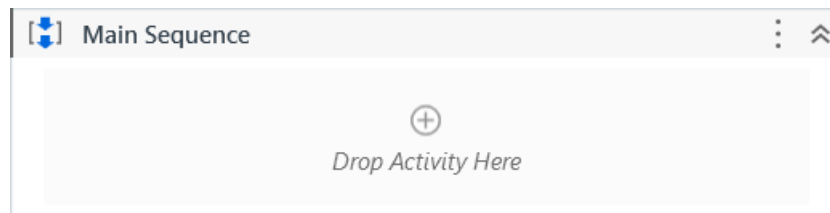


Practical 1

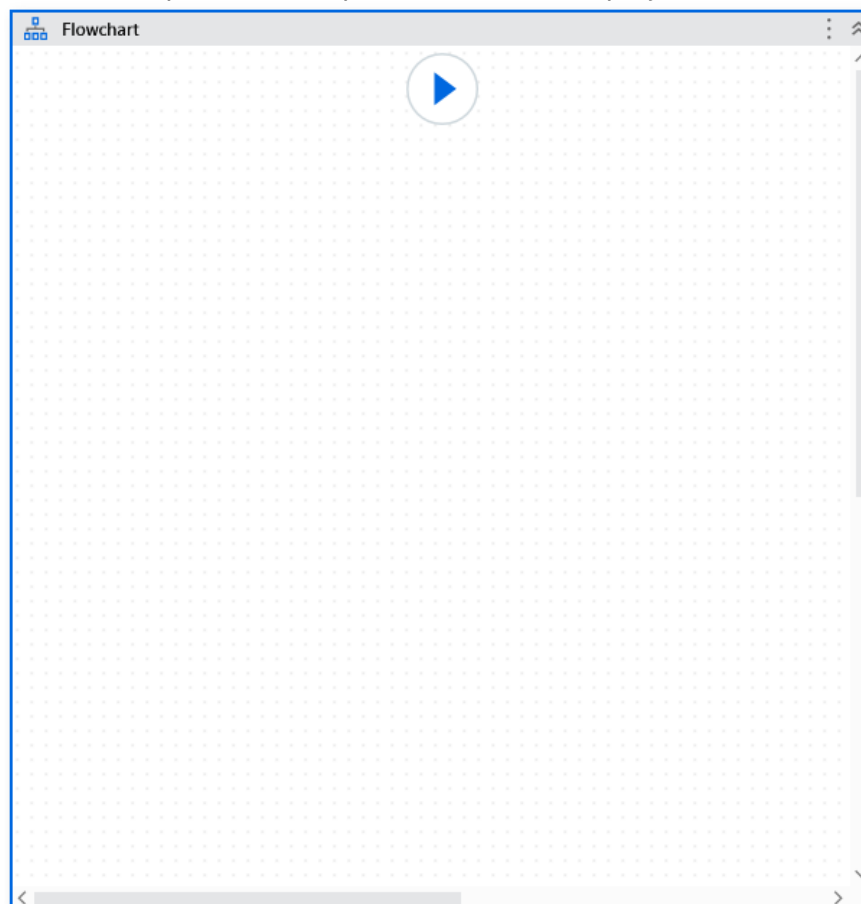
Aim: Understanding UI Path and its Different components.

Theory:

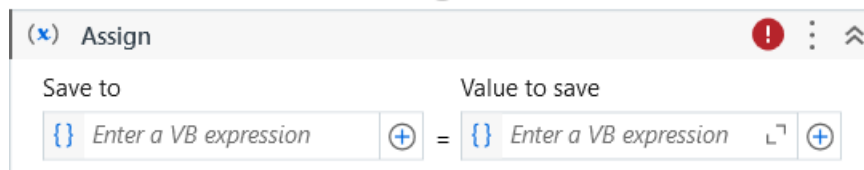
Sequence: This is suitable for simple actions or tasks. It enables you to go from one activity to another, without interfering with your project. It consists of various activities. Creating sequences is also useful for debugging purposes. One activity from a particular sequence can easily be tracked. The Basic type of project can be started using the Blank option in the start tab and then adding the sequence in the diagram from the toolbox.



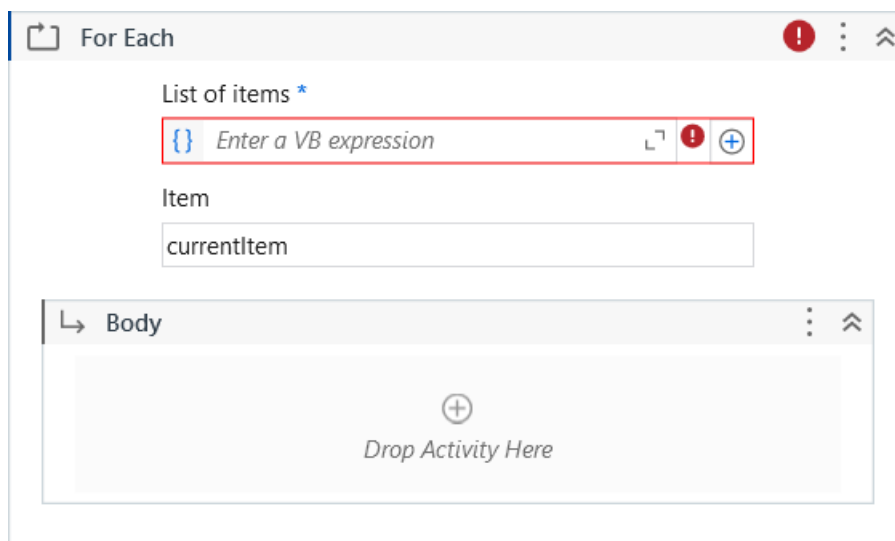
Flowchart: This is suitable for dealing with more complex projects. It enables you to integrate decisions and connect activities. To start this kind of project, choose the Flowchart - Simple Process option from the new project menu



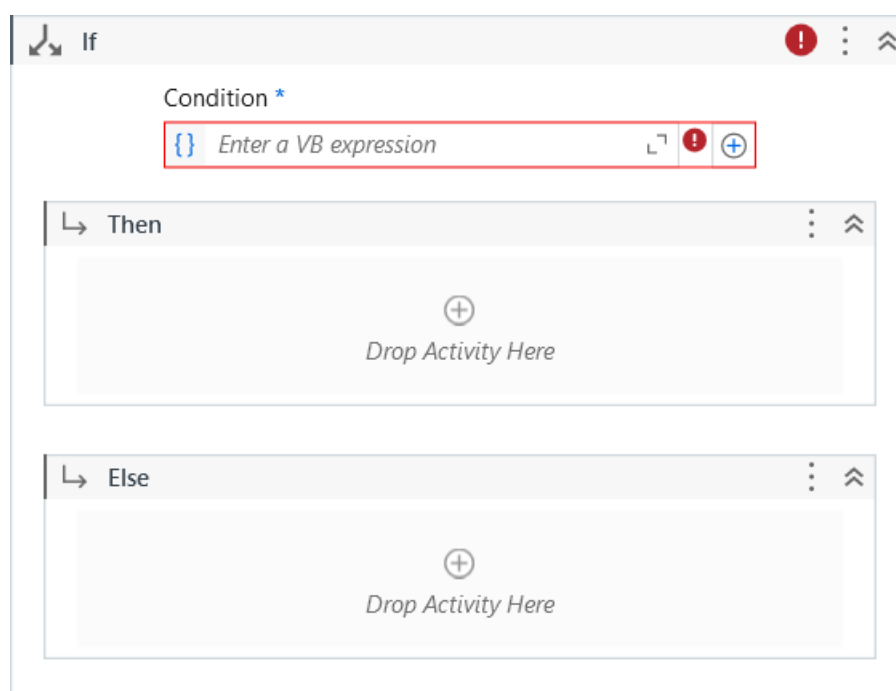
The Assign activity: is used to designate a value to the variable. The Assign activity can be used for different purposes, such as incrementing the value of a variable in a loop, or using the results of a sum, difference, multiplication, or division of variables and assigning it to another variable.



The For each activity: works by iterating each element from the collection of items or list of elements, one at a time. In the process, it will execute all the actions that are available inside the body. Thus, it iterates through the data and processes each piece of information separately.



The If activity: consists of a statement with two conditions: true or false. If the statement is true, then the first condition is executed; if not, the second condition is executed. This is useful when we have to take decisions on the basis of statements.



Practical 2

Aim: Understanding various activities in UiPath

Hardware & Software Requirement:

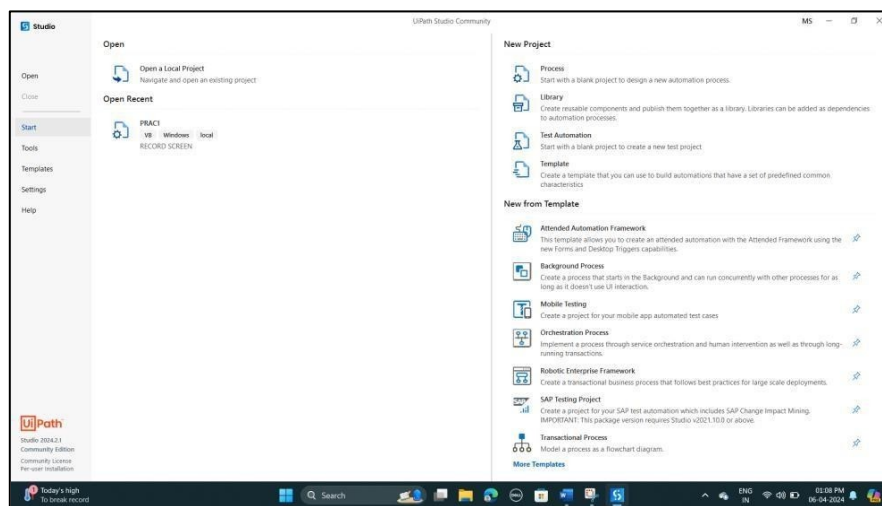
- Hardware:
 - Processor: 11th Gen Intel(R) Core (TM) i5-1135G7 @ 2.40GHz 2.42 GHz
 - RAM: 8.00 GB (7.74 GB usable)
 - System Type 64-bit Operating System, x86-64-based processor
- Software: UiPath Studio

Steps- Follow are the given steps for performing the following practical:

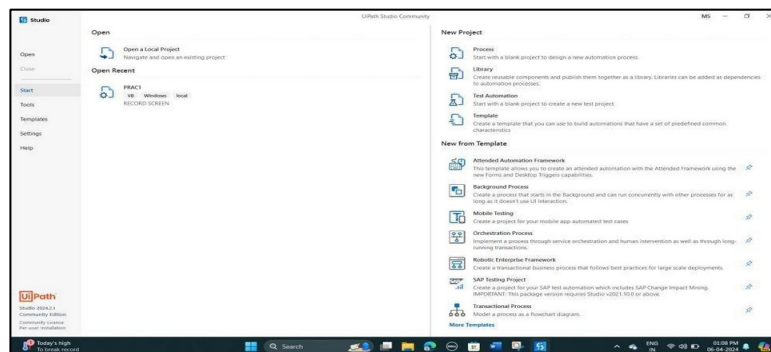
1. Install the UiPath studio after installing the application we get to see the following icon on your desktop.



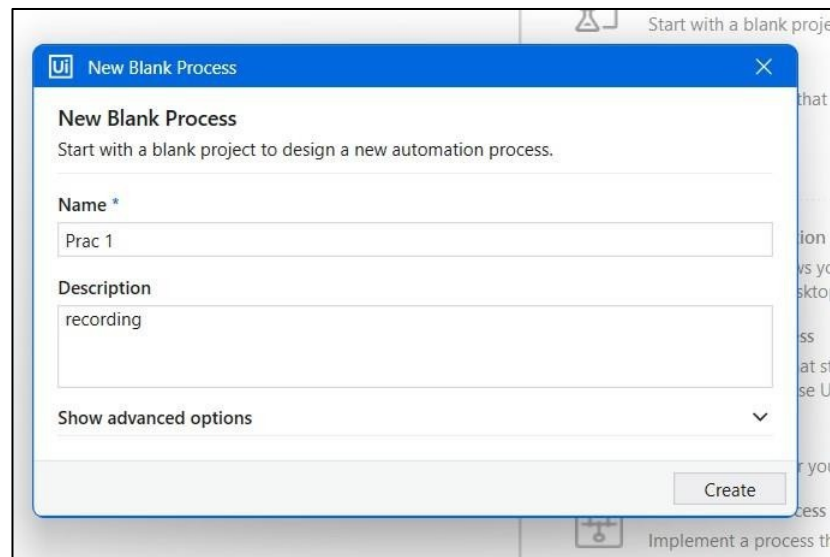
2. The following interface of UiPath studio will be seen.



3. After starting the UiPath -> Select the blank process as shown in the below image.



4. Named your 1st blank process-> then click on create.



UiPath New Blank Process

New Blank Process
Start with a blank project to design a new automation process.

Name *
Prac 1

Description
recording

Show advanced options ▼

Create

5. Now start performing below practicals

A. Read from Input Box and Write in Message box.

Template:

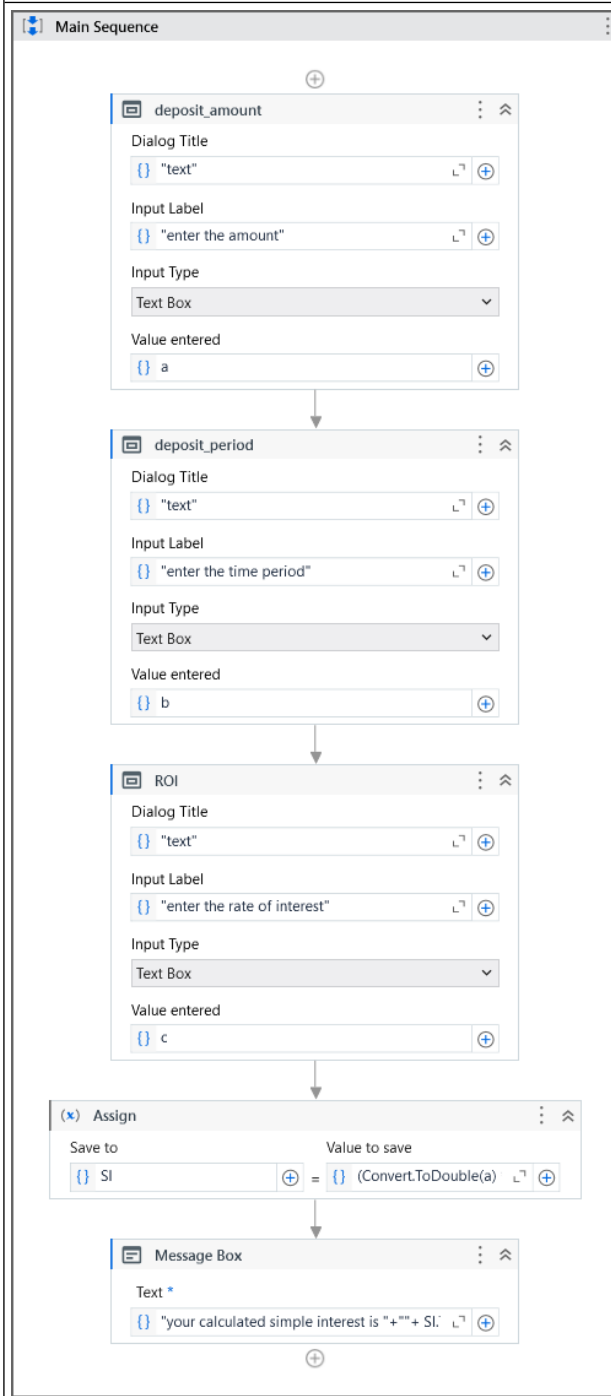
The screenshot shows the 'Main Sequence' editor. It contains two steps: an 'Input Dialog' and a 'Message Box'. The 'Input Dialog' has the following properties: Dialog Title is 'text', Input Label is 'enter your name', Input Type is 'Text Box', and Value entered is 'a'. An arrow points from the 'Input Dialog' to the 'Message Box'. The 'Message Box' has the following property: Text is 'you have enetred this text:' followed by a variable 'a' and '.ToString'.

