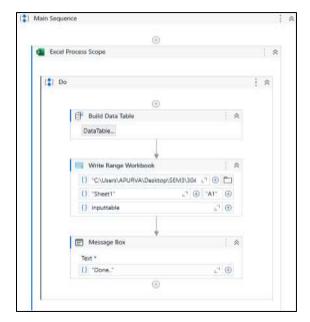
**Step 2:** Now drag and drop the Build Data Table. Create three columns Roll No, Name and Location. Create a variable inputtable by pressing ctr+k.

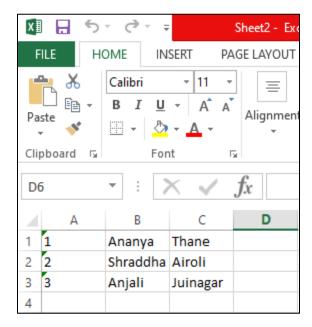
**Step 3:** Take Write Range Workbook Activity under Build Data Table.

Step 4: Create an empty excel file with and save it. Give a desired path of excel file in the Write Range Workbook. Also give the "sheet name" (Sheet1) and assign the cell you want to write from ("A1"). Type the created variable inputtable in the text.

**Step 5:** Add Message Box Activity and connect it to Write Range Workbook. In the Text field, type "Done".

Step 6: Run.







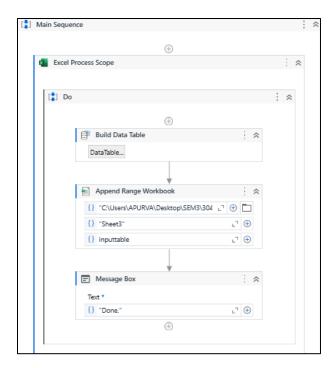
# Append Range

## Steps: -

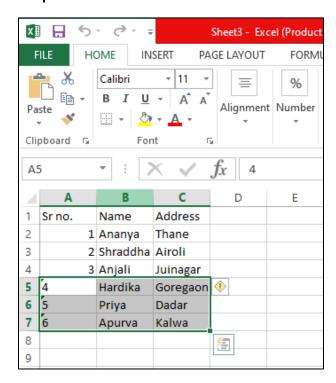
- **Step 1:** Drag and drop the Sequence Activity from the Activity Panel.
- **Step 2:** Now drag and drop the Build Data Table. Create three columns Roll No, Name and Location. Create a variable inputtable by pressing ctrl+k.
- Step 3: Take Append Range Workbook Activity under Build Data Table.
- **Step 4:** Create an excel file with some data and save it. Give a desired path of excel file in the Append Range Workbook. Also give the "sheet name" (Sheet1). Type the created variable inputtable in the text field.
- **Step 5:** Add Message Box Activity and connect it to Write Range Workbook. In the Text field, type "Done"
- Step 6: Run.

#### M.Sc.IT Part 2 Sem 3

#### **ROBOTIC PROCESS AUTOMATION**



# **Output:**





# **Conclusion:**

The practical to automate read, write and append operation on excel file was successfully executed.

B. Aim: Automate the process to extract data from an excel file into a data table and vice versa.

Steps: -

**Step 1:** Open UiPath Studio. Start a BlankProcess. Give the BlankProcess a name.

**Step 2:** Drag and drop the Sequence Activity from the Activity Panel.

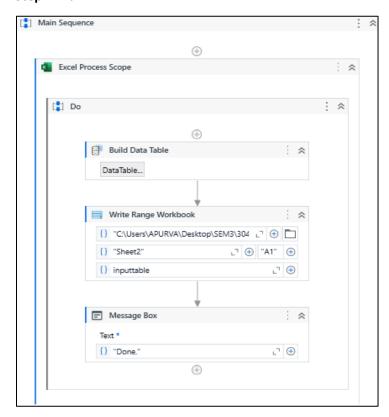
**Step 3:** Now drag and drop the Build Data Table. Create three columns Roll No, Name and Location. Create a variable inputtable by pressing ctrl+k.

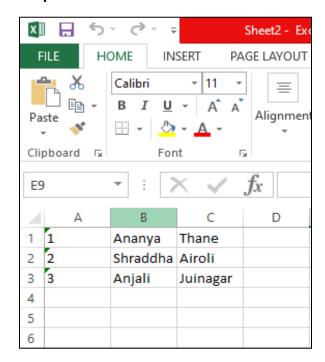
**Step 4:** Take Write Range Workbook Activity under Build Data Table.

**Step 5:** Create an empty excel file with and save it. Give a desired path of excel file in the Write Range Workbook. Also give the "sheet name" (Sheet2) and assign the cell you want to write from ("A1"). Type the created variable inputtable in the text field.

**Step 6:** Add Message Box Activity and connect it to Write Range Workbook. In the Text field, type "Done".

Step 7: Run.







## **Conclusion:**

The practical to automate the process to extract data from an excel file into a data table and vice versa was successfully executed.

#### PRACTICAL NO. 7

A. Aim: Implement the attach window activity.

**Table Extraction:** 

Steps: -

Step 1: Open UiPath Studio.

**Step 2:** Start a BlankProcess. Give the BlankProcess a name.

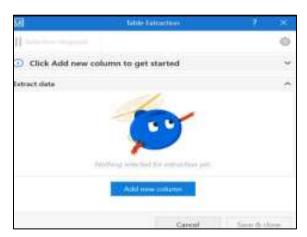
**Step 3:** Drag and drop the Sequence Activity from the Activity Panel.

**Step 4:** Now drag and drop the Use Application/Browser. Indicate the screen where you want to extract data(Google Chrome -> <a href="https://www.w3schools.com/html/html">https://www.w3schools.com/html/html</a> tables.asp).

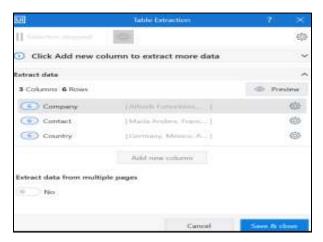
**Step 5:** In Ribbon Panel go to the Design and click on Table Extraction. Add Table Extraction in Do part of Use Application/Browser.



**Step 6:** Open the website where you want to extract data. Click on Add new Column then click on Extract data.

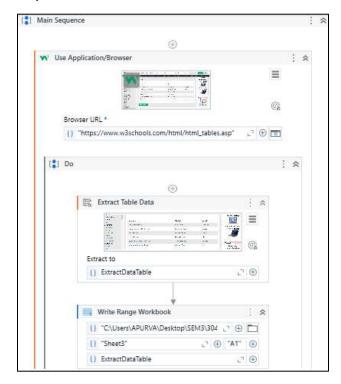


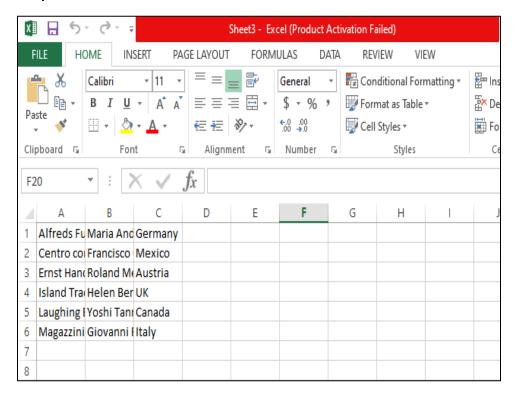
**Step 7:** It will display all the data as shown in the image below.



- **Step 7:** Next click on Save and Close. If you wish to extract multiple pages then press the on button for Extract data for Multiple pages
- **Step 8:** A default variable of Sytem.Datatable "ExtractData Table" is created, set its scope from Sequence.
- Step 9: Take Write Range Workbook Activity.
- **Step 10:** Create an empty excel file with and save it. Give a desired path of excel file in the Write Range Workbook. Also give the "sheet name" (Sheet3) and assign the cell you want to write from ("A1"). Type the created variable ExtractData Table in the text field.

Step 11: Run.





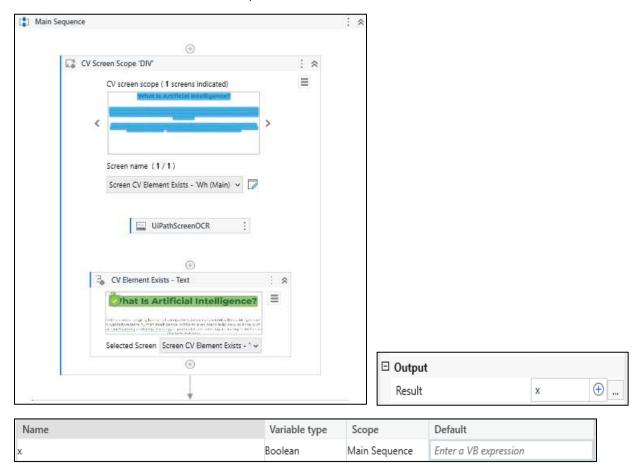
# **Conclusion:**

The practical to implement attach window was successfully executed.

- B. Aim: Find different controls using UiPath.
- 1. Element Exists:

Steps: -

- **Step 1:** Drag and drop sequence activity in the workflow.
- **Step 2:** Drag and drop "CV Screen Scope" Activity. Indicate the screen.
- **Step 3:** Drag and drop "CV Element Exists" Activity. Indicate the Element. Create and set an output variable to store the Boolean Value Output.

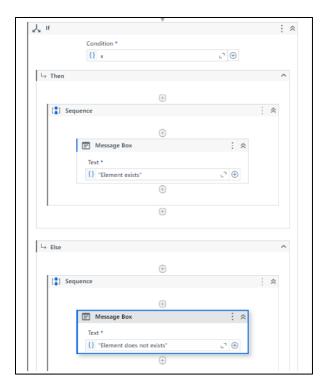


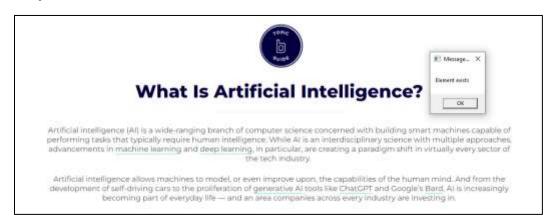
**Step 4:** drag and drop If activity and set its condition.

**Step 5:** Add two Message Box: one in Then part and another in Else Part to check whether element is exists or not. And Run.

#### M.Sc.IT Part 2 Sem 3

#### **ROBOTIC PROCESS AUTOMATION**



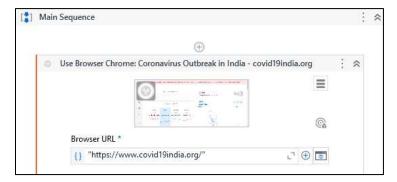


## 2. Find Element:

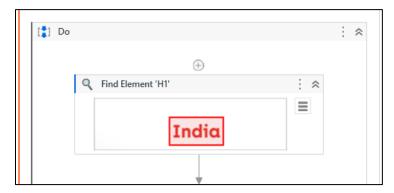
## Steps: -

**Step 1:** Drag and drop "Sequence" in the Activities panel and then drag and drop it onto the Designer Panel.

**Step 2:** Drag and drop "Use Application/ Browser" activity Indicate the screen you want to include in the workflow.



**Step 3:** Add "Find Element" Activity in the Activities Panel and drag it inside the sequence workflow. Indicate the Element you want to look for and Click on Save & Close. Create and set an output variable to store the Attribute Value Output.



**Step 4:** Search for "Get Attribute" Activity in the Activities Panel and drag it inside the sequence workflow. Input element as the Find Element output, create and set an attribute value and and String output variable.



**Step 5:** Search for "Message Box" Activity in the Activities Panel and drag it inside the sequence. Enter the Output value.



**Step 6:** Click the Run button and see the result.



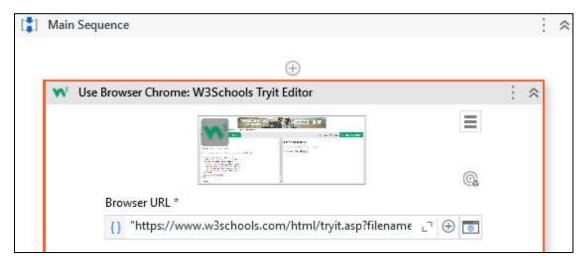


#### 3. Find Children:

Steps: -

**Step 1:** Drag and drop "Sequence" activity in main workflow.

**Step 2:** Drag and drop "Use Application/ Browser" Activity inside sequence. Indicate the screen you want to include in the workflow.

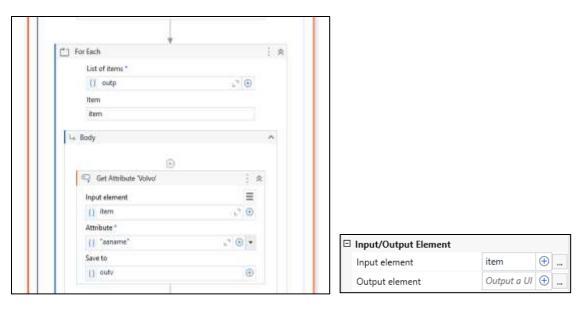


**Step 3:** Add "Find Children" Activity in the Activities Panel and drag it inside the sequence workflow. Indicate the Element you want to look for and Click on Save & Close. Create and set an output variable to store the Attribute Value Output.



Step 4: Search for "For Each" Activity in the Activities Panel and drag it inside the sequence workflow.

**Step 5:** Search for "Get Attribute" Activity in the Activities Panel and drag it inside the sequence workflow. Input element as the Find Element ouput, create and set an attribute value and and String output variable.

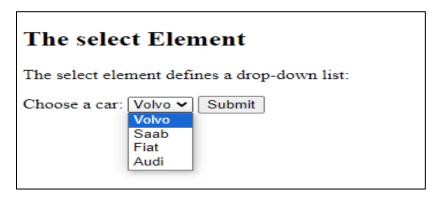


**Step 6:** Search for "Write Line" Activity in the Activities Panel and drag it inside the sequence. Enter the Output value.



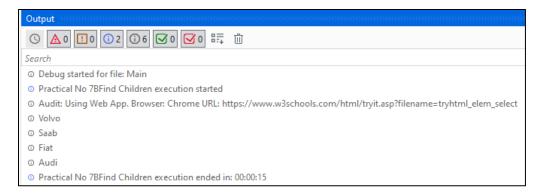
Name	Variable type	Scope	Default
aaname	String	Body	Enter a VB expression
outv	String	Body	Enter a VB expression
outp	IEnumerable < UiEler	Do	Enter a VB expression

**Step 7:** Click the Run button and see the result.



#### M.Sc.IT Part 2 Sem 3

## **ROBOTIC PROCESS AUTOMATION**



## **Conclusion:**

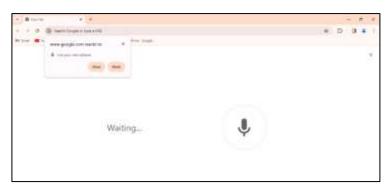
The practical to find different controls using UiPath is successfully completed.

## C. Aim: Demonstrate the following activities in UiPath:

- 1. Mouse (click, double click and hover)
  - Mouse Click
    - Steps: -
    - **Step 1:** Drag and drop a Sequence activity on the Designer panel.
    - **Step 2:** Drag and drop use Application/Browser activity.
    - **Step 3:** Drag and drop the Click activity.
    - **Step 4:** Click on Indicate on screen and indicate the UI element you want to click on:

Hit the Run button to the see the result.







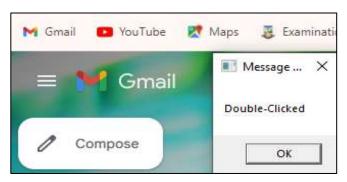
#### Double Click

## Steps: -

- **Step 1:** Drag and drop a Sequence activity in the Designer panel.
- **Step 2:** Drag and drop use Application/Browser activity.
- **Step 3:** Drag and drop the Click activity.
- **Step 4:** Indicate the Element you want to double-click on and Click on Save & Close. Select Click Type as "Double". Click on Indicate on screen and indicate the UI element you want to double-click on

Step 5: Run.





#### Mouse Hover

Steps: -

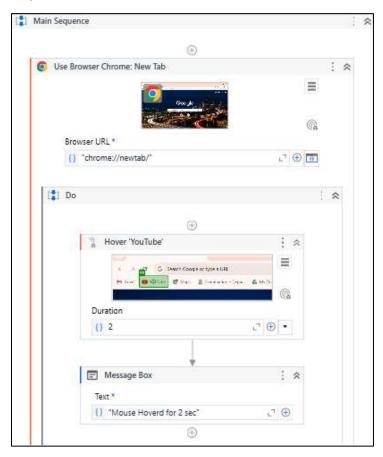
**Step 1:** Drag and drop a Sequence activity in the Designer panel.