O/P:

The screenshot shows the output of the application. It consists of two windows. The first window, titled 'text', has a label 'enter your name' and a text input field containing 'ragvinder'. Below the input field is an 'Ok' button. The second window, titled 'Message Box', has a message 'you have enetred this text:ragvinder' and an 'OK' button.

B. Calculate Simple Interest

Template:



O/P:

text

enter the amount

2000

Ok

text

enter the time period

3

Ok

text

enter the rate of interest

5

Ok

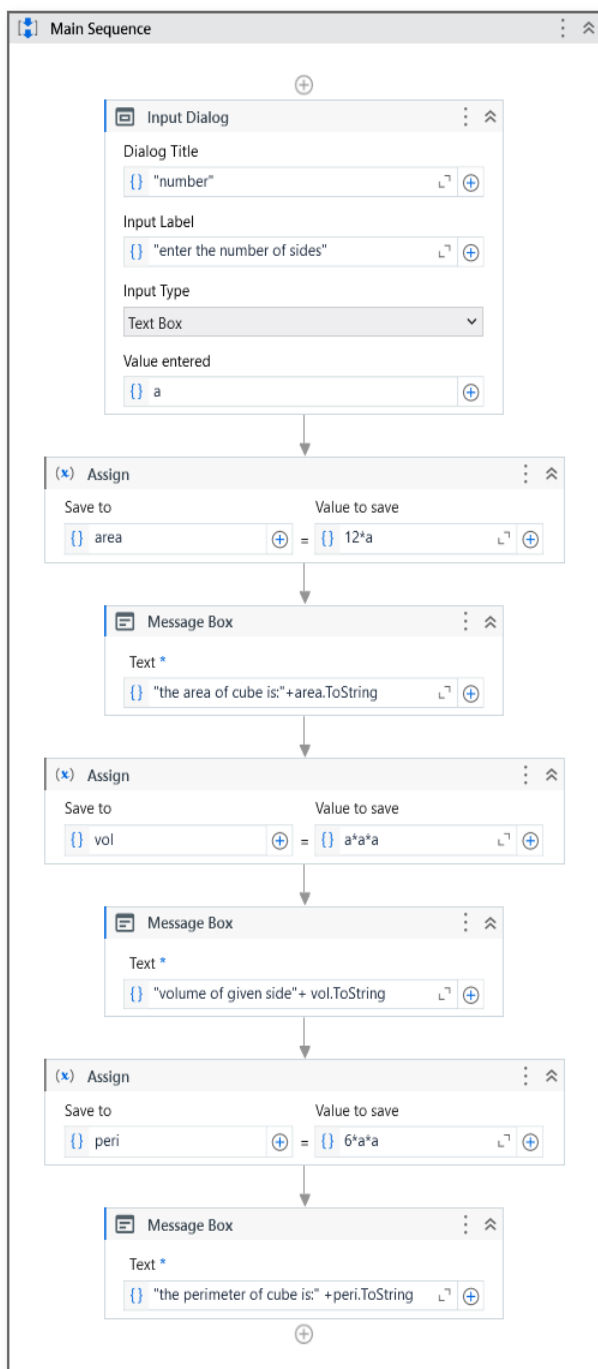
Message Box

your calculated simple interest is 300

OK

C. Calculate Volume, Area and Perimeter of Cube.

Template:



O/P:

number

enter the number of sides

12

Ok

Message Box

the area of cube is:144

OK

Message Box

volume of given side1728

OK

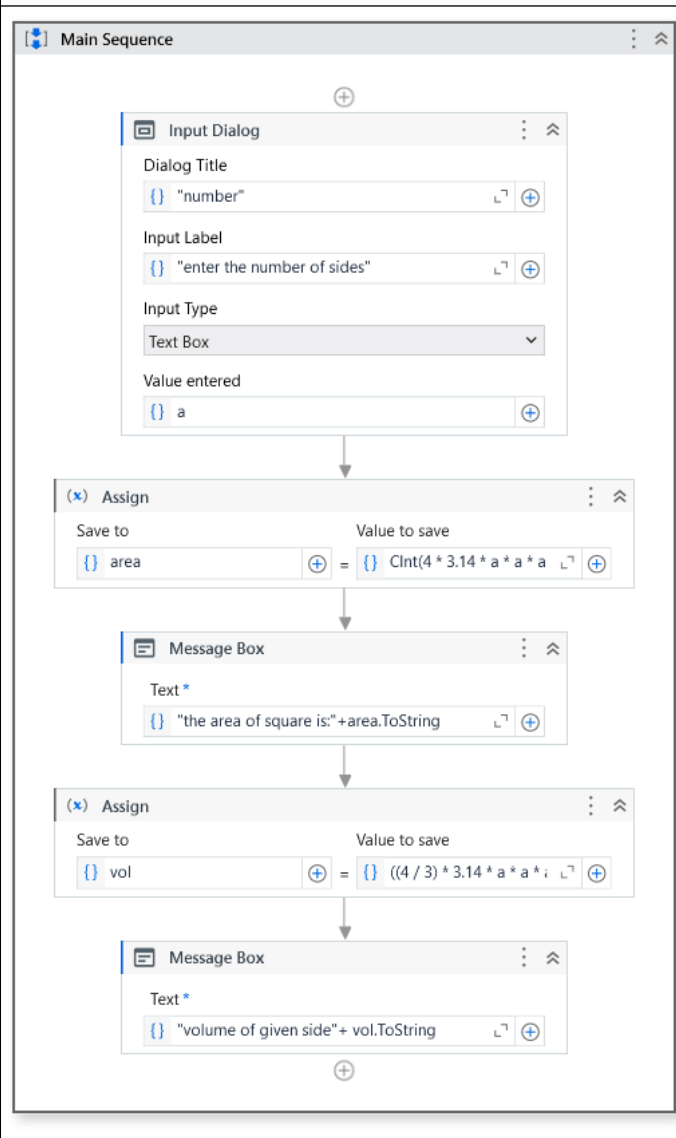
Message Box

the perimeter of cube is:864

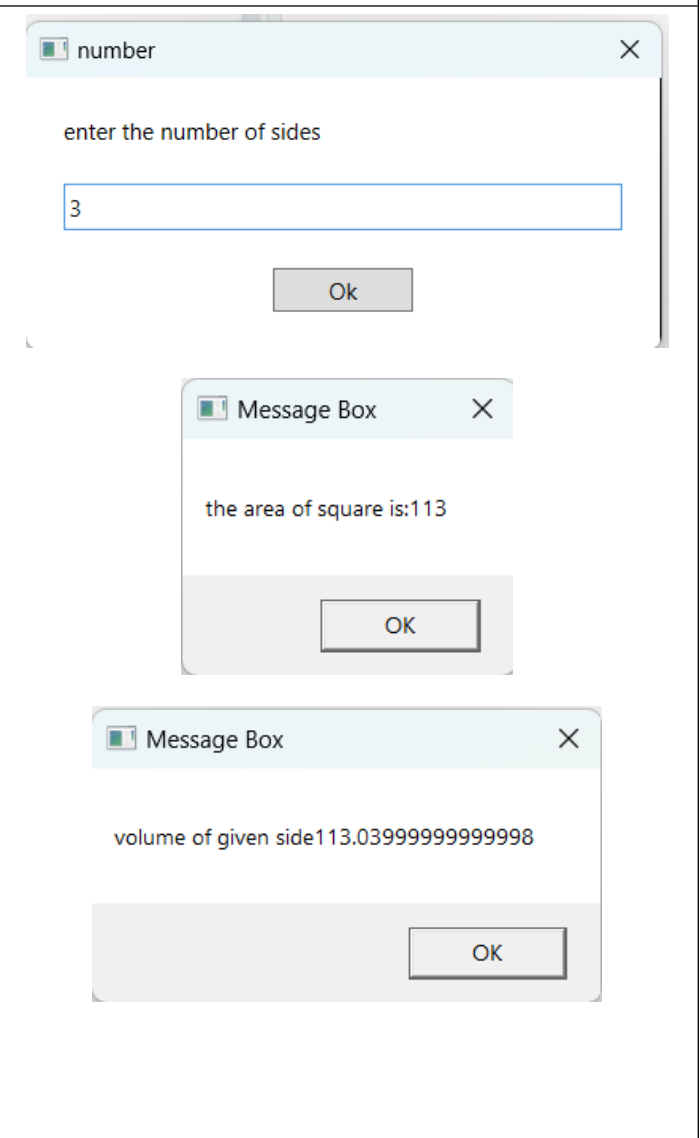
OK

D. Calculate Volume, Area and Circumference of Sphere.

Template:



O/P:



E. Create a workflow which shows the welcome message only if the user enters the correct password.

Template:

Main Sequence

Input Dialog

Dialog Title
{ } "text" ⌵ ⊕

Input Label
{ } "enter your name" ⌵ ⊕

Input Type
Text Box ⌵

Value entered
{ } a ⌵ ⊕

Input Dialog

Dialog Title
{ } "text" ⌵ ⊕

Input Label
{ } "enter your password" ⌵ ⊕

Input Type
Text Box ⌵

Value entered
{ } b ⌵ ⊕

Input Dialog

Dialog Title
{ } "text" ⌵ ⊕

Input Label
{ } "enter your password" ⌵ ⊕

Input Type
Text Box ⌵

Value entered
{ } c ⌵ ⊕

If

Condition
{ } b=c ⌵ ⊕

Then

Message Box

Text
{ } "hello"+" "+ a.ToString ⌵ ⊕

Else

Message Box

Text
{ } "You've entered the wrong password" ⌵ ⊕

O/P:

text

enter your name

ragvinder

Ok

text

enter your password

Show password

Ok

Message...

helloragvinder

OK

Practical 3

Aim: Understanding Branching Activities

Hardware & Software Requirement:

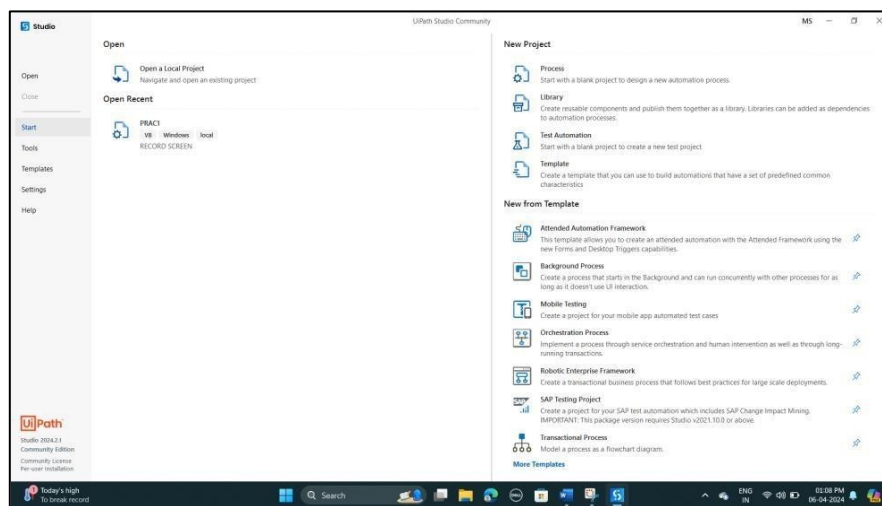
- Hardware:
 - Processor: 11th Gen Intel(R) Core (TM) i5-1135G7 @ 2.40GHz
 - RAM: 8.00 GB (7.74 GB usable)
 - System Type 64-bit Operating System, x86-64-based processor
- Software: UiPath Studio

Steps- Follow are the given steps for performing the following practical:

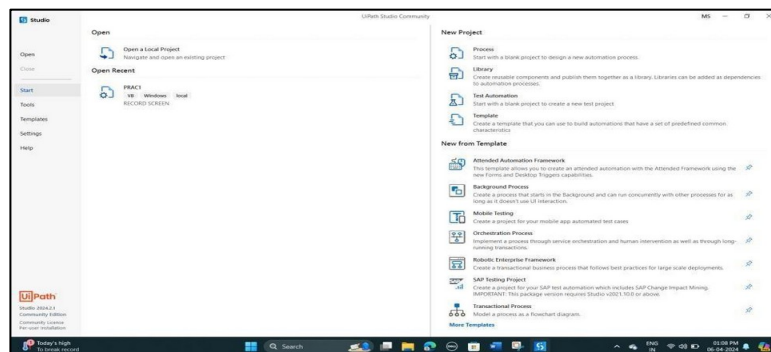
1. Install the UiPath studio after installing the application we get to see the following icon on your desktop.



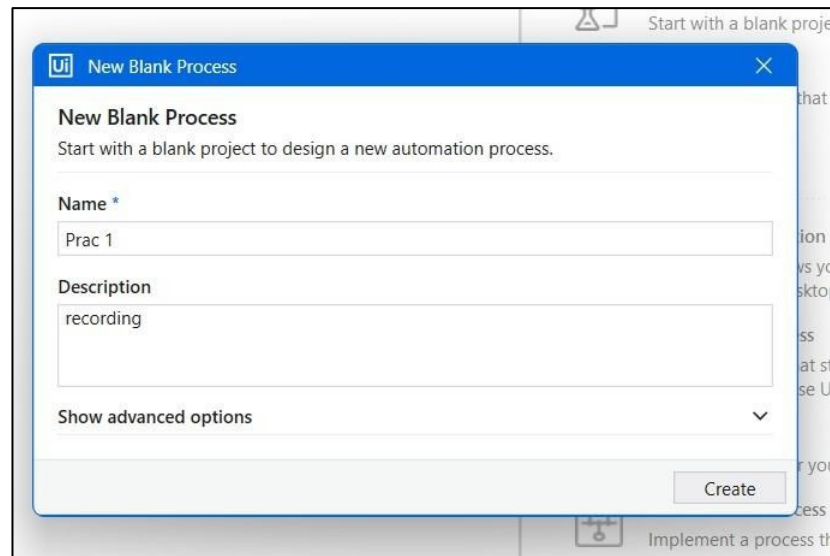
2. The following interface of UiPath studio will be seen.