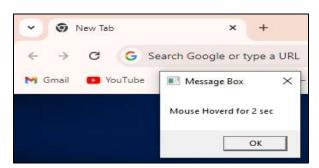
Step 2: Drag and drop use Application/Browser activity.

Step 3: Drag and drop the Hover activity.

**Step 4:** Click on Indicate on screen and indicate the UI element you want to hover on and set duration of 2 sec.

**Step 5:** Hit the Run button to the see the result.





## 2. Type into:

Steps: -

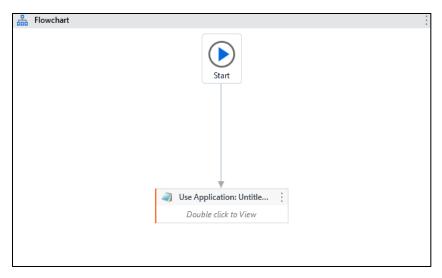
**Step 1:** Drag and drop Flowchart activity in workflow.

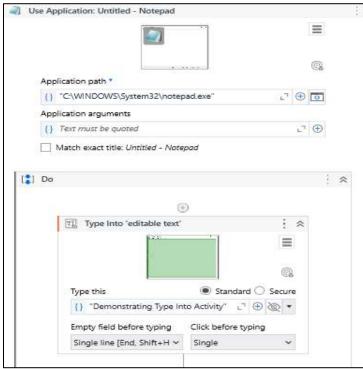
Step 2: Drag and drop Use Application/Browser.

**Step 3:** Click on "Indicate on screen". Locate the Notepad screen.

**Step 4:** Add a Type into Activity and again indicate your screen to Notepad window.

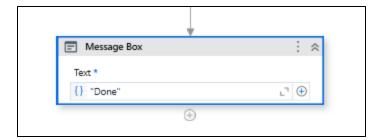
**Step 5:** Add message box activity to check the project is successful.



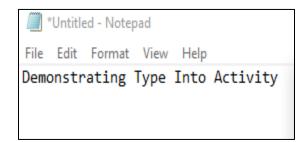


## M.Sc.IT Part 2 Sem 3

# **ROBOTIC PROCESS AUTOMATION**



Step 6: Run





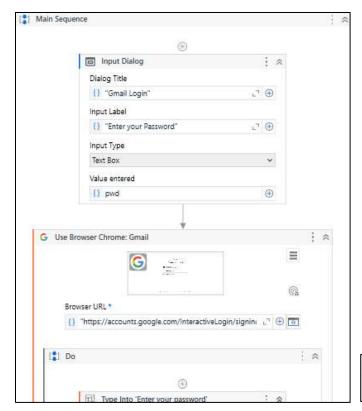
## 3. Type secure text:

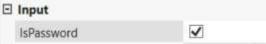
Steps: -

**Step 1:** Select sequence activity.

**Step 2:** Drag and drop Input dialog activity inside the Sequence. Write the appropriate message on the Label of the Input dialog. Create a variable and specify the variable in the Result property of the Input dialog box. Check the IsPassword property.

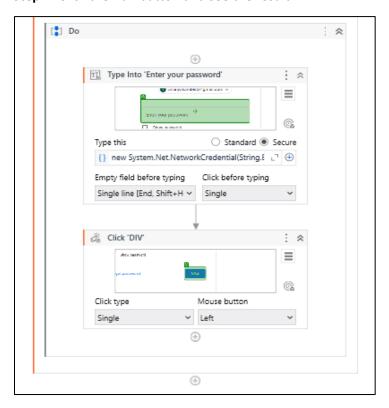
**Step 3:** Drag and drop "Use Browser/ Application" inside the sequence workflow. Indicate the screen you want to include in the workflow.



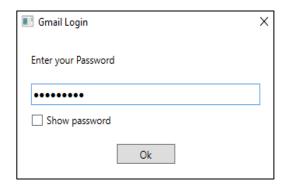


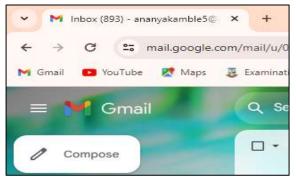
#### **ROBOTIC PROCESS AUTOMATION**

- **Step 4:** Drag and "Type Into" Activity inside the sequence workflow. Indicate the Element you want to click on and Click on Save & Close.
- **Step 5:** Select the Secure Radio Button. Set the variable as Secure String using the code "new System.Net.NetworkCredential(String.Empty, pwd).SecurePassword".
- Step 6: Add "Click" Activity and Indicate the "Next" button.
- Step 7: Click the Run button and see the result.



# **Output:**





#### **Conclusion:**

The practical to demonstrate the mouse, type into, type secure text activity using UiPath is successfully completed.

#### PRACTICAL NO. 8

# A. Aim: Demonstrate the following events in UiPath:

# 1. Element triggering event

Click Trigger

Steps: -

- **Step 1:** Drag and drop a Sequence Activity.
- Step 2: Take Use Application/Browser Activity. Indicate the screen where you want
- **Step 3:** Add Trigger Scope Activity. In the Trigger Action drag and drop a Click Trigger. Indicate the screen on a particular thing.
  - **Step 4:** Select BTN\_LEFT of Mouse Button and check true for Include Children.
  - **Step 5:** For Actions drag and drop the Message Box Activity. Hit the Run button.





# information technology (IT)



## • Key press

Steps: -

Step 1: Open UiPath Studio.

**Step 2:** Start a BlankProcess. Give the BlankProcess a name.

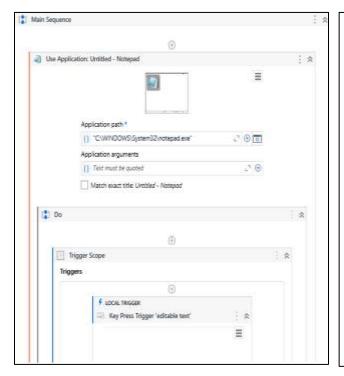
Step 3: Drag and drop a Sequence Activity.

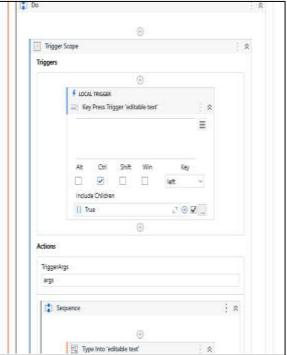
**Step 4:** Take Use Application/Browser Activity. Create a Notepad file and indicate the screen on Notepad.

**Step 5:** Add Trigger Scope Activity. In the Trigger Action drag and drop a Key Press Trigger. Select ctrl + left key.

**Step 6:** For Actions take a Type into Activity and indicate screen on notepad.

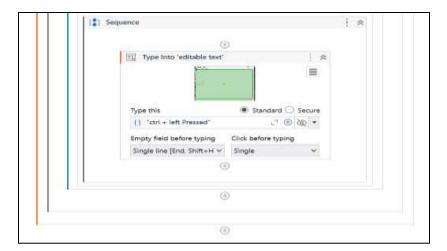
Step 7: Run.

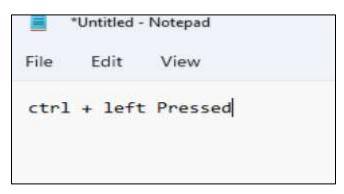




## M.Sc.IT Part 2 Sem 3

# **ROBOTIC PROCESS AUTOMATION**





## 2. Image triggering event:

Steps: -

**Step 1:** Drag and drop a Sequence Activity.

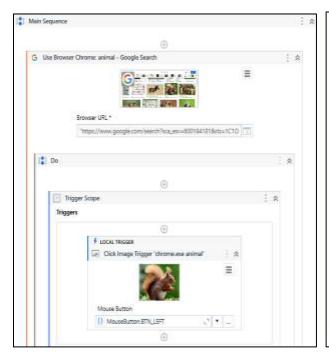
**Step 2:** Take Use Application/Browser Activity. Indicate the screen to the image.

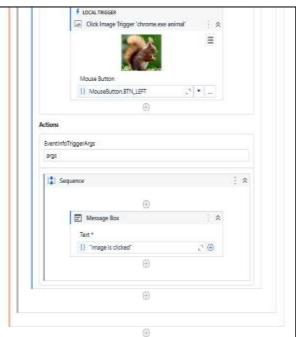
**Step 3:** Add Trigger Scope Activity. In the Trigger Action drag and drop a Click Image Trigger. Drag the cursor on the image and also indicate the scope.

**Step 4:** Select BTN\_LEFT of Mouse Button.

**Step 5:** For Actions drag and drop the Message Box Activity. In the text field type "Image is Clicked".

Step 6: Run.

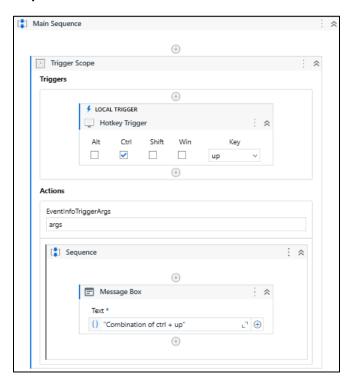


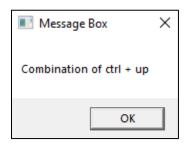




- 1. System triggering event:
- Hot Key
- Steps: -
- **Step 1:** Open UiPath Studio.
- **Step 2:** Start a BlankProcess. Give the BlankProcess a name.
- **Step 3:** Drag and drop a Sequence Activity.
- **Step 4:** Add Trigger Scope Activity. In the Trigger Action drag and drop a Hotkey Trigger.
- **Step 5:** Select ctrl + up key.
- **Step 6:** For Actions drag and drop the Message Box Activity. In the text field type "Combination of ctrl + up".

Step 7: Run





# • Mouse Trigger

Steps: -

Step 1: Open UiPath Studio.

**Step 2:** Start a BlankProcess. Give the BlankProcess a name.

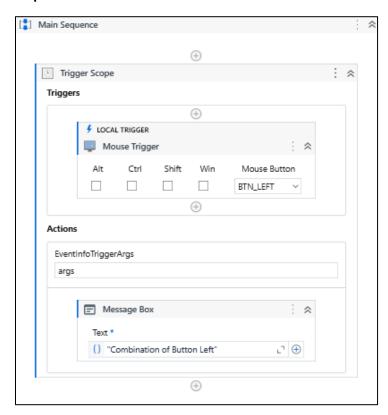
**Step 3:** Drag and drop a Sequence Activity.

**Step 4:** Add Trigger Scope Activity. In the Trigger Action drag and drop a Mouse Trigger.

**Step 5:** Select BTN\_LEFT of Mouse Button.

**Step 6:** For Actions drag and drop the Message Box Activity. In the text field type "Combination of Button Left".

Step 7: Run.





## • System Trigger

Steps: -

Step 1: Open UiPath Studio.

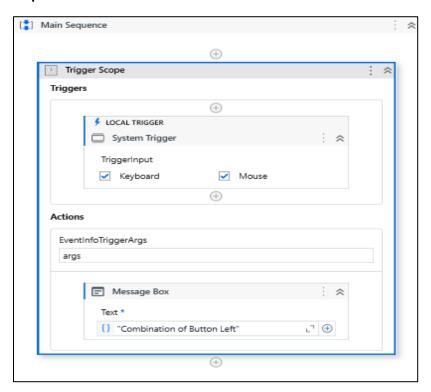
Step 2: Start a BlankProcess. Give the BlankProcess a name.

**Step 3:** Drag and drop a Sequence Activity.

Step 4: Add Trigger Scope Activity. In the Trigger Action drag and drop a System Trigger.

**Step 5:** For Actions drag and drop the Message Box Activity. In the text field type "Combination of Button Left".

#### Step 6: Run.



## Output:



## **Conclusion:**

The practical to demonstrate Element Triggering, Image Triggering and System Triggering events using UiPath was successfully executed.

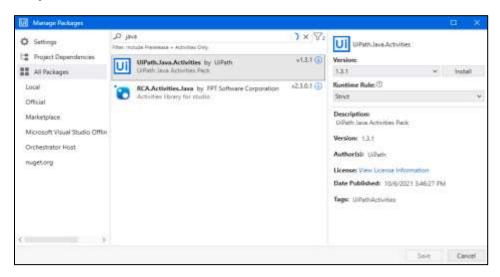
# B. Aim: Install and automate any process using UiPath with the following plugins:

## i. Java Plugin

### Steps: -

- Step 1: Open UiPath Studio. In the Ribbon Panel go to the Manage Package.
- Step 2: Select All Packages. A list of activities package will appear.
- **Step 3:** Search Java, UiPath.Java.Activities will appear. Click on install.
- Step 4: Java Plugin is installed.

# **Output:**



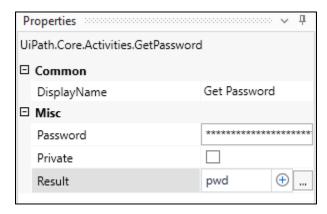
# ii. Mail Plugin

## Steps: -

- Step 1: Open UiPath Studio.In the Ribbon Panel go to the Manage Package.
- **Step 2:** Select All Packages. A list of activities package will appear.
- Step 3: Search mail UiPath.Mail.Activities will appear. Click on install
- Step 4: Mail Plugin is installed.

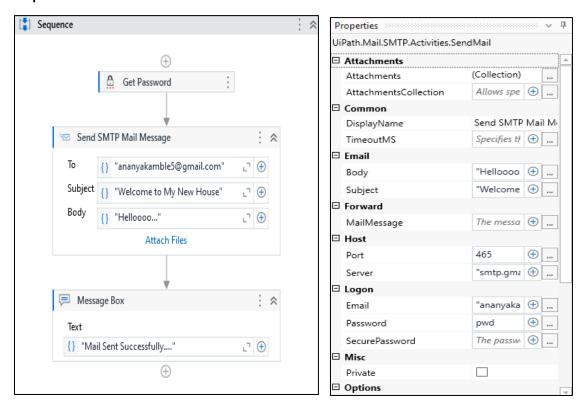


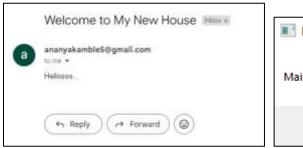
**Step 5:** Search for "Get Password" in Activities Panel and drag it inside the sequence workflow. Enter the password in the properties panel and assign it to variable pwd.



**Step 6:** Add "Send SMTP Mail Message" inside the sequence workflow. Enter the recipient's email address, subject line and message. Enter the password, port number, mail server name in the properties panel.

Step 7: Run







# iii. PDF Plugin

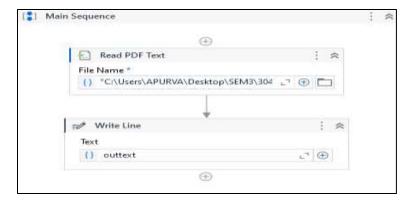
#### Steps: -

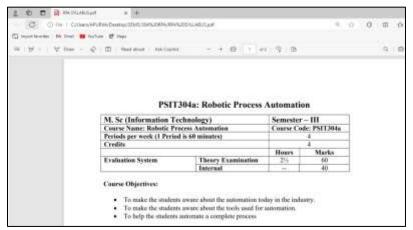
- **Step 1:** Open UiPath Studio. In the Ribbon Panel go to the Manage Package.
- **Step 2:** Select All Packages. A list of activities package will appear.
- Step 3: Search PDF, UiPath.PDF.Activities will appear. Click on install.
- Step 4: PDF Plugin is installed.



- **Step 5:** Drag and drop sequence activity. Drag and drop "Read PDF Text". Enter the file location of the PDF to read from. Create and assign an output variable.
- **Step 6:** Add "Write Line" in Activity. Enter the output text variable.
- **Step 7:** Click on the Run button and see the Results.