3. After starting the UiPath -> Select the blank process as shown in the below image.



4. Named your 1st blank process-> then click on create.

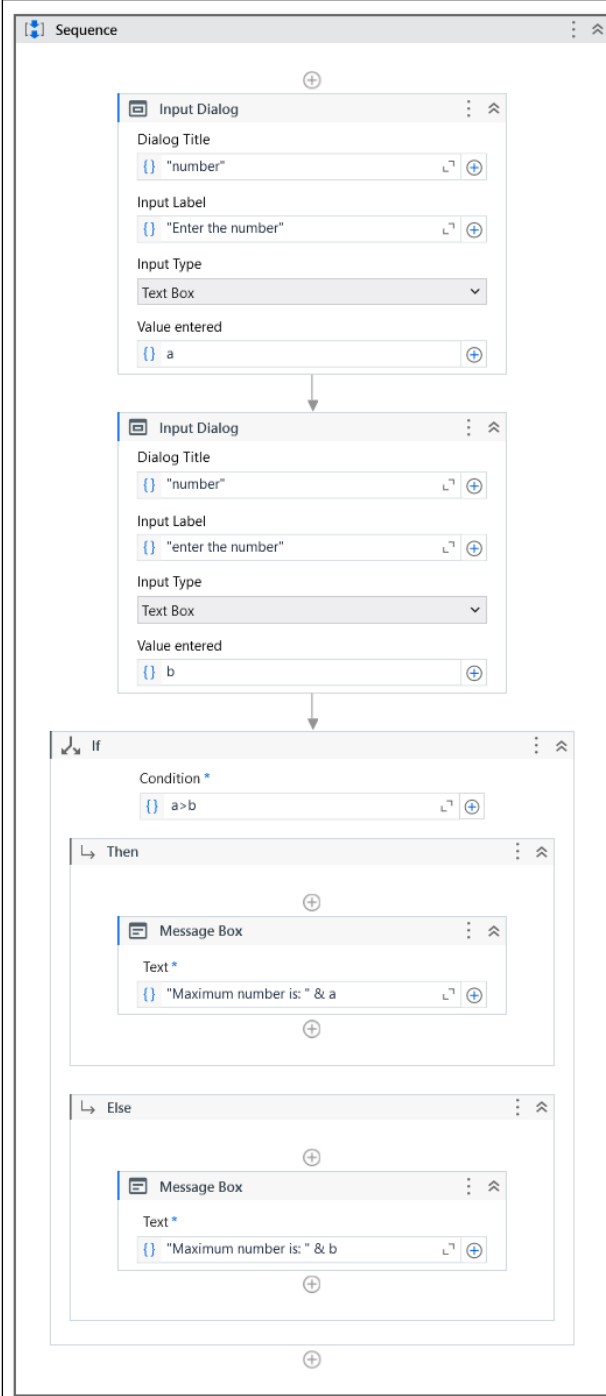


The screenshot shows a 'New Blank Process' dialog box with a blue header bar containing the UiPath logo and the title 'New Blank Process'. Below the header, the text 'Start with a blank project to design a new automation process.' is displayed. The dialog contains two input fields: 'Name' with the value 'Prac 1' and 'Description' with the value 'recording'. Below these fields is a 'Show advanced options' label with a downward arrow. A 'Create' button is located at the bottom right of the dialog. The background shows a blurred view of the UiPath interface with tabs like 'Start with a blank project' and 'Implement a process'.

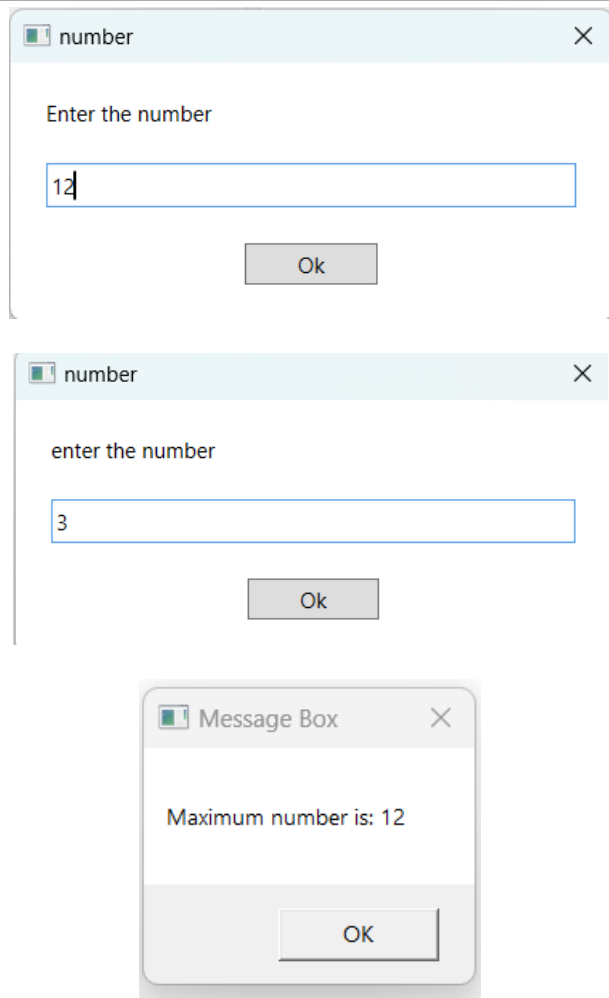
5. Now start performing below practicals

1. Find Maximum of Two numbers (if Activity).

Template:



O/P:



2. Decide whether entered character is Vowel or Consonant (if, Switch activity).

Template:

Main Sequence

Input Dialog

Dialog Title
{ } "letter" L¹ +

Input Label
{ } "enter the letter" L¹ +

Input Type
Text Box

Value entered
{ } ch +

Switch

Expression { } ch L¹ +

Default

Message Box

Text *
{ } "given letter is consonant" L¹ +

Case a

MessageBox

Text *
{ } "given letter is vowel" L¹ +

Case e

MessageBox

Text *
{ } "given letter is vowel" L¹ +

Case i

MessageBox

Text *
{ } "given letter is vowel" L¹ +

Case o

MessageBox

Text *
{ } "given letter is vowel" L¹ +

Case u

MessageBox

Text *
{ } "given letter is vowel" L¹ +

Add new case

O/P:

letter

enter the letter

r

Ok

Message Box

given letter is consonant

OK

letter

enter the letter

a

Ok

MessageBox

given letter is vowel

OK

3. Generation of Fibonacci Series (for activity).

Template:

Fibonacci series

Input Dialog

Dialog Title
{ } "Enter the number greater than 0"

Input Label
{ } "Enter number"

Input Type
Text Box

Value entered
{ } n

If

Condition *
{ } n=1

Then

MessageBox

Text *
{ } int1.ToString

Else

Assign

Save to
{ } fibstore

Value to save
{ } int1.ToString+" "+int2.1

While

Condition *
{ } ctr<n

Body

Assign

Save to
{ } int3

Value to save
{ } int1+int2

Assign

Save to
{ } int1

Value to save
{ } int2

Assign

Save to
{ } int2

Value to save
{ } int3

Assign

Save to
{ } fibstore

Value to save
{ } fibstore+" "+int3.ToString

Assign

Save to
{ } ctr

Value to save
{ } ctr+1

MessageBox

Text *
{ } fibstore

O/P:

Enter the number greater than 0

Enter number

14

Ok

MessageBox

01123581321345589

OK

4. Generation of Even Numbers (For Activity).

Template:	O/P:
<div><div>Main Sequence</div><div><div><div>Assign</div><div>Save to: arr</div><div>Value to save: New Int32(10)</div></div><div>For Each</div><div><div>List of items *: Enumerable.Range(2,21)</div><div>Item: currentNumber</div><div>Body</div><div><div>If</div><div>Condition *: currentNumber Mod 2 = 0</div><div>Then</div><div><div>Assign</div><div>Save to: arr(count)</div><div>Value to save: currentNumber</div></div><div><div>Assign</div><div>Save to: count</div><div>Value to save: count+1</div></div></div><div>Else</div><div><div>Continue</div></div></div></div><div><div>Message Box</div><div>Text *: String.Join(", ", arr)</div></div></div>	

 Message Box 2,4,6,8,10,12,14,16,18,20,22 OK |

5. To find Factorial of Number (While Activity).

Template:	O/P:
<pre>graph TD A[Input Dialog: enter the number] --> B[Assign: i = input] B --> C[Assign: fact = 1] C --> D[While Loop: Condition input > 1] subgraph D [While Loop Body] E[Assign: fact = fact * input] --> F[Assign: input = input - 1] end F --> G[Message Box: Factorial of i is fact]</pre>	

6. Whether the number is even or odd.

Template:

Input Dialog

Dialog Title

{ } "Number"

Input Label

{ } "Enter the number"

Input Type

Text Box

Value entered

{ } num

Message Box 1

Text *

{ } "Entered number is even"

Message Box 2

Text *

{ } "Entered number is odd"

O/P:

Number

Enter the number

12

Ok

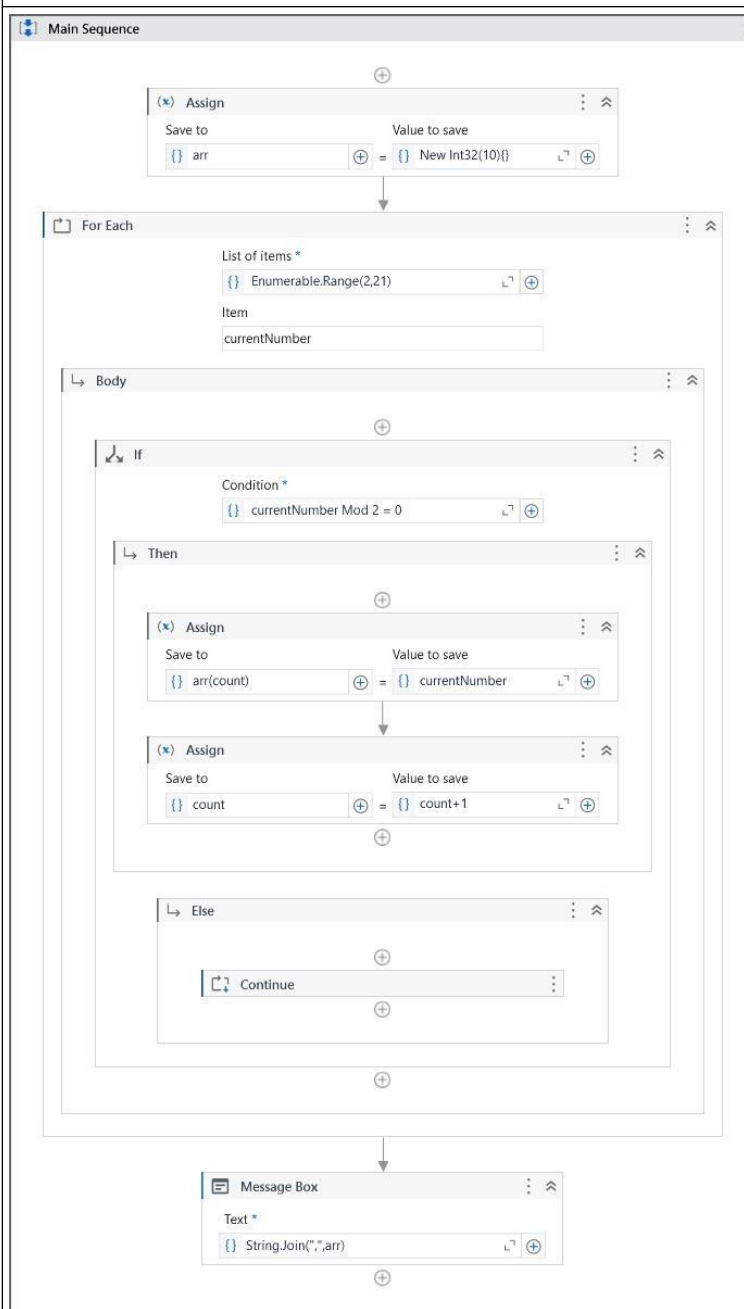
Message Box 1

Entered number is even

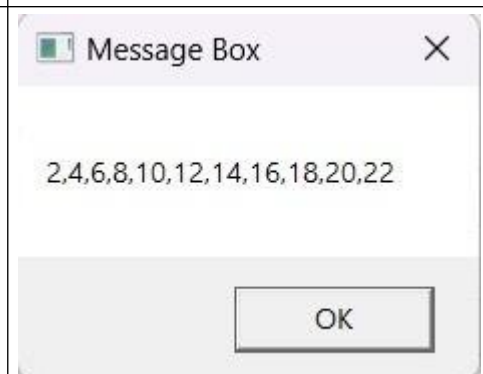
OK

7. Design a workflow for an integer variable will increase from 2 to 22 in increments of 2.

Template:



O/P:



Practical 4

Aim: Use of Advanced Activities

Hardware & Software Requirement:

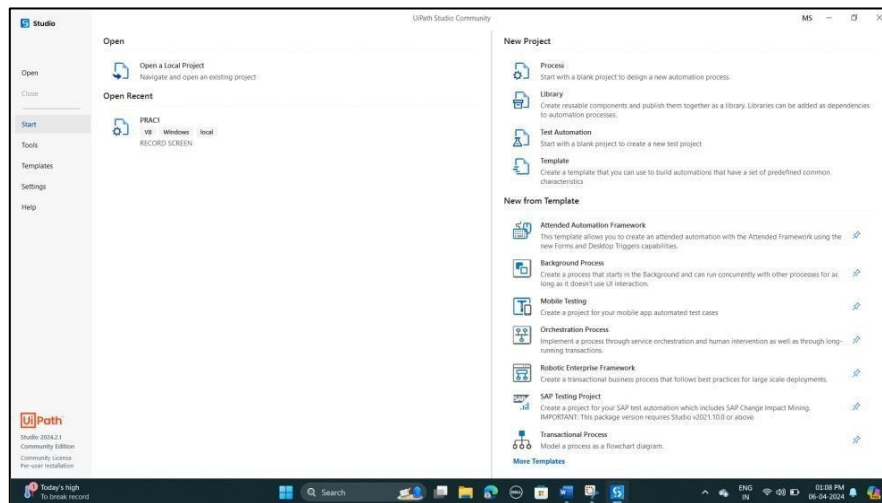
- Hardware:
 - Processor: 11th Gen Intel(R) Core (TM) i5-1135G7 @ 2.40GHz
 - RAM: 8.00 GB (7.74 GB usable)
 - System Type 64-bit Operating System, x86-64-based processor
- Software: UiPath Studio

Steps- Follow are the given steps for performing the following practical:

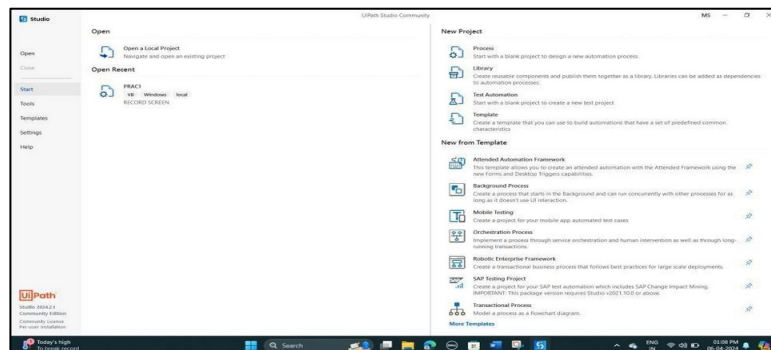
1. Install the UiPath studio after installing the application we get to see the following icon on your desktop.



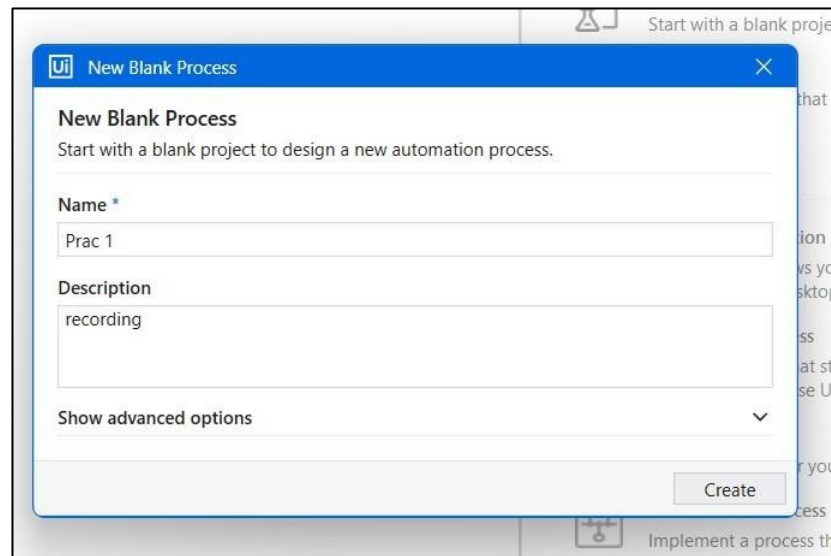
2. The following interface of UiPath studio will be seen.



3. After starting the UiPath -> Select the blank process as shown in the below image.



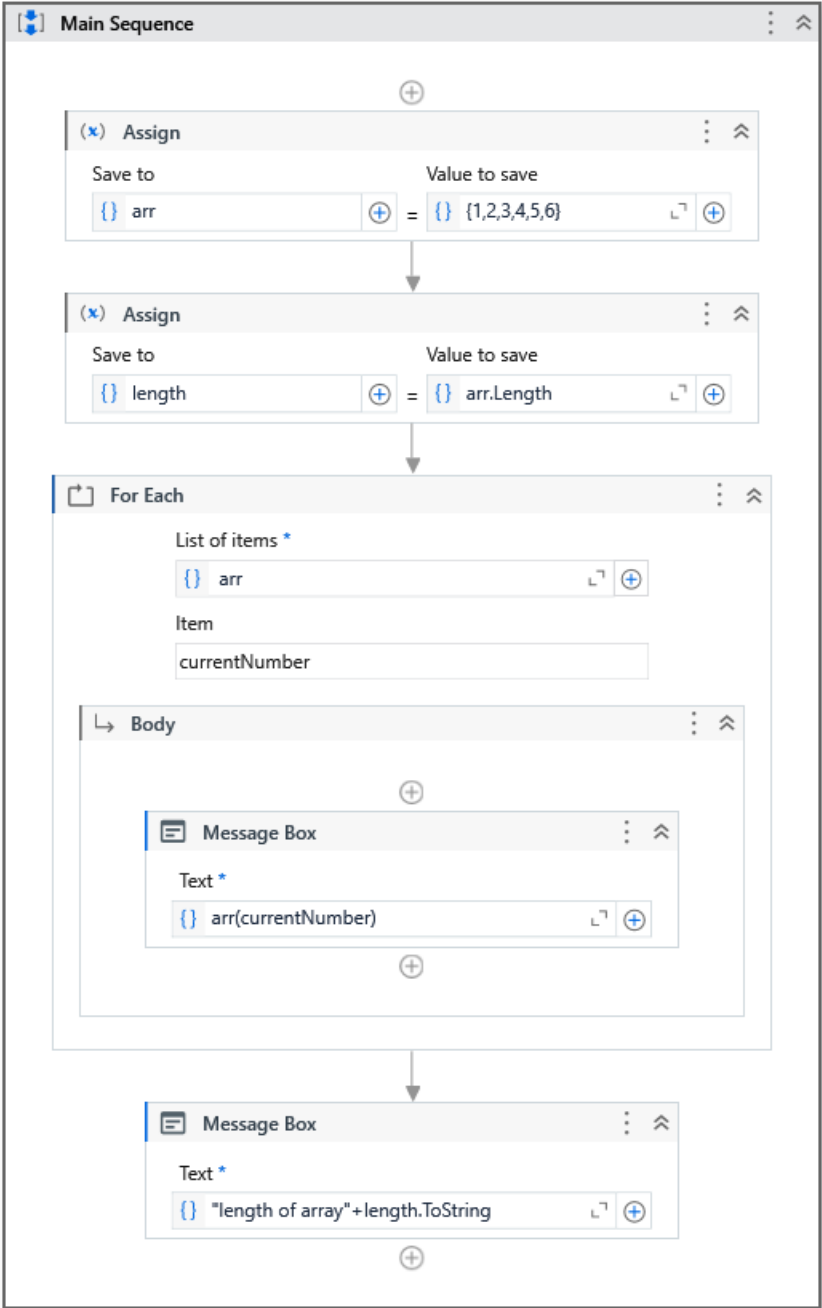
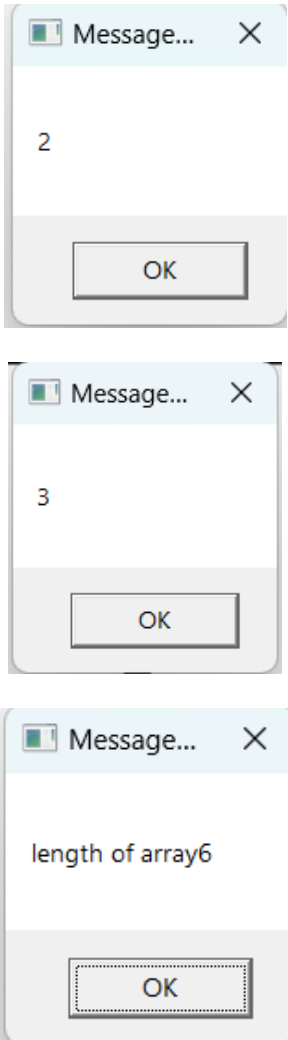
4. Named your 1st blank process-> then click on create.



The screenshot shows a 'New Blank Process' dialog box with a blue header bar containing the UiPath logo and the title 'New Blank Process'. Below the header, the text 'Start with a blank project to design a new automation process.' is displayed. The dialog contains two input fields: 'Name *' with the value 'Prac 1' and 'Description' with the value 'recording'. Below these fields is a 'Show advanced options' section with a downward arrow. At the bottom right, there is a 'Create' button. The background of the application window is partially visible, showing tabs for 'Start with a blank project' and 'Implement a process template'.

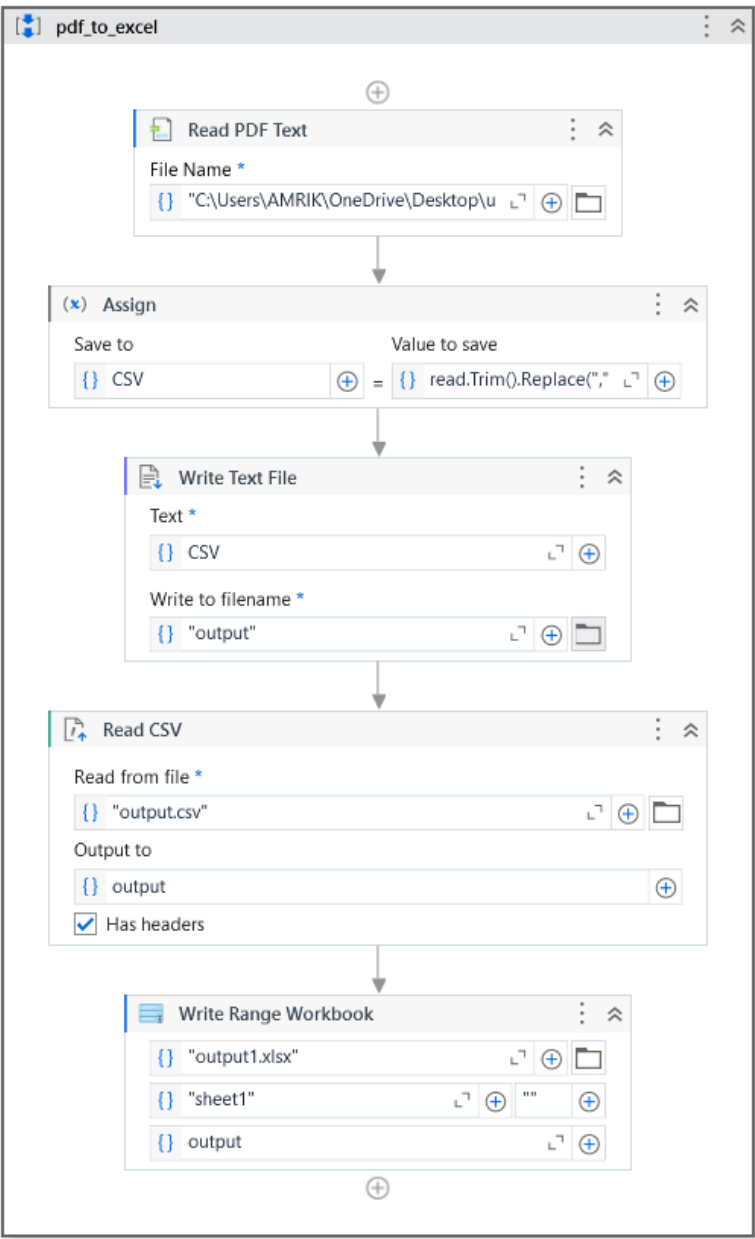
5. Now start performing below practicals

A. Create an automation process that goes through each element of an array write the length of array and each element to output panel.

Template:	O/P:
	

B. Perform File Operation Like Read cell, write cell, read range, write range, append range.

Template:



O/P:

output	12-05-2024 05:32 PM	File	1 KB
output	12-05-2024 05:30 PM	Microsoft Excel Co...	1 KB

Practical 5

Aim: File Processing

Theory: In UiPath, there are specific activities designed to handle PDF, CSV, and Word files.
PDF Activities

1. Read PDF Text

Description: Extracts all text from a PDF file.

Output: Stores the extracted text in a string variable.

2. Read PDF with OCR

Description: Extracts text from a PDF file using OCR (Optical Character Recognition). Useful for PDFs with images or scanned text.

Output: Stores the extracted text in a string variable.

OCR Engine: Specifies the OCR engine to use.

3. Read CSV

Description: Reads a CSV file and outputs a DataTable.

Delimiter: (Optional) Specifies the delimiter used in the CSV file (default is comma).

Output: Stores the CSV data in a DataTable variable.

4. Write CSV

Description: Writes a DataTable to a CSV file.

Input: The DataTable to write to the CSV file.

Delimiter: (Optional) Specifies the delimiter to use in the CSV file (default is comma).

4. Write Text

Description: Writes text to a Word document.

Text: The text to write to the Word document.

Append: (Optional) If set to true, appends the text to the existing content. If false, overwrites the content.

A. Design a process to read all PDF files from a folder and then close them all.

Steps:

1. Set Up the Project:

Open UiPath Studio and create a new process.

2. Define Variables and Arguments:

Create a variable to hold the folder path, e.g., folderPath (String).

Create a variable to store the list of PDF files

3. Get PDF Files:

Use the Assign activity to get all PDF files from the folder:

Ex `.pdfFiles = Directory.GetFiles(folderPath, "*.pdf")`

4. Loop Through PDF Files:

Use a For Each activity to loop through each file in the pdfFiles array.

Set the type argument to String.

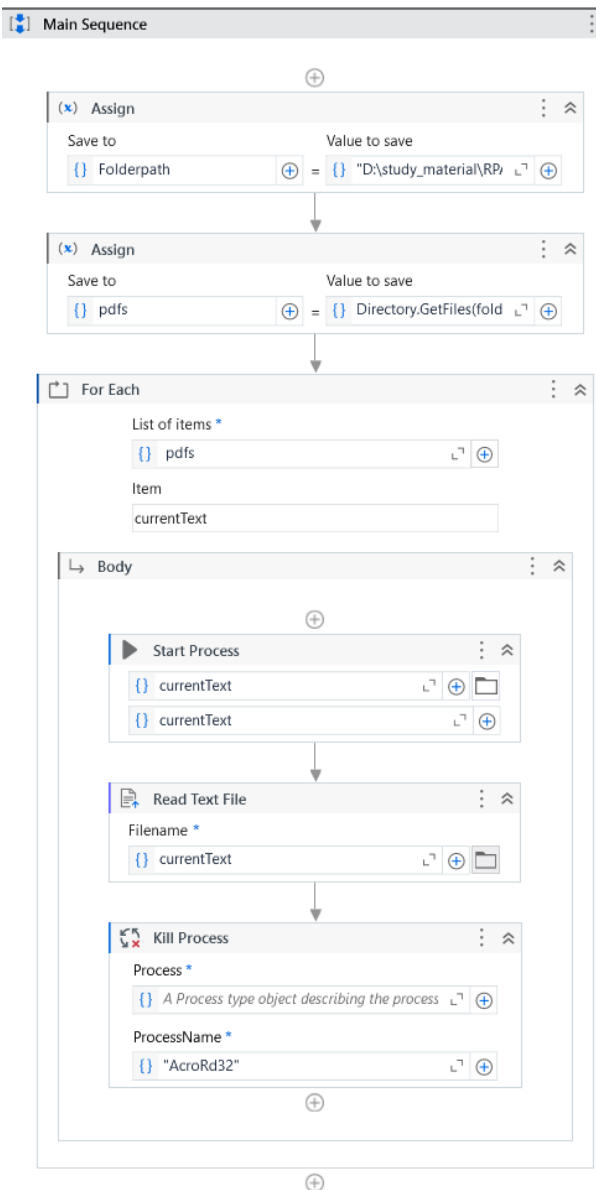
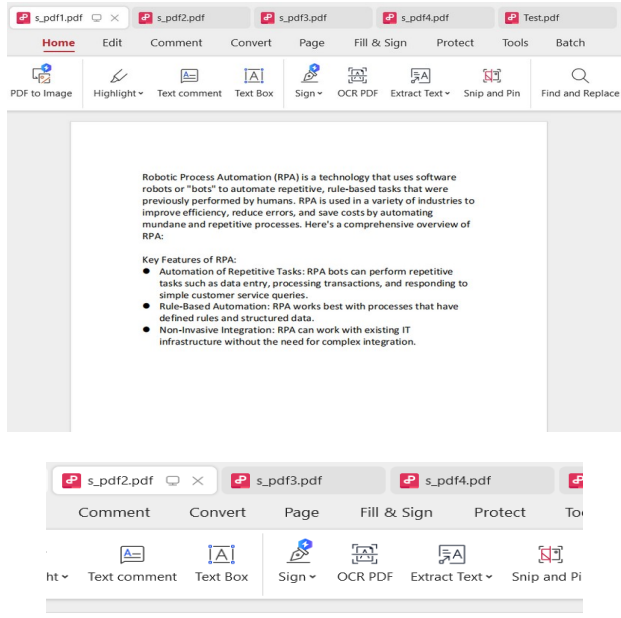
5. Open and Process PDF Files:

Within the For Each loop, use the Start Process activity to open each PDF file.

Set the FileName property to item (each PDF file path).

6. Perform Read text operation by drag and drop read text activity in for each body.

7. After processing each PDF, use the Kill Process activity to close the PDF reader application

Template:	O/P:
 <p>The diagram shows a 'Main Sequence' with the following steps:</p> <ul style="list-style-type: none">Assign: 'Save to' is 'Folderpath', 'Value to save' is '"D:\study_material\RP\..."Assign: 'Save to' is 'pdfs', 'Value to save' is 'Directory.GetFiles(fold...'.For Each: 'List of items' is 'pdfs', 'Item' is 'currentText'.Body:<ul style="list-style-type: none">Start Process: 'Process' is 'currentText', 'ProcessName' is 'AcroRd32'.Read Text File: 'Filename' is 'currentText'.Kill Process: 'Process' is 'A Process type object describing the process', 'ProcessName' is 'AcroRd32'.	<p>PDF will be open to read</p>  <p>The screenshot shows a PDF viewer with the following text:</p> <p>Robotic Process Automation (RPA) is a technology that uses software robots or "bots" to automate repetitive, rule-based tasks that were previously performed by humans. RPA is used in a variety of industries to improve efficiency, reduce errors, and save costs by automating mundane and repetitive processes. Here's a comprehensive overview of RPA:</p> <p>Key Features of RPA:</p> <ul style="list-style-type: none">Automation of Repetitive Tasks: RPA bots can perform repetitive tasks such as data entry, processing transactions, and responding to simple customer service queries.Rule-Based Automation: RPA works best with processes that have defined rules and structured data.Non-Invasive Integration: RPA can work with existing IT infrastructure without the need for complex integration. <p>Benefits of RPA:</p> <ul style="list-style-type: none">Increased Efficiency: Bots can operate 24/7 without breaks, significantly increasing process speed and throughput.Cost Savings: Automating tasks reduces the need for manual labor, leading to cost savings on staffing.Improved Accuracy: RPA reduces the likelihood of errors in repetitive tasks.Enhanced Compliance: RPA ensures that processes are executed consistently, which is crucial for compliance with regulations.Employee Satisfaction: By automating mundane tasks, employees can focus on more strategic, value-adding activities.