#### **ROBOTIC PROCESS AUTOMATION**





## **Output:**

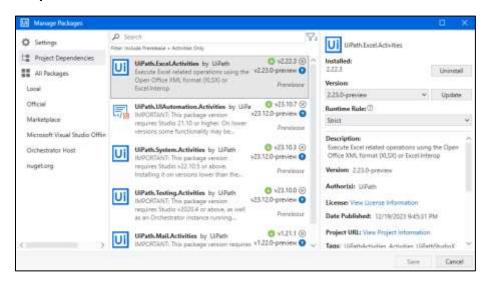
Debug started for file: Main
 8B PDF Plugin execution started
 PSIT304a: Robotic Process Automation
 M. Sc (Information Technology) Semester − III
 Course Name: Robotic Process Automation Course Code: PSIT304a
 Periods per week (1 Period is 60 minutes) 4
 Credits 4
 Hours Marks
 Evaluation System Theory Examination 2½ 60
 Internal -- 40
 Course Objectives:
 □ To make the students aware about the automation today in the industry.
 □ To make the students aware about the tools used for automation.
 □ To help the students automate a complete process
 Unit Details

#### iv. Excel Plugin

Steps: -

- **Step 1:** Open UiPath Studio.In the Ribbon Panel go to the Manage Package.
- Step 2: Select All Packages. A list of activities package will appear.
- Step 3: Search Excel, UiPath.Excel.Activities will appear. Click on install.
- Step 4: Excel Plugin is installed.

## **Output:**



#### Read Cell

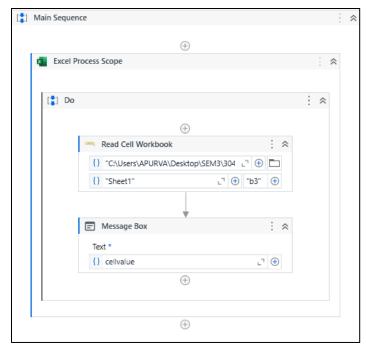
Steps: -

- **Step 1:** Drag and drop the Sequence Activity.
- **Step 2:** Drag and drop Excel Process Scope Activity in the Sequence Activity.
- **Step 3:** In Excel Process Scope drag and drop the Read Cell Workbook Activity.
- **Step 4:** Create an excel file with some data and save it. Give a desired path of excel file in the Read Cell Workbook. Also give the "sheet name" (Sheet1) and assign the cell you want to read("b2"). Create a variable cellvalue by pressing ctrl+k. In the output filed of Rad cell Activity write created variable: cellvalue
- **Step 5:** Add Message Box Activity and connect it to Read Cell Workbook. In the Text field, type variable "cellvalue" created in Step 5.

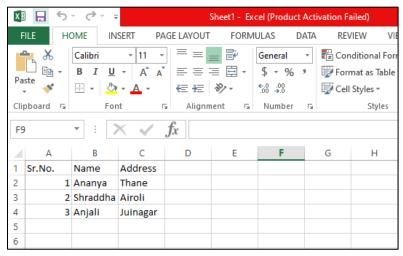
Step 6: Run.

### M.Sc.IT Part 2 Sem 3

### **ROBOTIC PROCESS AUTOMATION**







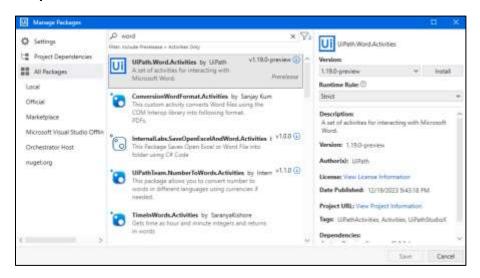


## v. Word Plugin

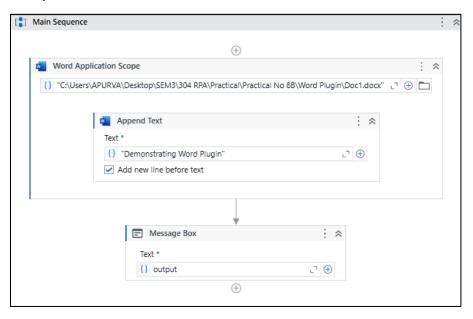
### Steps: -

- **Step 1:** Open UiPath Studio.In the Ribbon Panel go to the Manage Package.
- Step 2: Select All Packages. A list of activities package will appear.
- Step 3: Search word, UiPath.Word.Activities will appear. Click on install.
- Step 4: Mail Plugin is installed.

# **Output:**



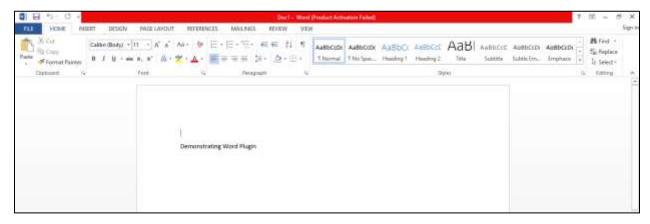
## **Example**



Name	Variable type	Scope	Default
output	String	Main Sequence	Enter a VB expression

### **ROBOTIC PROCESS AUTOMATION**

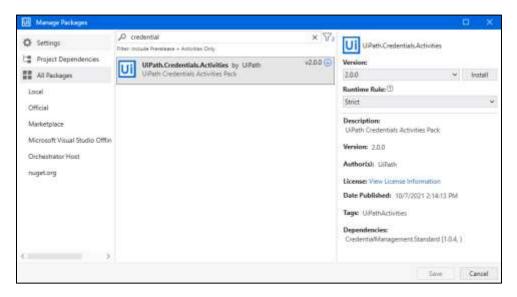
## **Output:**



# vi. Credential Plugin

## Steps: -

- **Step 1:** Open UiPath Studio.In the Ribbon Panel go to the Manage Package.
- Step 2: Select All Packages. A list of activities package will appear.
- **Step 3:** Search Credentials, UiPath.Credentials.Activities will appear. Click on install.
- **Step 4:** Credentials Plugin is installed.



## [a] Set Credential

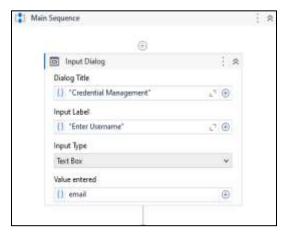
Steps: -

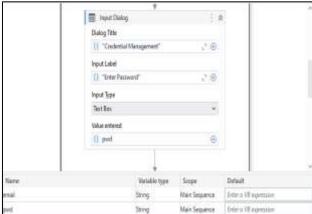
**Step 1:** Drag and drop "Sequence" in the Activity.

**Step 2:** Create a new Credential in Orchestrator.



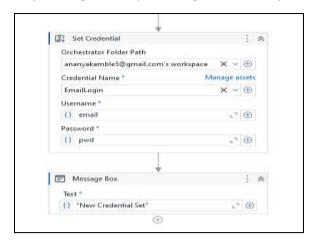
**Step 3:** Drag and drop two Input dialog boxes inside the Sequence. Set one input Dialog box for the username and with output variable as "email" and the other input Dialog box for the Password with the output variable as "pwd" and isPassword Property checked.





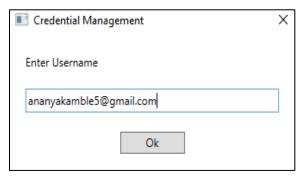
**Step 4:** Drag and drop the "Set Credential" activity inside the Sequence. Select the Orchestrator Folder Path and the Credential name. Enter the Username and Password Variables.

**Step 5:** Drag and drop "Message Box" activity inside the body and enter the output statement.



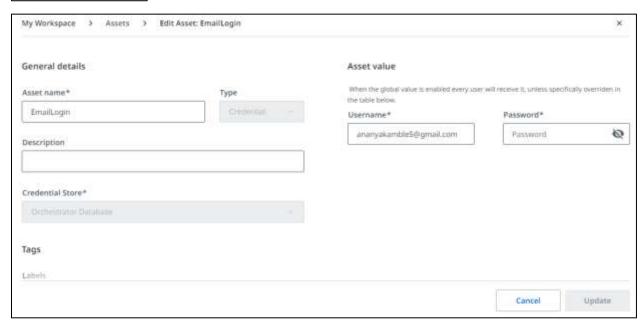
### **ROBOTIC PROCESS AUTOMATION**

Step 6: Click the Run button and see the result.





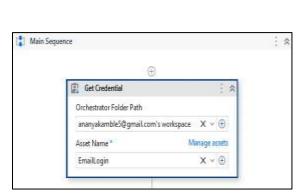


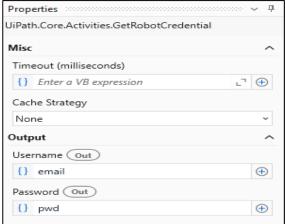


## [b] Get Credential

**Step 1:** Drag and drop "Sequence" in the Activity.

**Step 2:** Drag and drop "Get Credential" activity inside the Sequence. Select the Orchestrator Folder Path and the Credential name. Create new variables for username and password and map the Username and Password Outputs.