B. Read PDF and Convert into CSV/Word

Step:

Initialize Variables:

Create variables for the PDF file path, the extracted text, and the DataTable to hold the CSV data.

Read PDF Text:

Use the Read PDF Text activity to read the text from the PDF file.

Parse Text:

Use string manipulation activities to parse the extracted text into a tabular format. This step will depend on the structure of the text in your PDF.

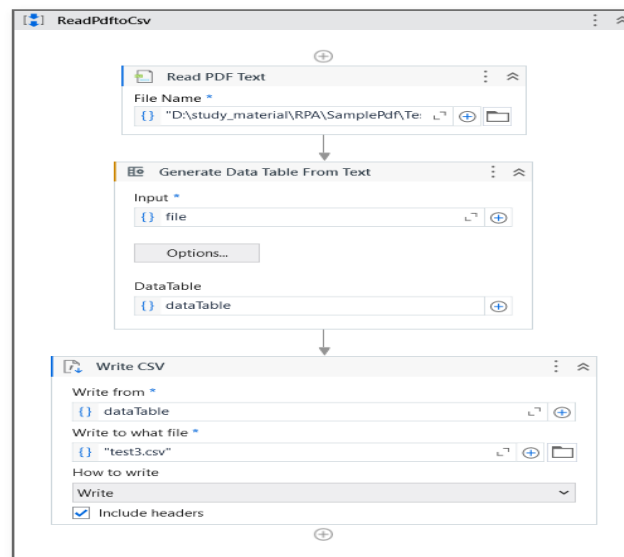
Build Data Table:

Create a DataTable to store the parsed data.

Write to CSV:

Use the Write CSV activity to write the DataTable to a CSV file.

Template:



I/P PDF

ID	Name	Age	Department	Salary	Date of Joining
1	John Smith	29	IT	60000	15-03-2020
2	Jane Doe	34	HR	58000	21-07-2018
3	Mike Brown	41	Sales	75000	02-11-2017
4	Emily Davis	26	Marketing	50000	13-06-2019
5	David Wilson	38	Finance	82000	30-09-2016
6	Sarah Lee	31	IT	67000	10-01-2021
7	Chris Martin	28	Customer Support	48000	05-12-2019
8	Laura King	36	Sales	73000	18-04-2015
9	Robert White	45	Finance	90000	27-08-2013

O/P

<

C. Design a process to read text from multiple word documents

Steps:

1. Define Variables and Arguments:

Create a variable to hold the folder path, e.g., folderPath (String).

Create a variable to store the list of word files

2. Get word Files:

Use the Assign activity to get all PDF files from the folder:

Ex .wordFiles = Directory.GetFiles(folderPath, "*.doc")

3. Loop Through PDF Files:

Use a For Each activity to loop through each file in the pdfFiles array.

Set the type argument to String.

4. Open and Process PDF Files:

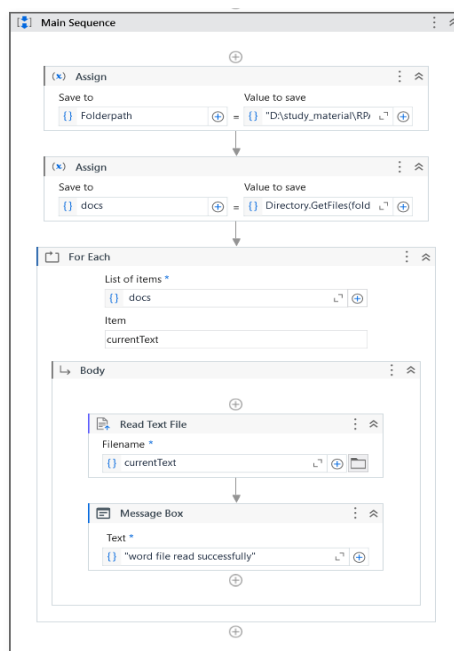
Within the For Each loop, use the Start Process activity to open each PDF file.

Set the FileName property to item (each PDF file path).

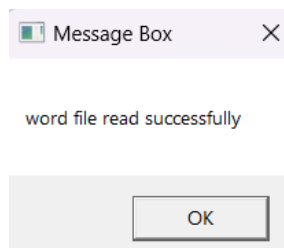
5. Perform Read text operation by drag and drop read text activity in for each body.

After processing each PDF, use the Kill Process activity to close the PDF reader.

Template:



Output:



D. Design a process to Merge Multiple word files into one file

Steps:

1. Create a New Sequence

Create a new sequence in UiPath Studio where you will design your workflow.

Define the File Paths

2. Create variables to store the file paths of the Word documents you want to merge. You can use a list of strings if you have multiple documents.

3. Use Word Application Scope

Use a Word Application Scope activity to open the first document.

4. Append the Documents

Use the Append Text or Append Document activity inside the Word Application Scope to append the content of the other documents. Loop through the list of file paths starting from the second document.

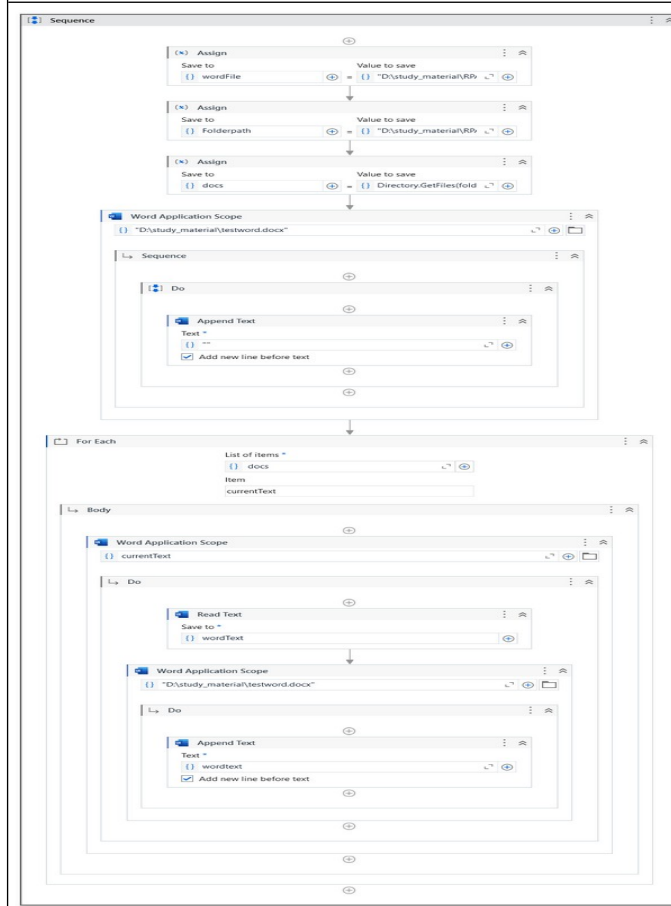
5. Save and Close the Merged Document

After appending all the documents, save the merged document using the Save Document As activity within the Word Application Scope.

6. Close the Word Application Scope

Close the Word Application Scope to ensure all changes are saved and the document is closed properly.

Template:



O/P:

The screenshot shows a Windows File Explorer window with the path 'This PC > New Volume (D:) > study_material > RPA > sampleWord'. Below the address bar is a table of files:

Name	Date modified	Type	Size
s_word	24-05-2024 19:50	DOCX Document	11 KB
s_word2	24-05-2024 19:51	DOCX Document	11 KB
s_word3	24-05-2024 19:52	DOCX Document	11 KB

Future Trends in RPA:

Integration with AI and ML: Enhancing RPA with artificial intelligence (AI) and machine learning (ML) to handle more complex tasks and unstructured data.

Hyperautomation: Combining RPA with other automation tools and technologies to create end-to-end automated processes.

Increased Adoption in SMEs: More small and medium-sized enterprises are adopting RPA to improve efficiency and competitiveness.

Cloud-Based RPA: Leveraging cloud platforms for RPA to enable easier deployment, scalability, and management.

Focus on Human-Bot Collaboration: Developing systems where humans and bots can work together seamlessly, augmenting human capabilities rather than replacing them.

Challenges and Considerations:

Complexity of Processes: Not all processes are suitable for RPA. Complex, unstructured processes may require additional AI and machine learning capabilities.

Change Management: Successful RPA implementation requires effective change management to address employee concerns and ensure smooth adoption.

Maintenance and Scalability: Ongoing maintenance is necessary to ensure bots continue to function as intended, especially as processes and systems change.

Security and Compliance: Ensuring that bots handle data securely and comply with relevant regulations is crucial.

E. Create an automation for PDF to Text Conversion

Steps:

1. Create a New Sequence

Create a new sequence in UiPath Studio where you will design your workflow.

2. Define the File Paths

Create variables to store the file paths of the PDF file and the output text file

3. Define the File Paths

Create variables to store the file paths of the PDF file and the output text file

4. Use Read PDF Text Activity

Use the Read PDF Text activity to read the text from the PDF file.

Input: pdfFilePath

Output: pdfText (String variable to hold the text content.)

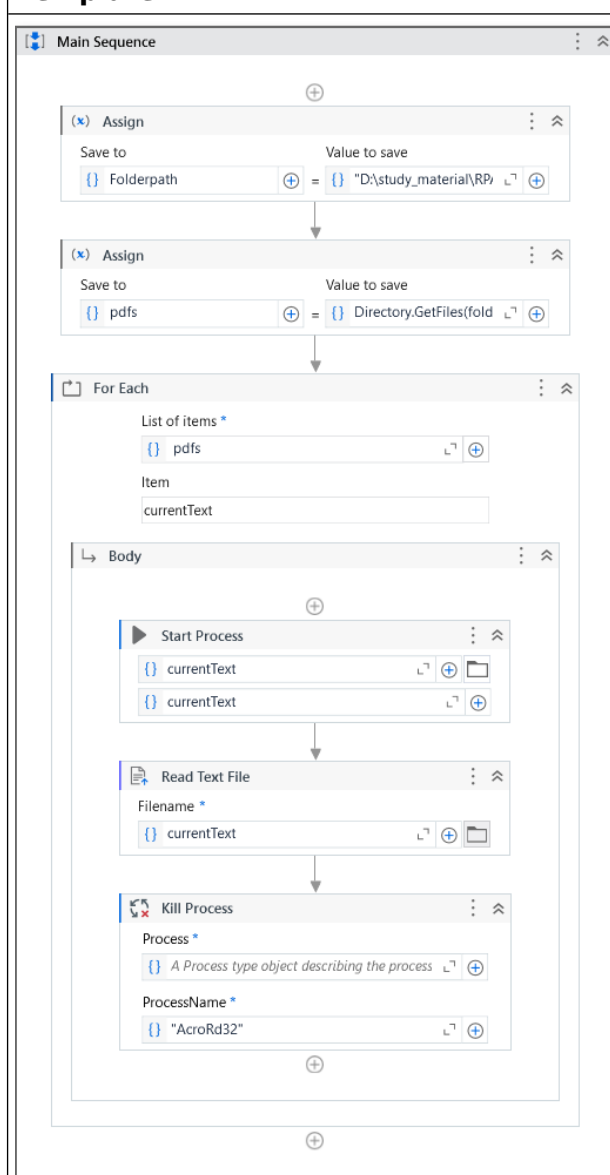
5. Write Text to File

Use the Write Text File activity to save the text content into a text file.

Input: textFilePath (path to save the text file)

Input: pdfText (the text content from the PDF)

Template:

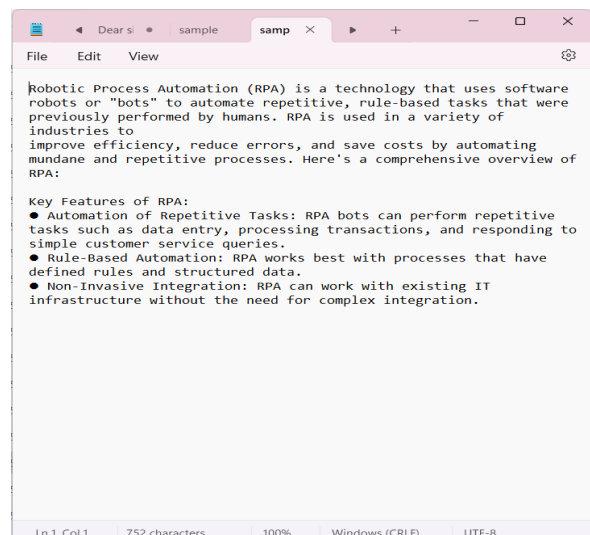


O/P:

Robotic Process Automation (RPA) is a technology that uses software robots or "bots" to automate repetitive, rule-based tasks that were previously performed by humans. RPA is used in a variety of industries to improve efficiency, reduce errors, and save costs by automating mundane and repetitive processes. Here's a comprehensive overview of RPA:

Key Features of RPA:

- Automation of Repetitive Tasks: RPA bots can perform repetitive tasks such as data entry, processing transactions, and responding to simple customer service queries.
- Rule-Based Automation: RPA works best with processes that have defined rules and structured data.
- Non-Invasive Integration: RPA can work with existing IT infrastructure without the need for complex integration.



Practical 6

Aim: Advanced Automation

Theory:

In UiPath, you can interact with web browsers using the "Open Browser" activity to launch a browser and navigate to a specific URL. Then, to interact with elements on the webpage, you can use the "Click" activity from the "UI Automation" category. You can create a UiPath automation workflow to interact with web browsers and perform various actions like clicking on UI elements.

1. Try Catch Activity

The Try Catch activity is used to handle exceptions that may occur during the execution of a sequence of activities. It allows you to define a block of activities to try, and one or more catch blocks to handle specific exceptions.

2. FormatException

FormatException is thrown when the format of an argument does not meet the parameter specifications of the invoked method. For example, attempting to convert a non-numeric string to a number will throw a FormatException.

3. System.Exception

System.Exception is the base class for all exceptions in .NET. Catching System.Exception will handle any exceptions that are not caught by more specific catch blocks.

A. Create a workflow that will input data from a spreadsheet into the form fields of RPA Challenge

Steps:

1. Read Data from Spreadsheet:

Use the Excel Application Scope activity to open your Excel file.

Use the Read Range activity within the Excel Application Scope to read the data from the spreadsheet into a DataTable.

2. Use Application/Browser Activity:

Drag and drop the Use Application/Browser activity into your workflow.

Configure this activity to point to the specific browser application or an already open browser window.

Inside the Use Application/Browser container, add the activities to interact with the form fields.

3. Iterate Through DataTable:

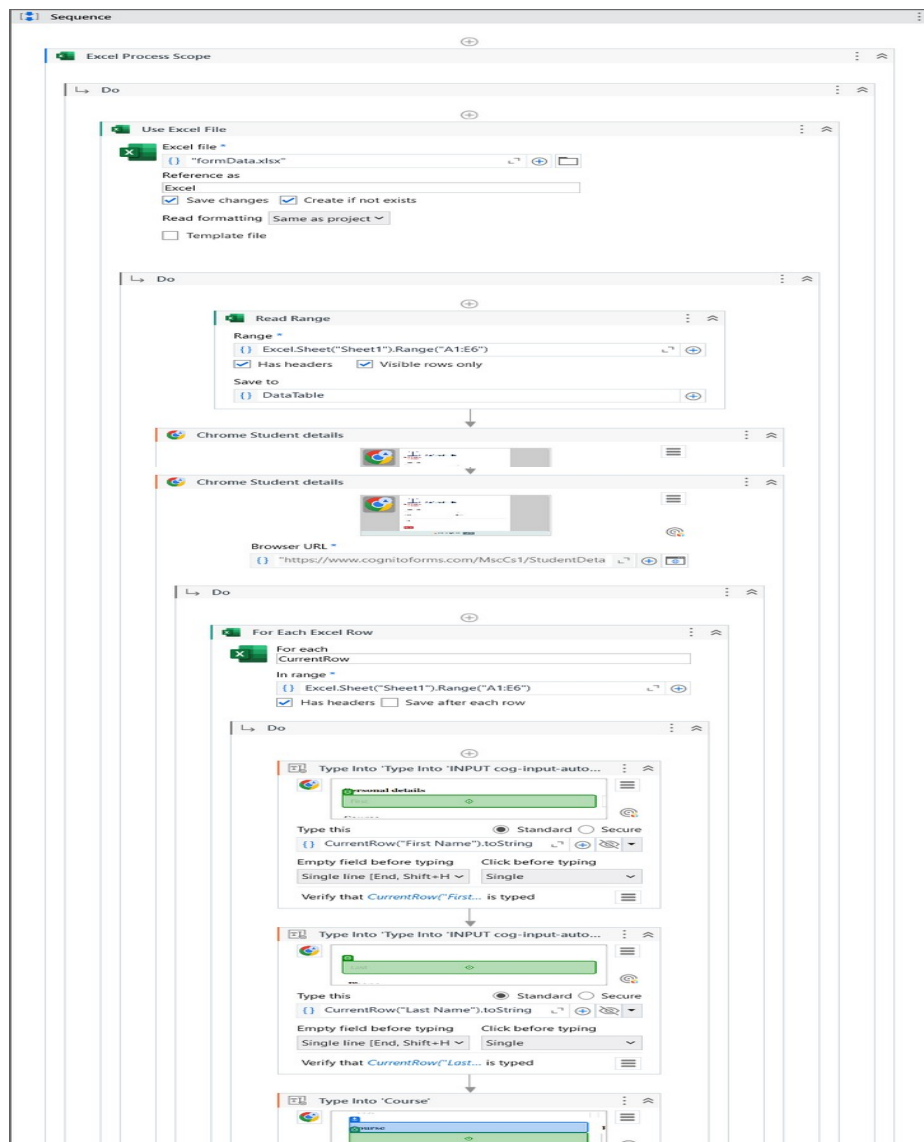
Use a For Each Row activity to loop through each row in the DataTable obtained from the spreadsheet.

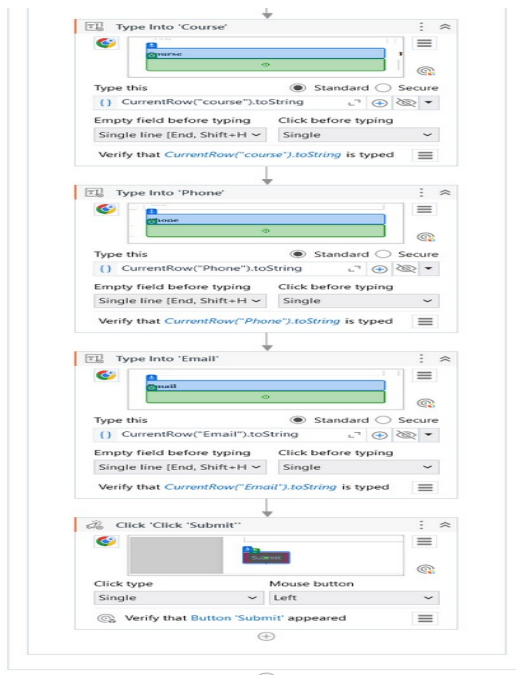
4. Input Data into Form Fields:

Inside the For Each Row loop, use appropriate activities such as Type Into and Click to enter the data into the form fields.

You can use dynamic selectors or directly indicate the fields on the web form using UiPath's recorder or selector editor.

Template:





Output:

Input spreadsheet and form

A	B	C	D	E
First Name	Last Name	course	Phone	Email
Emma	Smith	Introduction to Psychology	(555) 123-4567	emma.smith@example.com
Liam	Johnson	Principles of Marketing	(555) 987-6543	liam.johnson@example.com
Sophia	Williams	Data Structures and Algorithms	(555) 246-8102	sophia.williams@example.com
Ethan	Brown	Environmental Science	(555) 369-2580	ethan.brown@example.com
Mia	Garcia	Modern Art History	(555) 112-3344	mia.garcia@example.com

Student details

Personal details

First Last

Course **Phone**

Email

"UiPath Browser Automation 23.10" started debugging this browser

Cancel

Student details						
#	Status	Submitted	Personal details	Course	Phone	Email
2	Submitted	28-05-2024 20:52	Emma Smith	Introduction to Psychology	(555) 123-4567	emma.smith@example.com
1	Submitted	28-05-2024 20:45	Emma Smith	Introduction to Psychology	(555) 123-4567	emma.smith@example.com

B. Create a process to login to Amazon website and recover if browser Crashes.

Steps:

1. Open UiPath Studio and create a new project.

Add the necessary dependencies, such as UiPath.UIAutomation.Activities.

2. Define Variables:

Create variables for storing login credentials (e.g., username, password).

Create a variable to store the URL of the Amazon login page (e.g., amazonLoginUrl).

3. Use Application/Browser Activity:

Drag and drop the "Use Application/Browser" activity into the Main workflow.

In the "ApplicationPath" field, enter the URL of the Amazon login page (e.g., <https://www.amazon.com/ap/signin>).

4. Set the "BrowserType" property to the appropriate browser (e.g., Chrome, Firefox).

5. Handle Login:

Inside the "Use Application/Browser" container, use activities to automate the login process:

Use "Type Into" activities to enter the username and password.

Use "Click" activities to click the "Sign-In" button.

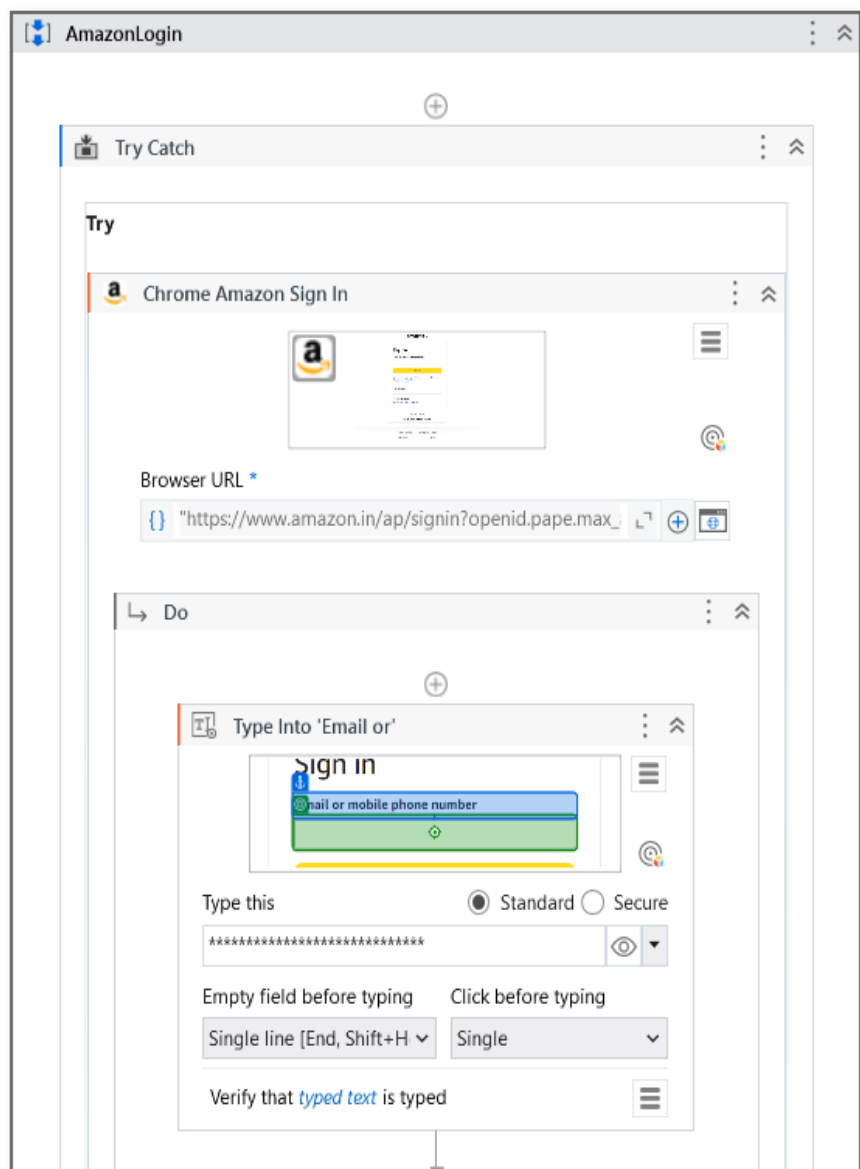
6. Error Handling:

Add a "Try Catch" activity to handle potential errors or browser crashes.

Place the "Use Application/Browser" activity inside the "Try" block.

In the "Catch" block, handle specific exceptions like System.Exception

Template:



Click 'Click 'INPUT signInSubmit''

Click type

Single

Mouse button

Left

Indicate verification target on screen

Message Box

Text *

{ } "user login succesfully to amazon"

Catches

Exception

Add new catch

Finally

Add an activity

Output:

"UiPath Browser Automation 23.10" started debugging this browser

Cancel

amazon.in

Delivering to Karjat 410201

Update location

All

Search Amazon.in

EN

Hello, Siddharth

Account & Lists

All

Amazon miniTV

Sell

Amazon Pay

Keep Shopping for

Today's Deals

Best Sellers

Buy Again

Prime

Mobiles

Customer Service

Gift Cards

PANCHAYAT

Join

Your Amazon.in

Your Browsing History

Recommended For You

Improve Your Recommendations

Your Profile

Learn more

Top picks for you

boAt Newly Launched Airdopes 311 Pro TWS Earbuds w/Up to...
★★★★★ 2
₹1,199.00
Get it by Friday, May 31

iQOO Z9x 5G (Tornado Green, 6GB RAM, 128GB Storage) [...]
★★★★★ 37
₹14,499.00
Get it by Friday, May 31

BlackBook of English Vocabulary May 2024 by Nikhil Gupta
★★★★★ 62
₹299.00
Get it by Friday, May 31

Maths Concept King All Formulas and Theorum | Smart Tricks [...]
★★★★★ 55
₹239.00
Get it by Sunday, June 2

Sprite Soft Drink PET Bottle, 750 ml
★★★★★ 11,729

Noise Pulse 2 Max 1.85" Display, Bluetooth Calling Smart Watch,...
★★★★★ 33,824
₹1,299.00
Get it by Friday, May 31

Lucifer
Get

C. Handling the Format exception and System exception in basic calculation program

Steps:

1. Create Variables

input1 (String)

input2 (String)

2. Input Dialogs

Title: "Enter the first number"

Label: "Please enter the first number:"

Store the result in input1

3.Try Catch Activity

Add a Try Catch activity to handle potential exceptions.

4.Try Block

Add activities inside the Try block to perform the conversion and calculation

5.Catch Blocks

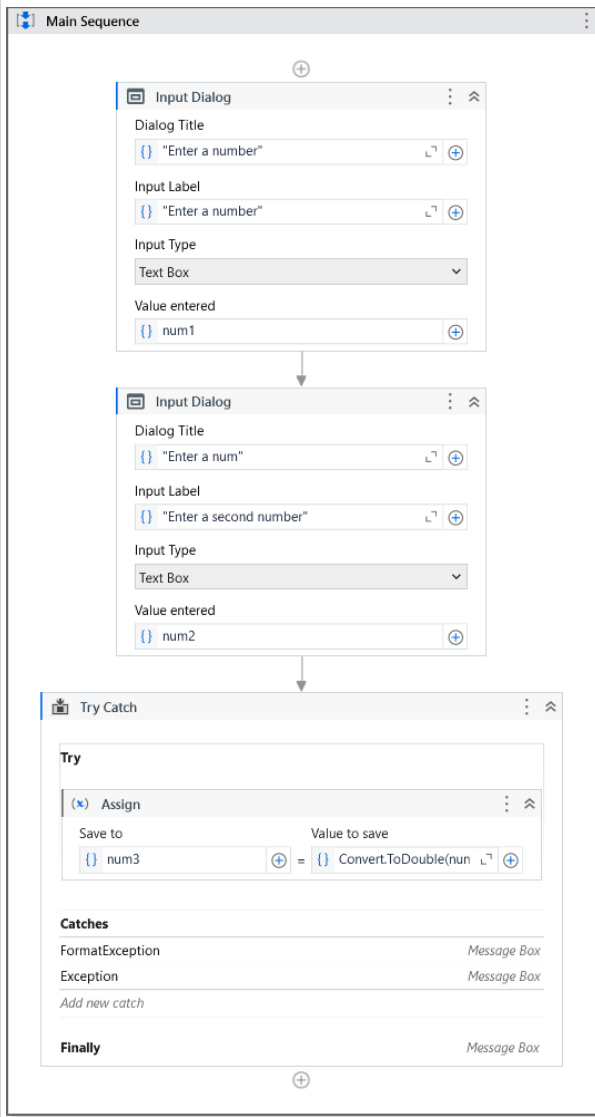
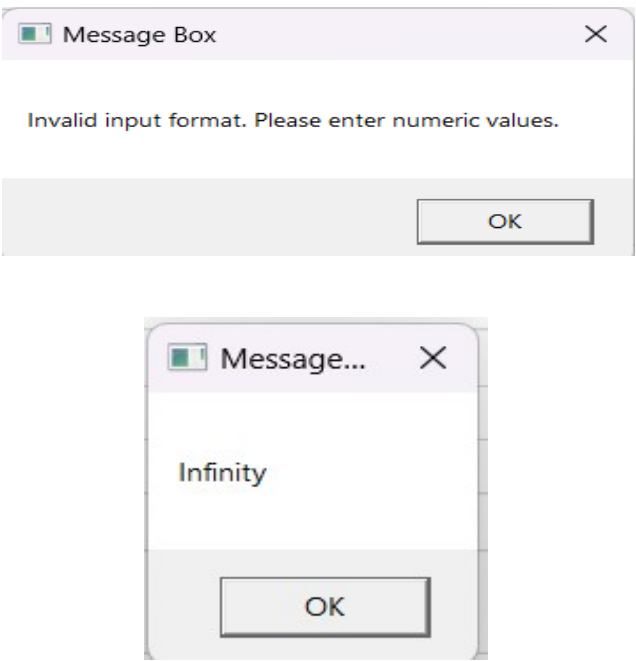
Add two Catch blocks:

FormatException:

Add a Message Box activity to display an error message for invalid input formats

System.Exception:

Add a Message Box activity to display a general error message for unexpected errors

Template	O/P
	

Practical 7

Aim: Web Recording

Theory:

Web recording automation in UiPath allows you to capture actions performed on web applications and websites, enabling the automation of repetitive web-based tasks.

- Web recording automation in UiPath is a powerful tool that can be used in various scenarios across different industries. Here are some common uses
- Automating Form Filling: Automatically fill out forms on websites, reducing manual entry and increasing accuracy.
- Web Scraping: Extract structured data from web pages for reporting, analysis, or further processing. This can include data such as product prices, stock information, or contact details.

Advantages of Using Web Recording Automation:

Efficiency: Reduces the time taken to perform repetitive tasks.

Accuracy: Minimizes human error in data entry and processing.

Scalability: Can handle a large volume of transactions or data extractions without degradation in performance.