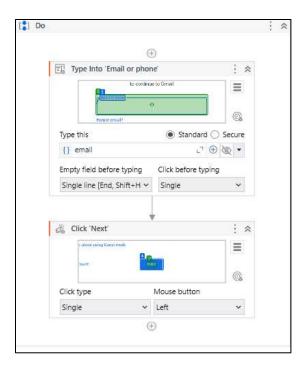


**Step 3:** Search for "Use Browser/ Application" Activity in the Activities Panel and drag it inside the sequence workflow. Indicate the screen you want to include in the workflow.

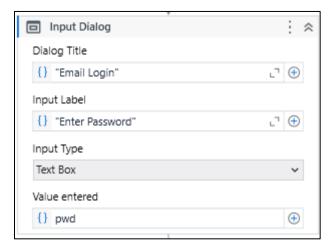


**Step 4:** drag and drop "Type Into" Activity inside the sequence workflow. Indicate the Element you want to click on and Click on Save & Close.

**Step 5:** Search for "Click" Activity in the Activities Panel and drag it inside the sequence. Indicate the "Next" button.



**Step 6:** Search for "Input dialog" in the Search panel of the Activities panel. Drag and drop Input dialog activity inside the Sequence. Write the appropriate message on the Label of the Input dialog. Create a variable and specify the variable in the Result property of the Input dialog box. Check the IsPassword property.



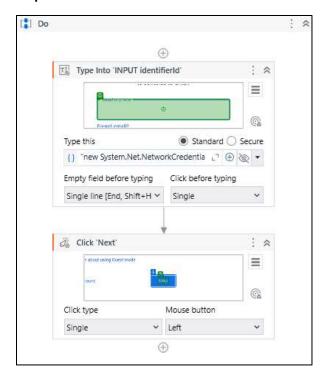
**Step 7:** Search for "Use Browser/ Application" Activity in the Activities Panel and drag it inside the sequence workflow. Indicate the screen you want to include in the workflow.

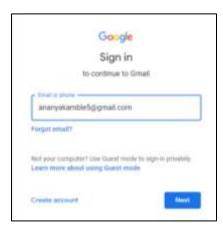


### **ROBOTIC PROCESS AUTOMATION**

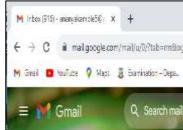
- **Step 8:** Search for "Type Into" Activity in the Activities Panel and drag it inside the sequence workflow. Indicate the Element you want to click on and Click on Save & Close.
- **Step 9:** Select the Secure Radio Button. Set the variable as Secure String using the code "new System.Net.NetworkCredential(String.Empty, pwd).SecurePassword".
- **Step 10:** Search for "Click" Activity in the Activities Panel and drag it inside the sequence. Indicate the "Next" button.

Step 11: Click the Run Button and see the results.



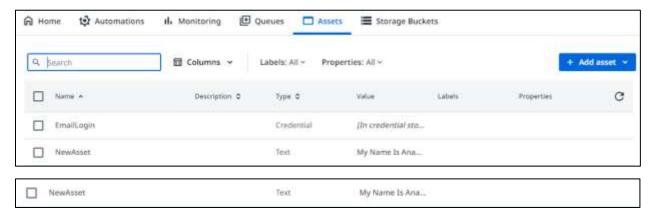




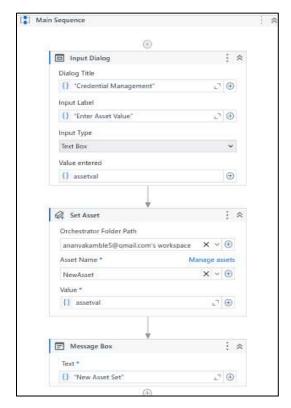


## [c] Set Asset

- Step 1: Drag and drop "Sequence" Activity.
- **Step 2:** Create a new Asset in Orchestrator.

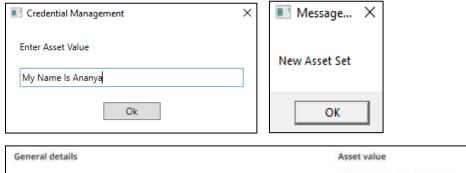


- **Step 3:** Add "Input Dialog Box" inside the Sequence. Create a new variable to store Asset Value.
- **Step 4:** Drag and drop "Set Asset" activity inside the Sequence. Select the Orchestrator Folder Path and the Asset name. Enter the Asset Value Variable.
- **Step 5:** Drag and drop "Message Box" activity inside the body and enter the output statement.





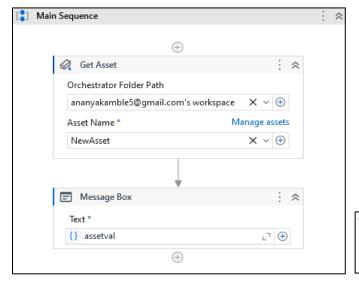
# **Output:**

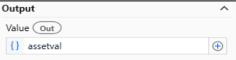




# [d] Get Asset

- **Step 1:** Drag and drop "Sequence" Activity.
- **Step 2:** Drag and drop "Get Asset" activity inside the Sequence. Select the Orchestrator Folder Path and the Asset name. Create new variables for Asset Value and map Get Asset Output.
- **Step 3:** Drag and drop "Message Box" activity inside the body and enter the output variable.
- Step 4: Click the Run button and see the result.

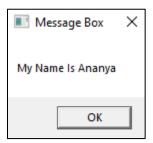




# M.Sc.IT Part 2 Sem 3

# **ROBOTIC PROCESS AUTOMATION**

# **Output:**



# **Conclusion:**

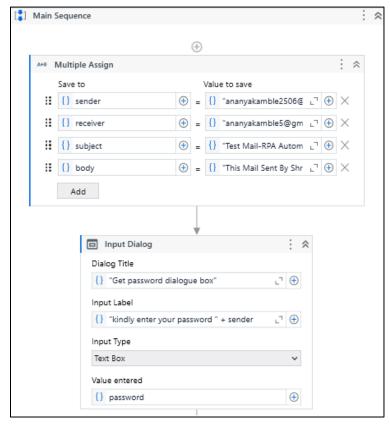
The practical to install and demonstrate the processes using plug-ins in UiPath is successfully completed.

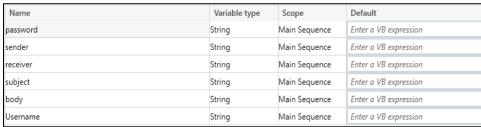
#### PRACTICAL NO. 9

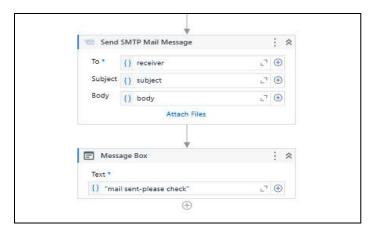
A. Aim: Automate the process of Send Mail Event.

Steps: -

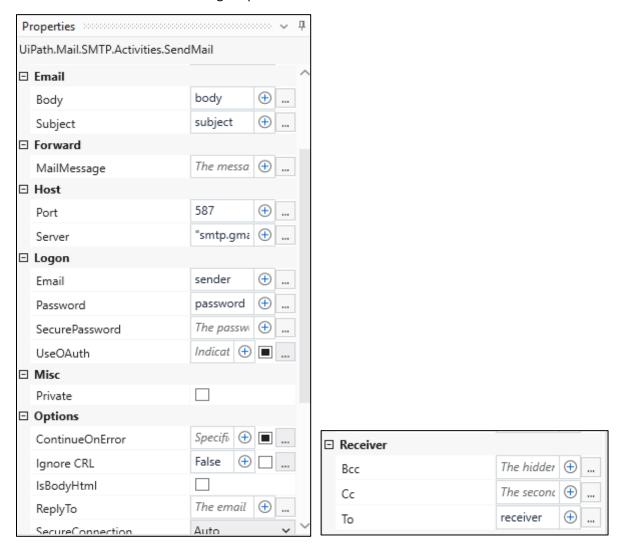
- **Step 1:** Drag and drop a sequence activity.
- **Step 2:** Create five variables: sender, receiver, password, subject, body.
- Step 3: Add Multiple Assign activity under sequence activity.
- **Step 4:** Then assign value to variables as shown in the snapshot.
- **Step 5:** Add Input Dialog activity below multiple assign activity to get the password of sender's email from user.
- **Step 6:** Take send SMTP Mail Message activity and in text boxes enter the previously created variable names as shown in snapshot.