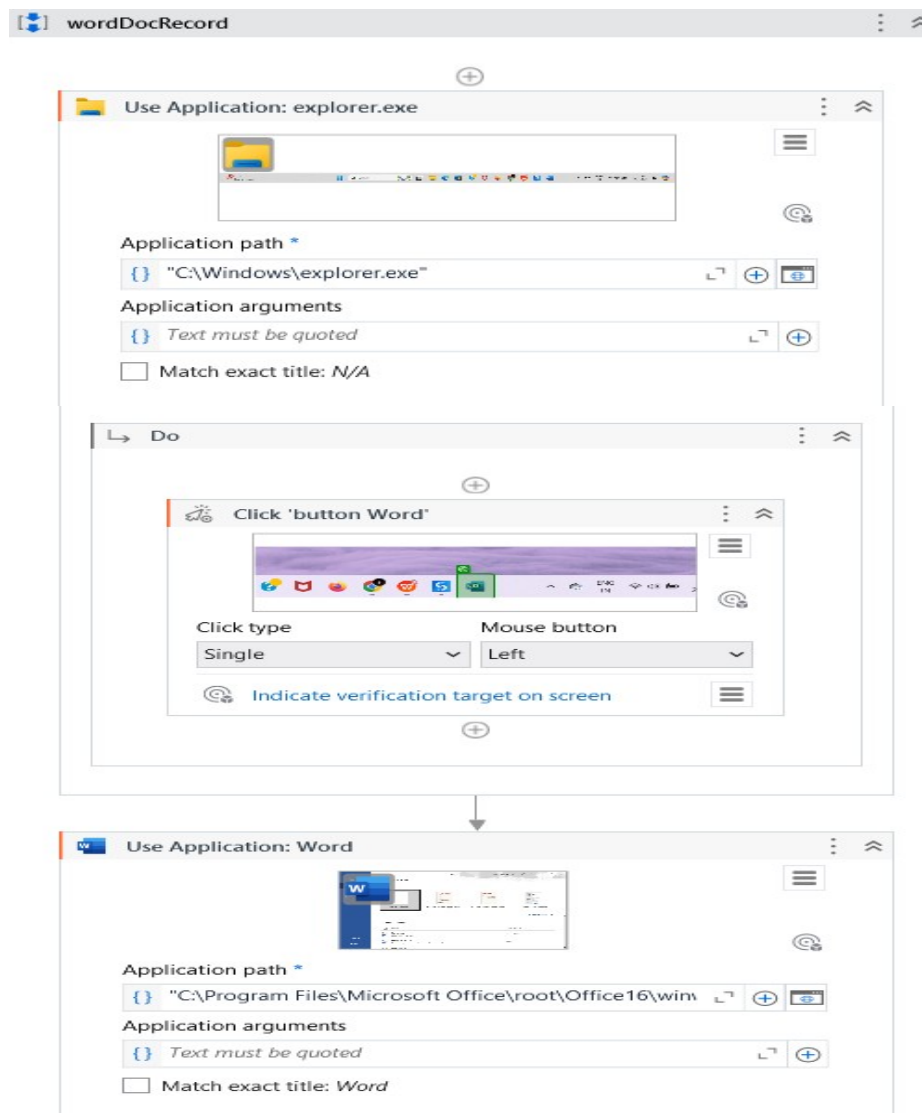
By leveraging web recording automation in UiPath, businesses can streamline their processes, improve accuracy, and achieve significant operational efficiencies across a wide range of applications.

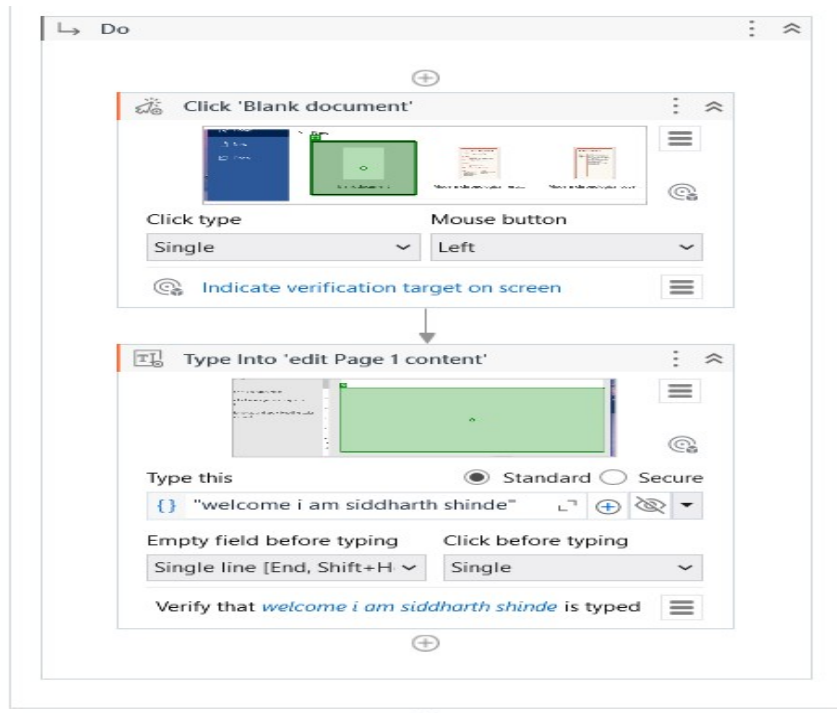
A. Automate word file using basic recording

Steps:

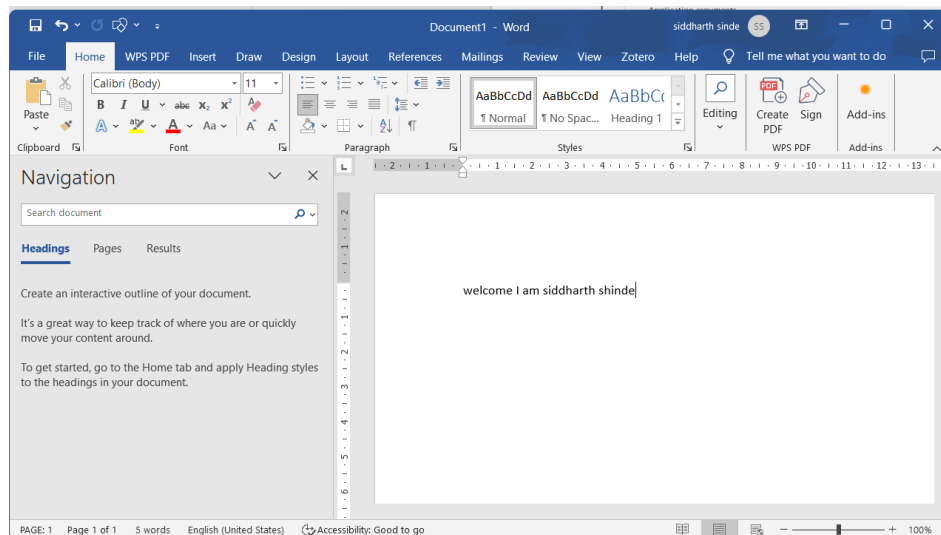
1. Open UiPath Studio:
2. Create a New Sequence:
In the main panel, click on "New" and then select "Sequence". Name your sequence appropriately, e.g., "WordAutomationSequence".
3. Use Basic Recording:
In the UiPath ribbon, click on the "Recordings" tab.
Select "Basic" recording. This will open the recording window.
4. Start Recording Actions:
Click on "Record" to start recording your actions.
Open Microsoft Word.
Perform the actions you want to automate.
5. Stop Recording:
Once you have performed all the actions you want to automate, click on "Save & Exit". UiPath will generate activities corresponding to the recorded actions.
6. Review and Edit the Sequence
The recorded actions will be displayed as activities in your sequence

Template:





Output:



B. Create a Gmail Login Steps using Web Recording

Steps:

1. Create a New Sequence:

In the main panel, click on "New" and then select "Sequence". Name your sequence appropriately, e.g., "GmailLoginAutomation".

2. Open Web Recording:

In the UiPath ribbon, click on the "Recordings" tab.

Select "Web" recording. This will open the web recording window.

3. Start Recording Actions:

Click on "Record" to start recording your actions.

Open your web browser and navigate to the Gmail login page (<https://mail.google.com>).

4. Perform the Login Actions:

Enter your Gmail username (email address).

Click the "Next" button.

Enter your Gmail password.

Click the "Next" button to log in.

5. Stop Recording:

Once you have performed all the actions required to log into Gmail, click on "Save & Exit".

UiPath will generate activities corresponding to the recorded actions.

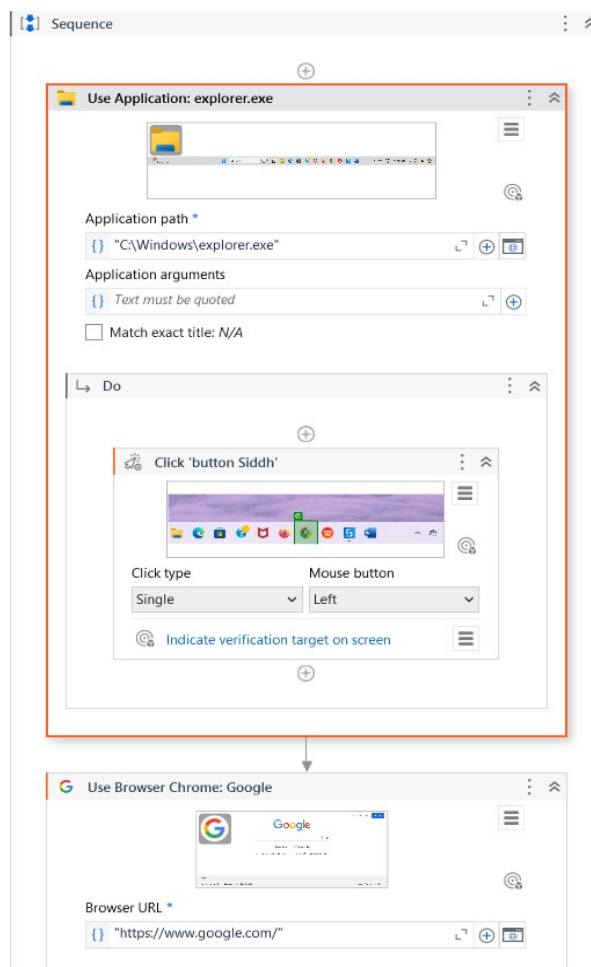
Edit the activities if necessary. Add delays or conditions to handle any page load times or potential issues.

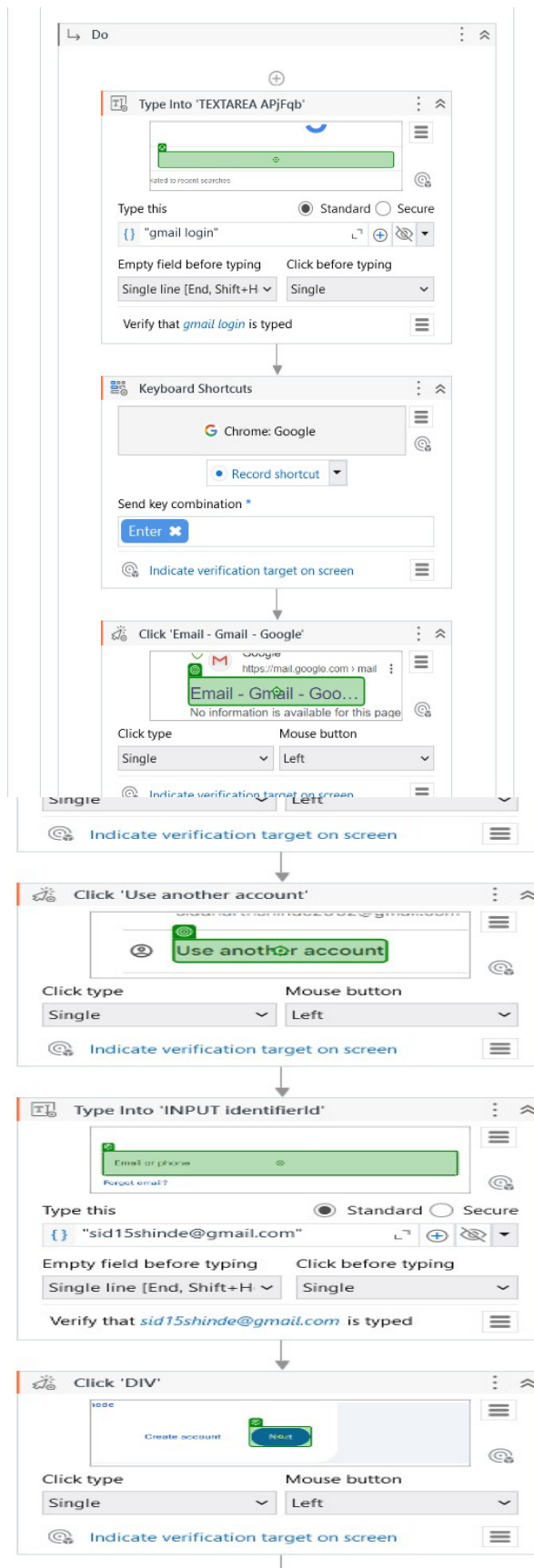
6. Add Variables for Credentials:

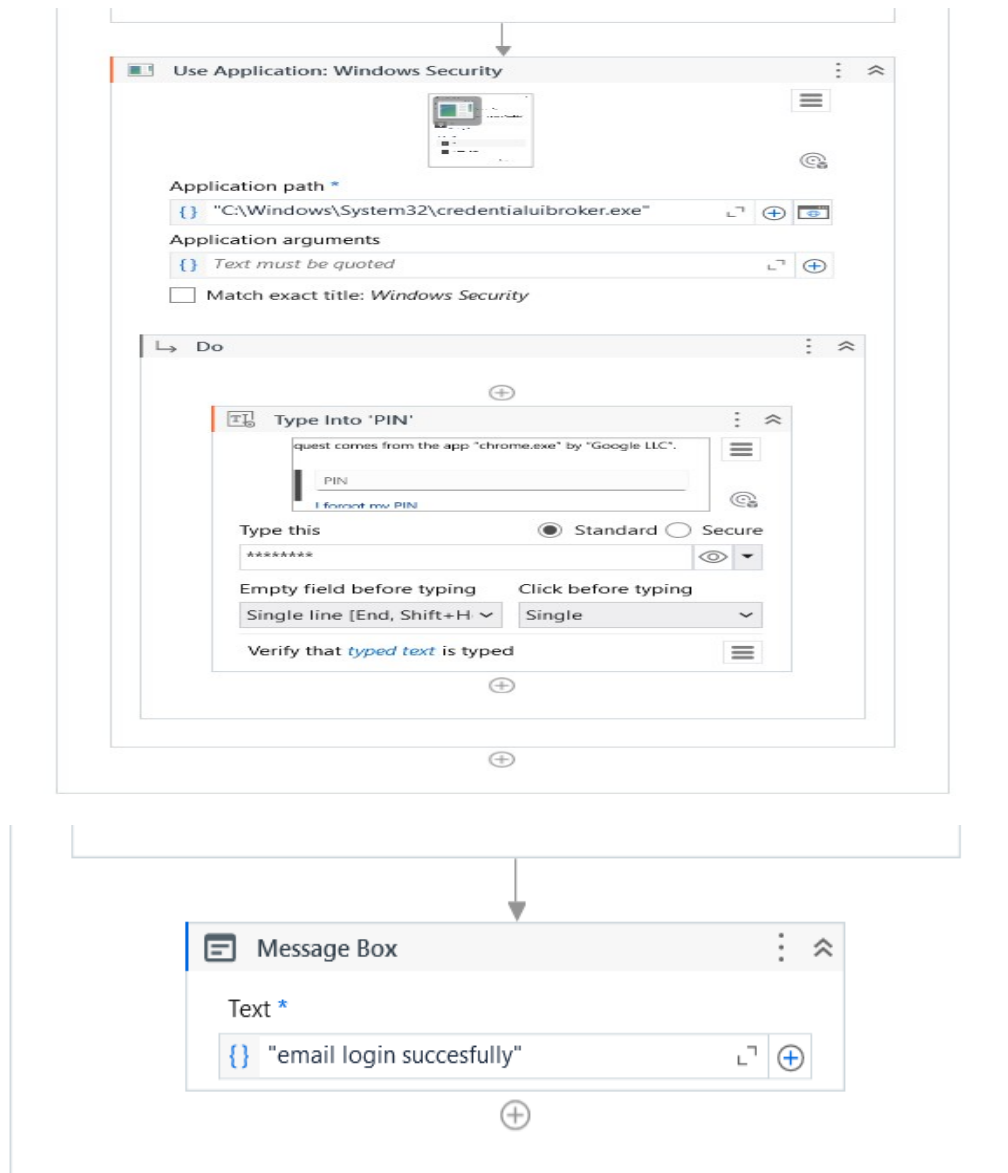
Define variables for the Gmail username and password to avoid hardcoding sensitive information.