**Step 7:** Then in properties panel of SMTP Mail Message activity fill the text boxes of Email, Host, Logon and Receiver as shown in following snapshot.



**Step 8:** At last drag and drop Message Box activity to check the mail is sent.

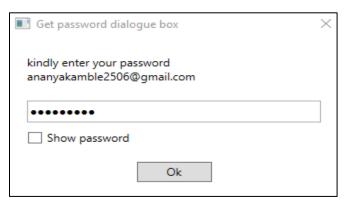
Step 9: Debug file.

## M.Sc.IT Part 2 Sem 3

# **ROBOTIC PROCESS AUTOMATION**

# **Output:**

Enter the password of sender's email:



## B. Aim: Automate the process of launching an assistant bot on keyboard event

## Hot Key

Steps: -

**Step 1:** Open UiPath Studio.

**Step 2:** Start a BlankProcess. Give the BlankProcess a name.

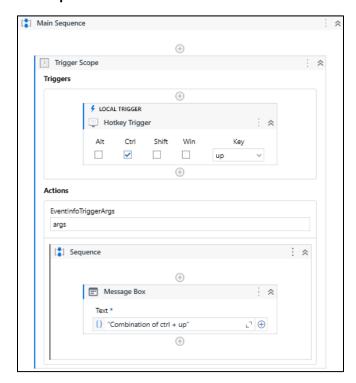
Step 3: Drag and drop a Sequence Activity.

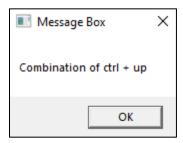
**Step 4:** Add Trigger Scope Activity. In the Trigger Action drag and drop a Hotkey Trigger.

**Step 5:** Select ctrl + up key.

**Step 6:** For Actions drag and drop the Message Box Activity. In the text field type "Combination of ctrl + up".

Step 7: Run.





C. Aim: Demonstrate the Exception Handling in UiPath Studio.

Steps: -

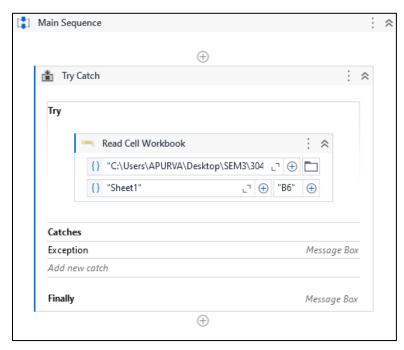
Step 1: Open UiPath Studio.

**Step 2:** Start a BlankProcess. Give the BlankProcess a name.

Step 3: Drag and drop Sequence Activity.

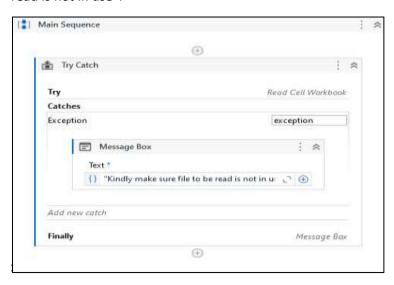
Step 4: Now drag and drop Try Catch Activity from the Activity Panel in the Sequence Activity.

**Step 5:** In Try Action take a Read Cell Workbook Activity. Create an excel file and save it. Give a desired path of excel file and assign sheet name "Sheet1". Also assign cell value("B6"). Create a variable output by pressing ctrl + k in property panel.



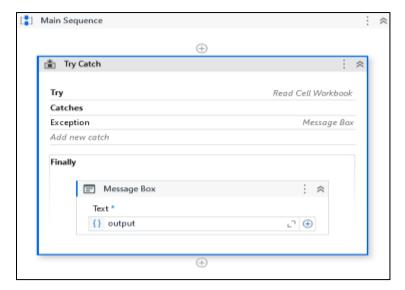
Step 6: In Catches Action select System. Exception from the list of exceptions.

**Step 7:** Drag and drop Message Box in Catch Action and in the text field type "Kindly make sure file to be read is not in use".

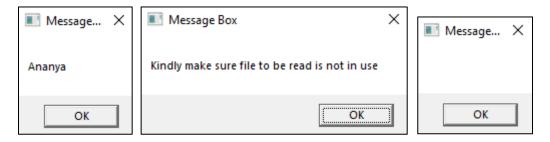


**SEAT NO: 30414** 

**Step 8:** In Finally Action drag and drop the Message Box Activity. In the text field type the variable output created in Step 5.



# **Output:**



# **Conclusion:**

The practical to automate the process of launching assistant bot on a keyboard event using UiPath was successfully executed.

#### PRACTICAL NO. 10

A. Aim: Automate the process of logging and taking screenshots in UiPath Studio.

Steps: -

Step 1: Open UiPath Studio.

Step 2: Start a BlankProcess. Give the BlankProcess a name.

**Step 3:** Drag and drop Sequence Activity.

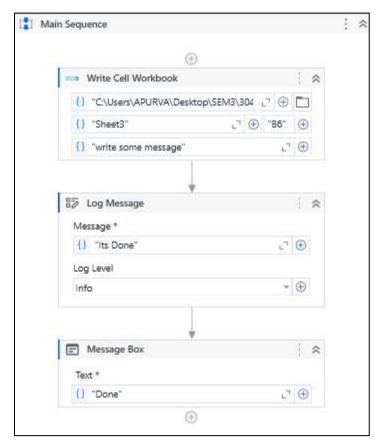
**Step 4:** Now drag and drop Write Cell Workbook Activity from the Activity Panel in the Sequence Activity.

**Step 5:** Create an excel file and save it. Give a desired path of excel file and assign sheet name. Also assign cell value("B6"). In the text property type anything you want.

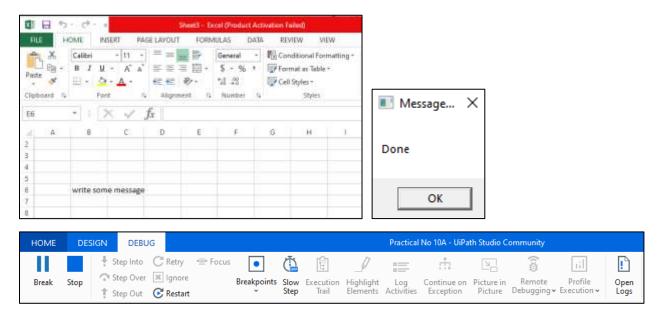
**Step 6:** Take a Log Message Activity in the Sequence Activity and connect it with the Write Cell Workbook Activity. In the log level select "Info" from the drop-down list and in Text field type "Done".

Step 7: Run.

**Step 8:** Logs details can be viewed in Open Logs in Debug option of Ribbon Panel.



## **Output:**



## **Conclusion:**

The practical to automate the process of logging and taking screenshots was successfully executed.

B.Aim: Automate any process of using State Machine.

Steps: -

**Step 1:** Open UiPath Studio.

**Step 2:** Start a BlankProcess. Give the BlankProcess a name

Step 3: Drag and drop Flowchart Activity.

Step 4: There are two activities specific to State Machines. They are State and Final State

**Step 5:** The State activity consists of three sections Entry, Exit, and Transitions, while the Final State only contains Entry.

Step 6: State activity: Transitions contain three sections Trigger, Condition, and Action.

**Step 7:** Connect three state activity along with final activity.

Step 8: Name the three states activity as IDLE, COOLING, HEATING.

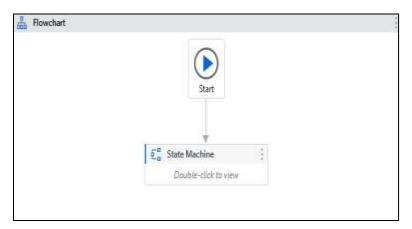
Step 9: Name the final activity as Power Off.

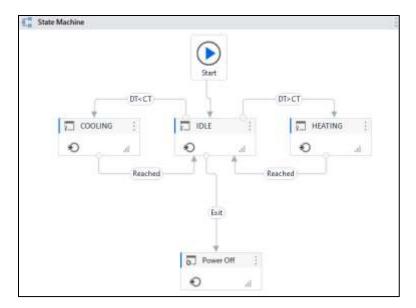
**Step 10:** Connect IDLE to COOLING and vice versa. A transition TI from IDLE to COOLING is named as DT<CT and transition T2 from COOLING to IDLE is named as Reached.

**Step 11:** Connect IDLE to HEATING and vice versa. A transition T3 from IDLE to HEATING is named as DT>CT and transition T4 from HEATING to IDLE is named as Reached.

Step 12: Connect IDLE to Power Off. A transition T5 from IDLE to Power Off is named as Exit.

**Step 13:** Create a variables of type integer(Int32) as Current\_Temp and Desrired\_Temp. Set the default value as 24 for Current\_Temp and save it. Create another variable of type Boolean as IDLE and set the default value as True and save it.

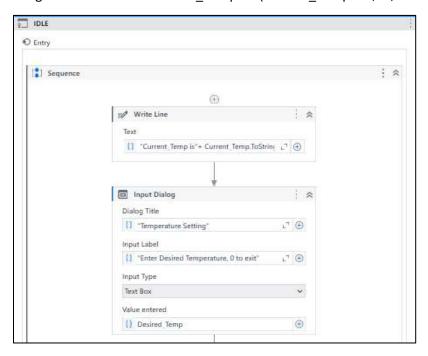


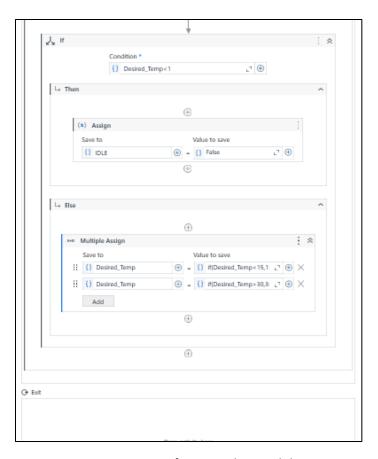


**Step 14:** In IDLE state for Entry drag and drop WriteLine Activity. In the text field type "Current\_Temp is " + Current\_Temp.ToString + "Degree Celsius".

**Step 15:** Connect an Input Dialog Box Activity to the WriteLine Activity. Give a dialog title, for Input Lable type "Enter Desired Temperature, 0 to exit". Type Desired\_Temp for value entered field.

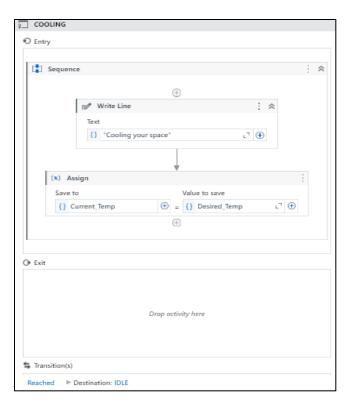
Step 16: Now take If Activity under Input Dialog Box. Set the condition as Desired\_temp<1 and drag and drop Assign Activity in the then part. Set IDLE = False for Assign Activity. Drag and drop Multiple Assign Activity for else part. Assign first value as Desired\_Temp = if(Desired\_Temp<15,15,Desired\_Temp). Assign second value as Desired\_Temp = if(Desired\_Temp>30,30,Desired\_Temp).



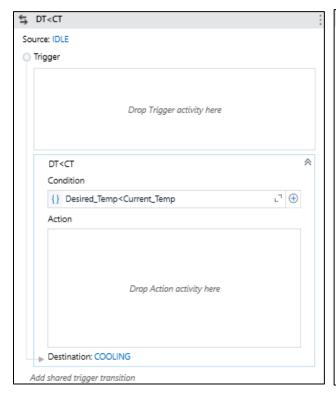


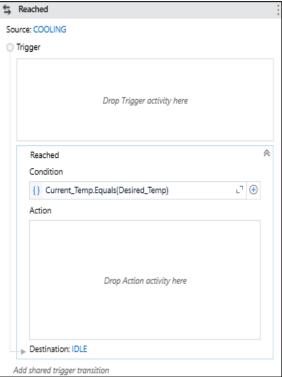
**Step 17:** In COOLING state for Entry drag and drop WriteLine Activity. In the text field type "Cooling your Space". Connect an Assign Activity to the WriteLine Activity. Set the value as Current\_Temp = Desired\_Temp field.

### **ROBOTIC PROCESS AUTOMATION**

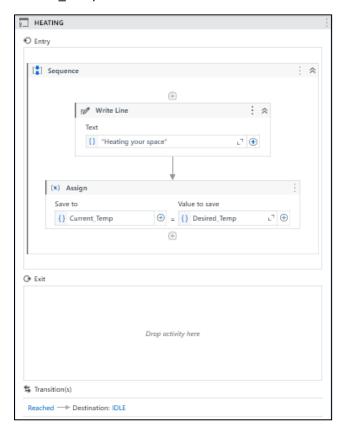


**Step 18:** The transition DT<CT set the condition as Desired\_Temp<Current\_Temp. Also for transition Reached set the condition as Current\_Temp.Equals(Desired\_Temp).

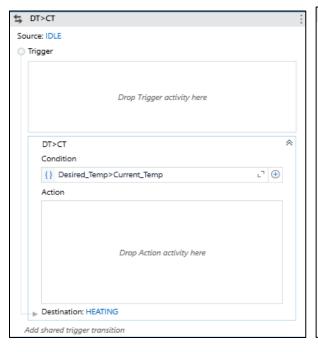


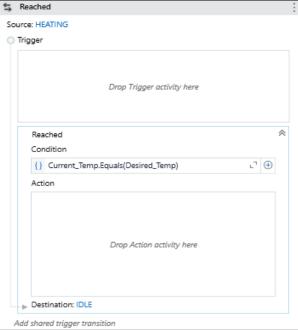


**Step 19:** In HEATING state for Entry drag and drop WriteLine Activity. In the text field type "Heating your Space". Connect an Assign Activity to the WriteLine Activity. Set the value as Current\_Temp = Desired\_Temp field.



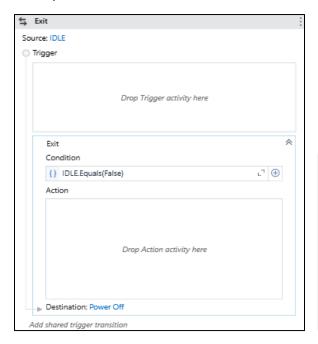
**Step 20:** The transition DT>CT set the condition as Desired\_Temp>Current\_Temp. Also for transition Reached set the condition as Current\_Temp.Equals(Desired\_Temp).





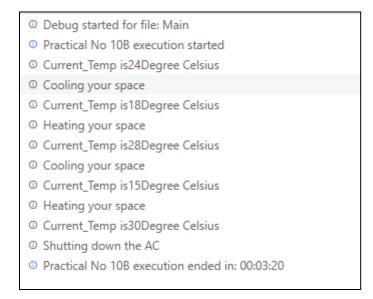
**Step 21:** For the transition Exit set condition IDLE.Equals(False).

**Step 22:** In Power Off state for Entry drag and drop WriteLine Activity. In the text field type "Shutting Down your AC". Hit the Run Button.





# **Output:**



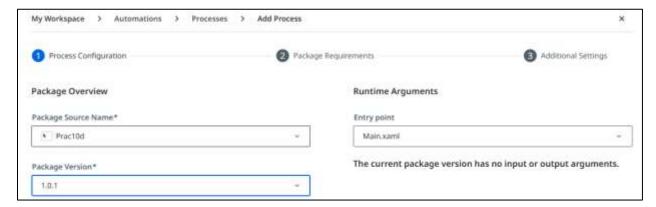
### **Conclusion:**

The practical to automating any process using State Machine was successfully executed.

C.Aim: Demonstrate the use of publish utility.

Steps: -

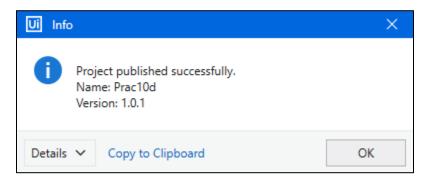
- **Step 1:** First, open UiPath Studio, create a new project, and give it an appropriate name.
- **Step 2:** Go to the Design in the Ribbon and click on the Publish button.
- **Step 3:** A dialog box will appear rename your project, get updates to the new version, etc . Then click on publish.



Step 4: Now check whether the project has been published successfully or not.

**Step 5:** If the workflow has been published successfully, then a dialog box will appear containing all the necessary data required to run that workflow from Orchestrator.

## **Output:**



## **Conclusion:**

The practical to demonstrate the use of publish utility was successfully executed.