7. Update Activities with Variables:

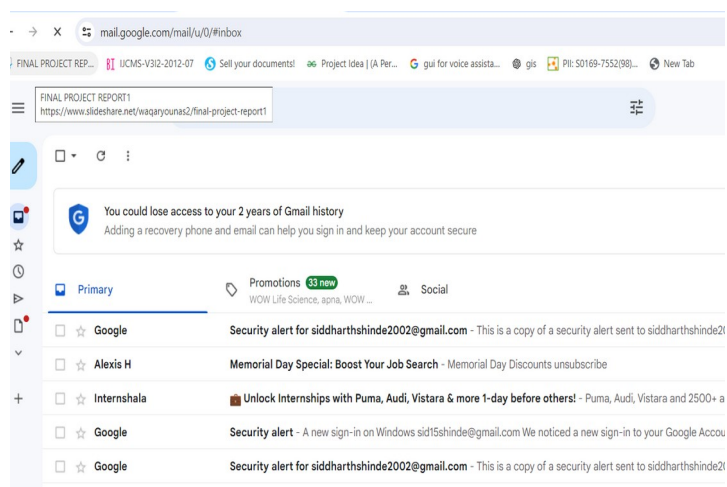
Template:







Output:



Practical 8

Aim: Data Table, Debugging and Exception

Theory:

Web scraping in UiPath involves extracting data from websites and automating the process using UiPath's automation tools. Web scraping in UiPath involves extracting data from websites and automating repetitive tasks. When building web scraping workflows, handling exceptions and debugging effectively are crucial for creating robust and reliable automation solutions. Table Extraction, part of the Modern Experience in Studio, enables you to use the UI Automation activity package to automatically extract structured data from applications and save it as a DataTable object that can then be further used in your automation processes

Exception Handling

Importance of Exception Handling

Exception handling ensures that your automation can gracefully handle unexpected issues without crashing.

It allows you to log errors, retry operations, or clean up resources.

Debugging

Importance of Debugging

Debugging helps identify and resolve issues in your workflow, ensuring that it behaves as expected.

A. Building Data table from Web scrapping

Steps:

1. Using the Table Extraction Recorder

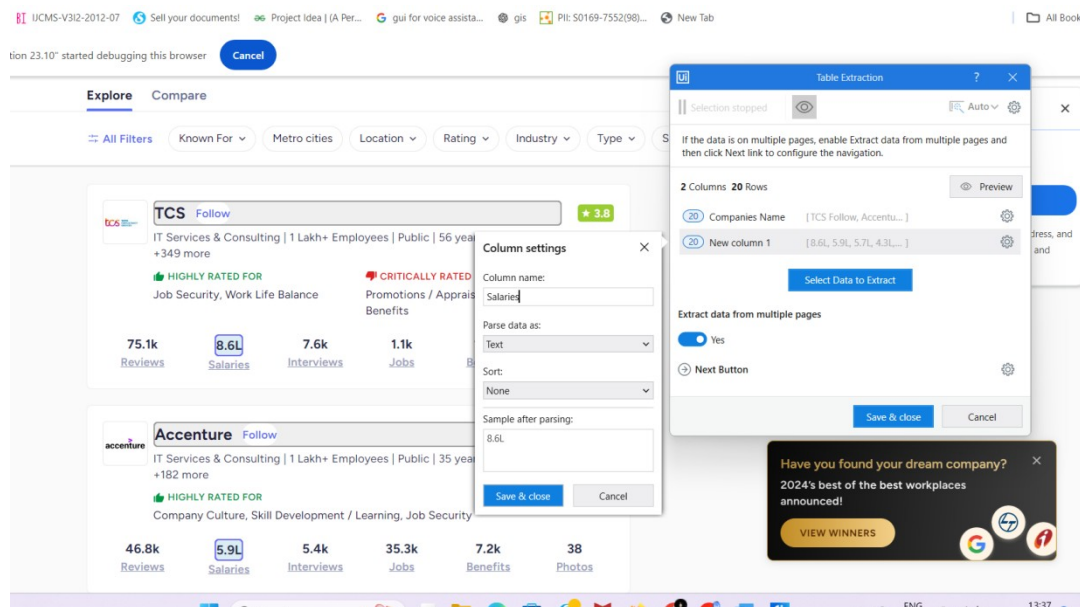
If you have the Modern Experience selected in your project, and the UI Automation activity package installed, you can find the Table Extraction recorder on the Ribbon in Studio.

2. Clicking the Table Extraction button in the Ribbon opens up the Table Extraction wizard.

3. To begin the process of extracting data, simply click the Add Data button. This starts the process of indicating a series of similar elements that can be used to identify the table you want to create

4. after clicking a column header, the wizard prompts you with a message, asking whether you want to extract all of the available columns, which are automatically identified. Selecting Yes scrapes the entire table.

5. Once you have selected all the data you want, simply clicking the Save and return to Studio button automatically closes the wizard and saves everything you have done in your workflow.



Template:

The screenshot shows the DataTableWebScrap application interface. It features a 'Use Application/Browser' section with a 'Browser URL' field containing the URL 'https://www.ambitionbox.com/list-of-companies'. Below this is a 'Do' section containing two sub-steps: 'Extract Table Data' and 'Write Range Workbook'. The 'Extract Table Data' step is connected to the 'Write Range Workbook' step by an arrow. The 'Write Range Workbook' step has three input fields: 'data.xlsx', 'Sheet1', and 'ExtractDataTable'.

O/P:

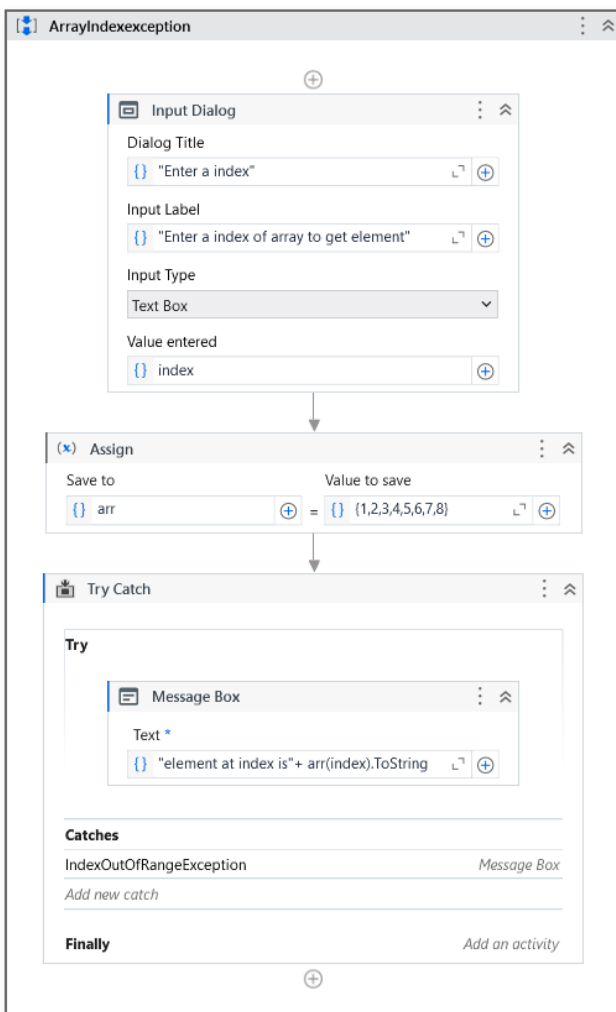
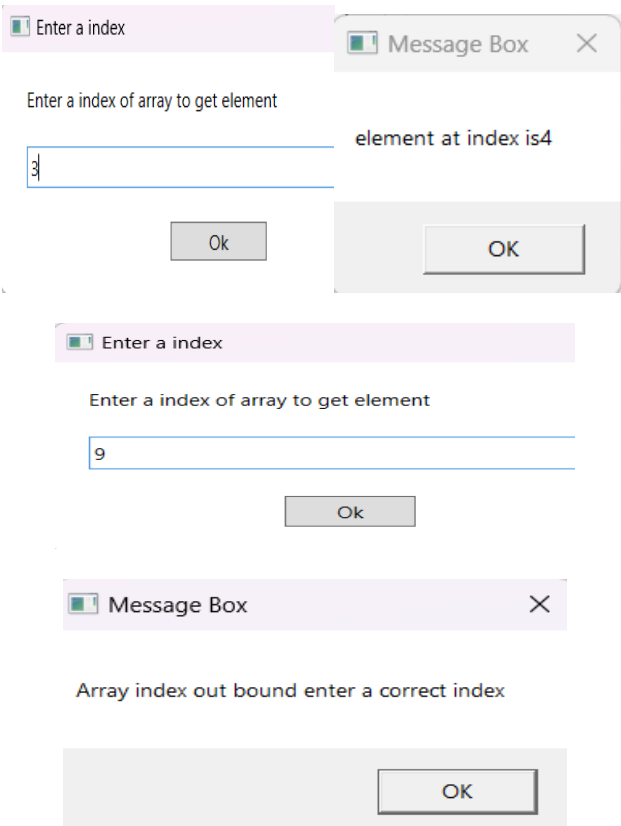
Calibri 11 A+ A-				
Format Painter Paste				
A23 fx				
	A	B	C	D
1	Companies Name	Salaries	Interviews	Jobs
2	TCS Follow	8.6L	7.6k	1.1k
3	Accenture Follow	5.9L	5.4k	35.3k
4	Cognizant Follow	5.7L	4.3k	574
5	Wipro Follow	4.3L	4.3k	227
6	Capgemini Follow	4.3L	3.5k	603
7	HDFC Bank Follow	1.3L	1.8k	183
8	ICICI Bank Follow	1.4L	2.1k	35
9	Infosys Follow	4.6L	5.7k	1k
10	HCLTech Follow	3L	2.9k	203
11	Tech Mahindra Follow	2.5L	2.8k	556
12	Genpact Follow	1.9L	2.3k	531
13	Axis Bank Follow	95.3k	1.2k	223
14	Teleperformance Follow	85.3k	1.4k	238
15	Concentrix Corporation Follow	1.1L	1.3k	82
16	Jio Follow	65.6k	1.3k	200
17	Amazon Follow	1.2L	3.9k	145
18	IBM Follow	2.2L	1.8k	1.9k
19	Reliance Retail Follow	61.7k	1.3k	165
20	HDB Financial Services Follow	49.7k	654	136
21	Larsen & Toubro Limited Follow	78.1k	1.2k	101

B. Handle exception

Steps:

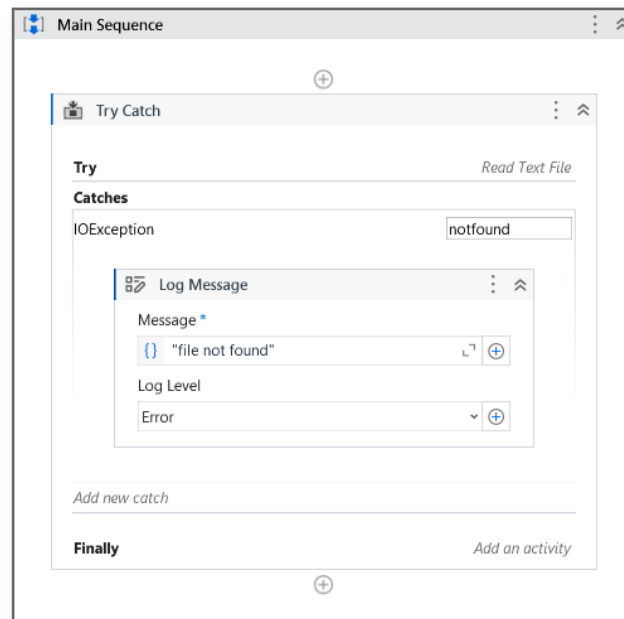
1. drag and drop assign activity inside the sequence.
2. Set the variable for array and declare its data type.
3. In assign activity initialize array variable with some values ex. Arr={1,2,3,4,5,6}
4. Drag and drop try catch activity, inside try block perform action you want to do.
ex. Take input dialogue box get index value from user and drag and drop message box in which it display the array value at that index.
5. Inside the catch select proper exception type and drag and drop message box inside that and display the correct error message you want to display
6. Set finally block by adding message box or any other activity you want to perform.

1. Array Index out of Bound

Template:	O/P:
	

2. IOException

Implementing an "IOException" exception in a try-catch block in UiPath involves handling situations where there are errors related to input or output operations, such as reading or writing files.



3. NullReference Exception

A NullReferenceException occurs in UiPath (or in any .NET application) when you try to use an object reference that has not been initialized (i.e., it is null). This exception indicates that you are trying to access a member (such as a method or property) of a null object reference.

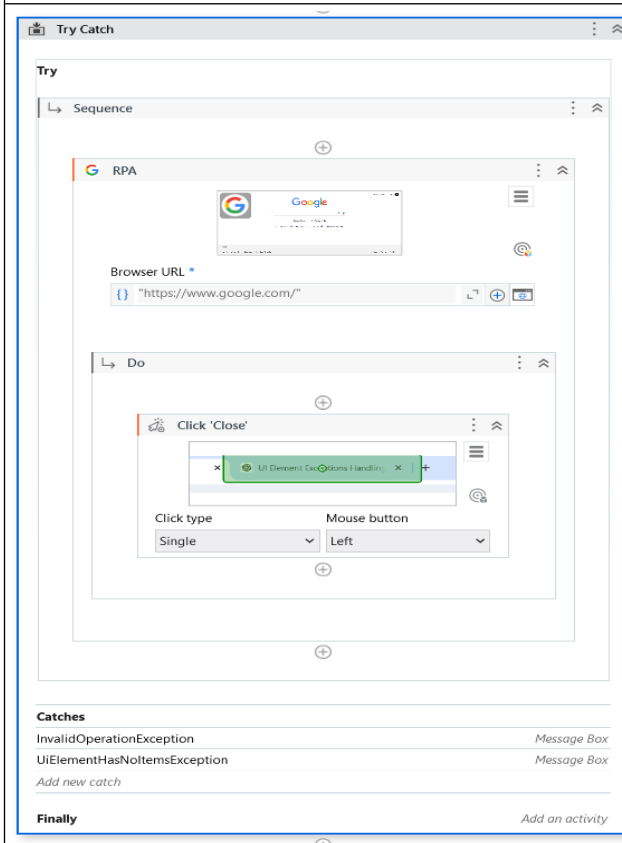
Template:	O/P:
The screenshot shows the 'Sequence' window in UiPath. A 'Try Catch' block is added to the sequence. The 'Try' block contains an 'Assign' activity. The 'Catches' section has a single catch for 'NullReferenceException' with the message 'exception'. Inside the catch, there is a 'Sequence' block containing a 'Log Message' activity with the message 'not intialized null reference error' and Log Level set to 'Error', followed by a 'Message Box' activity with the text 'not intialized null reference error'.	The screenshot shows a 'Message Box' dialog box. The title bar says 'Message Box'. The text inside says 'not intialized null reference error'. There is an 'OK' button at the bottom right.

4. Invalid OperationException and Unavailability of UI ElementException

This exception is typically thrown when a method call is invalid for the object's current state. In the context of UiPath, it might occur if you attempt to perform an operation on a UI element that is not in a valid state for that operation.

This exception occurs when the UI element you're trying to interact with is not available, either because it doesn't exist, is not visible, or is not in the expected state.

Template:



O/P:

