Program 1: Create a Sequence to Obtain User Inputs and Display in a Message Box

Objective: To create a simple sequence in UiPath to capture user input and display it using a message box.

Topics Covered in This Program

- User Input Handling
- Message Box
- String Variables
- Concatenation and Formatting

Procedure:

Step 1: Create a New UiPath Project

1. Open UiPath Studio.
2. Click "Process" → Give it a name (e.g., UserInput_Display).
3. Choose the default folder and click "Create".

Step 2: Add an Input Dialog Activity

1. In the Activities Panel, search for Input Dialog.
2. Drag and drop the Input Dialog activity into the Main.xaml workflow.
3. In the Properties Panel, set:

   Title: "User Input"

   Label: "Enter your name:"

   Result: Create a new variable (e.g., userName, Type: String).

Step 3: Add a Message Box Activity

1. Search for Message Box in the Activities Panel.
2. Drag and drop it below the Input Dialog activity.
3. In the Properties Panel, set:

   Message: "Hello " + userName + "! Welcome to UiPath RPA!".

Step 4: Run the Automation

1. Click the "Run" button (F5) in UiPath Studio.
2. A dialog box appears, prompting for the user’s name.
3. After entering a name, a message box appears displaying "Hello <userName>!

Welcome to UiPath RPA!".

Result:-

The sequence is created in UiPath studio with input dialog box and message box and it is successfully compiled and output is viewed.

Program 2: Create a Flowchart to Navigate to a Desired Page Based on a Condition

Objective: To create a Flowchart in UiPath that navigates to different web pages based on user input conditions.

Topics Covered in This Program

- Flowchart-based Automation
- User Input Handling
- Conditional Navigation using Flow Decision
- Web Automation using Open Browser

<u>Procedure:</u>

Step 1: Create a New UiPath Project

1. Open UiPath Studio.
2. Click "Process" → Give it a name (e.g., Flowchart_Navigation).
3. Choose the default folder and click "Create".

Step 2: Add a Flowchart Activity

1. In the Activities Panel, search for Flowchart.
2. Drag and drop the Flowchart activity into the Main.xaml workflow.

Step 3: Add an Input Dialog to Get User Choice

1. Search for Input Dialog in the Activities Panel.
2. Drag and drop it inside the Flowchart.
3. In the Properties Panel, set:

   Title: "Website Navigation"

Label: "Enter a website choice (Google/Facebook):"

Result: Create a new variable (userChoice, Type: String).

Step 4: Add a Flow Decision

1. Search for Flow Decision in the Activities Panel.
2. Drag and drop it inside the Flowchart, connecting it to the Input Dialog.
3. In the Condition Field, enter:

   userChoice.ToLower = "google"

4. This checks if the user entered "Google".

Step 5: Add Open Browser Activities

1. For Google Navigation:
   - Search for Open Browser in the Activities Panel.
   - Drag and drop it in the "True" branch of the Flow Decision.
   - In the Properties Panel, set:
   - URL: "https://www.google.com"
   - BrowserType: Chrome (or any preferred browser).
2. For Facebook Navigation:
   - Drag another Open Browser activity into the "False" branch.
   - In the Properties Panel, set:
   - URL: "https://www.facebook.com"

   BrowserType: Chrome.

Step 6: Connect the Components

The Flowchart should now look like this:

Input Dialog → Flow Decision → (Google → Open Browser: Google) / (Facebook → Open Browser: Facebook).

Step 7: Run the Automation

1. Click "Run" (F5).
2. A dialog box appears prompting the user to enter "Google" or "Facebook".
3. Based on input:
   - If "Google", it opens Google.
   - If "Facebook", it opens Facebook.

Expected Output

User enters "Google" → Google.com opens.

User enters "Facebook" → Facebook.com opens.

Result:-

The flowchart to navigate to a desired location based on a condition and display them using a message box in the Ui Path studio environment is successfully designed , executed and output is verified.

Program 3: Create a State Machine Workflow to Compare User Input with a Random Number

Objective:

To create a State Machine workflow in UiPath that generates a random number, takes user input, and provides guidance based on the guessed number using trigger conditions.

Topics Covered in This Program

- State Machine-based Automation
- User Input Handling
- Random Number Generation
- Conditional Logic and State Transitions

Procedure

Step 1: Create a New State Machine Project

1. Open UiPath Studio.
2. Click "Process" → Give it a name (e.g., StateMachine_GuessNumber).
3. Choose the default folder and click "Create".
4. In the Activities Panel, search for State Machine.

5. Drag and drop the State Machine activity into the Main.xaml workflow.

Step 2: Design the State Machine with Four States

1. Initialization State (Start State) – Generates a random number and takes user input.
2. Comparison State – Compares the user input with the generated number.
3. Try Again State – Redirects the user to input another number based on hints.
4. End State – Displays the success message when the user guesses correctly.

Step 3: Create Variables

1. Create a variable to store the randomly generated number.
2. Create a variable to store user input.

Step 4: Configure the Initialization State

1. Add an Assign activity to generate a random number.
2. Add an Input Dialog activity to prompt the user for input.
3. Connect this state to the Comparison State.

Step 5: Configure the Comparison State

1. Add a Flow Decision activity to check if the user's input matches the random number.
2. If the input matches, transition to the End State.
3. If the input does not match, transition to the Try Again State.

Step 6: Configure Try Again State (T2 and T3 Triggers)

1. Add two Trigger Activities inside the Try Again State:
   Trigger 1 (T2 - Try for Small Number)
   - Rename as "Try for Small".
   - Set condition: If the guessed number is greater than the random number.
   - Display a message: "Your guess is too high! Try a smaller number.".
   - Transition back to Initialization State for a new attempt.
2. Trigger 2 (T3 - Try for Bigger Number)

    - Rename as "Try for Bigger".
    - Set condition: If the guessed number is less than the random number.
    - Display a message: "Your guess is too low! Try a bigger number.".
    - Transition back to Initialization State for a new attempt.

Step 7: Configure the End State

1. Add a Message Box activity to display success if the user guesses correctly.
2. Transition from Comparison State to End State when the guess is correct.

Step 8: Connect the Components

- Connect Initialization State → Comparison State.
- Connect Comparison State → End State (if correct).
- Connect Comparison State → Try Again State (if incorrect).
- Connect Try Again State back to Initialization State for another attempt.

Step 9: Run the Automation

1. Click "Run" in UiPath Studio.
2. A dialog box appears, prompting the user to enter a number.
3. The program compares the user input with the random number.
4. Based on the input:
    - If correct, a success message appears.
    - If too high, a hint appears to enter a smaller number.
    - If too low, a hint appears to enter a bigger number.
5. The process repeats until the correct number is guessed.

<u>Expected Output</u>

- User enters a higher number → Prompt: "Your guess is too high! Try a smaller number."
- User enters a lower number → Prompt: "Your guess is too low! Try a bigger number."
- User guesses the correct number → "Congratulations! You guessed the correct number."

Result:-

A State Machine workflow to compare user input with a random number in the Ui Path studio environment is created and output is verified successfully.

Program 4: Build a Process in the RPA Platform Using UI Automation Activities

Objective:

To build an RPA process in UiPath to open a web browser, search for "Bangalore Temperature", extract the displayed temperature, and show the result in a message box.

Topics Covered in This Program

- UI Automation in RPA
- Web Automation using Open Browser
- Interacting with Web Elements (Typing, Clicking, and Extracting Data)
- Using Selectors for Automation
- Error Handling in Automation

Procedure

Step 1: Create a New Sequence

1. Open UiPath Studio.
2. Click "New Process" → Enter a name (e.g., Bangalore_Temperature_Automation).
3. Choose Sequence as the workflow type.

Step 2: Add UI Automation Activities to the Sequence

(a) Open Browser Activity

- Drag and drop the Open Browser activity.
- Set it to open Google (https://www.google.com).

(b) Attach Browser Activity

- Drag and drop Attach Browser after Open Browser.
- Ensures all actions take place in the same browser window.

(c) Type Into Activity (Enter Search Query)

- Drag and drop Type Into inside Attach Browser.
- Indicate the Google Search bar and configure it to type "Bangalore Temperature".
- Add a Delay Activity (1-2 seconds) for page loading.

(d) Click Activity (Click Search Button)

- Drag and drop Click inside Attach Browser.
- Indicate the Google Search button and configure the activity to click it.

(e) Extract Temperature Data (Get Text Activity)

- Drag and drop Get Text after Click Activity.
- Indicate the temperature value displayed on the search results page.
- Store the extracted temperature in a variable.

(f) Message Box Activity (Display Result)

- Drag and drop Message Box after Get Text.
- Configure it to display the extracted temperature value.

Step 3: Configure Each Activity

- Open Browser: Set URL to Google.
- Type Into: Input text as "Bangalore Temperature".
- Click: Select the Google Search button.
- Get Text: Extract the temperature value.

- Message Box: Display the fetched temperature.

Step 4: Run the Process

- Click Run in UiPath Studio. The automation will:
- Open Google in a web browser
- Enter "Bangalore Temperature" in the search bar.
- Click Search
- Extract the temperature data from search results.
- Display the temperature in a message box.

Expected Output

- The browser opens Google.
- The search bar is filled with "Bangalore Temperature".
- The search button is clicked, and results appear.
- The current temperature of Bangalore is extracted and displayed.

Result:

An RPA process using UI Automation in UiPath Studio was successfully created to open a web browser, search for "Bangalore Temperature", extract the displayed temperature, and present the result in a message box. The automation workflow executed successfully, verifying accurate data retrieval and display.

Program 5: Create an Automation Process Using Key System Activities, Variables, and Arguments

Objective:

To create an automation process in UiPath Studio that calculates the area of a rectangle using values entered by the user. The process will be divided into two workflows: one for collecting input and invoking another workflow, and the other for calculating the area. The result will be displayed using a Message Box. This version does not include any conditional checks.

Topics Covered in This Program

- Modular design using Invoke Workflow File
- Using Variables and Arguments
- Input Dialog for user interaction
- Assign activity for performing calculation
- Message Box for displaying output
- Argument mapping between workflows

Procedure

Step 1: Create the Main Workflow

1. Open UiPath Studio.
2. Create a new project and name it appropriately (e.g., Rectangle_Area_Using_Invoke).
3. In the main sequence, add two Input Dialog activities to get the length and width of the rectangle from the user.
4. Store the values in variables (e.g., lengthVar and widthVar).

Step 2: Create a Secondary Workflow for Calculation

1. Add a new Sequence to the project and name it (e.g., CalculateArea.xaml).
2. In this workflow, create the required arguments:
    - ○ Two input arguments for length and width.
    - ○ One output argument to return the calculated area.

3. Use Assign activity to multiply the length and width and store the result in the output argument.

Step 3: Invoke the Calculation Workflow

1. In the main sequence, after the input activities, use the Invoke Workflow File activity to call CalculateArea.xaml.
2. Use the Import Arguments option to map:
   - The user input variables to the input arguments of the calculation workflow.
   - A new variable (e.g., areaResult) to the output argument to capture the calculated area.

Step 4: Display the Result

1. After the Invoke Workflow activity, add a Message Box activity.
2. Display the calculated area stored in the output variable.

Step 5: Run the Process

1. Save and run the project.
2. The workflow will prompt the user to enter length and width, calculate the area in a separate file, and then display the result in a message box.

Expected Output

- When the user enters valid numeric inputs for length and width, the process will calculate the area and show the result in a message box.
- There are no conditions or validations—only calculation and display.

Result:

An RPA process using **Invoke Workflow File** and **arguments** was successfully created in UiPath Studio to calculate the area of a rectangle. The solution demonstrates modular design, argument passing between workflows, and the use of Input Dialog and Message Box for simple user interaction.

Program 6: Implement Automation Using System Trigger in UiPath

Objective:

To create and implement RPA processes in UiPath Studio that are triggered automatically based on predefined system events such as the start of a specific application (e.g., Notepad) or a change in a specific file. This process uses System Triggers to demonstrate unattended, event-driven automation.

Topics Covered in This Program

- Understanding System Triggers in UiPath
- Creating and Publishing Automation Workflows
- Event-Based Automation Using UiPath Assistant
- Configuring Process Start Trigger (e.g., Notepad)
- Configuring File Change Trigger
- Monitoring Automation Execution Logs
- Managing System Triggers through UiPath Assistant

Procedure

Step 1: Create a New Project in UiPath Studio

- Launch UiPath Studio.
- Create a new process and name it appropriately (e.g.,System_Trigger_Notepad_FileChange).
- Design the automation process using a Sequence.
- Add a simple activity (e.g., Message Box, Log Message) to confirm the process was triggered.

Step 2: Define the Automation Task

- In the main workflow, add an activity to execute when the trigger is fired.
    - For Notepad trigger: Add a Message Box saying *"Notepad has started"*.

    - For File change trigger: Add a Log Message or Message Box indicating *"File was modified"* or *"File was created"*.
- Keep the process lightweight for quick execution upon event detection.

Step 3: Publish the Project

- Click “Publish” in UiPath Studio.
- Publish the process to UiPath Assistant or Orchestrator, depending on your environment.
- Verify that the process appears in the Assistant/Orchestrator dashboard.

Step 4: Configure the System Triggers

Option A: Process Start Trigger (Example: Notepad)

- Open UiPath Assistant.
- Go to the “Triggers” tab and click “Create”.
- Select the published process from the list.
- Choose Trigger Type as Process Start.
- Set the condition as Application = Notepad (notepad.exe).
- Save the trigger configuration.

Option B: File Change Trigger

- In UiPath Assistant, create another trigger.
- Choose Trigger Type as File Change.
- Specify the file path to monitor (e.g., C:\Users\YourName\Documents\sample.txt).
- Choose the change type: Created, Changed, or Deleted.
- Save the trigger.

Step 5: Test the Automation

🔹 **To test Notepad Trigger:**

- Close Notepad if open.
- Launch Notepad manually.

- Observe if UiPath triggers the automation and displays the expected message.

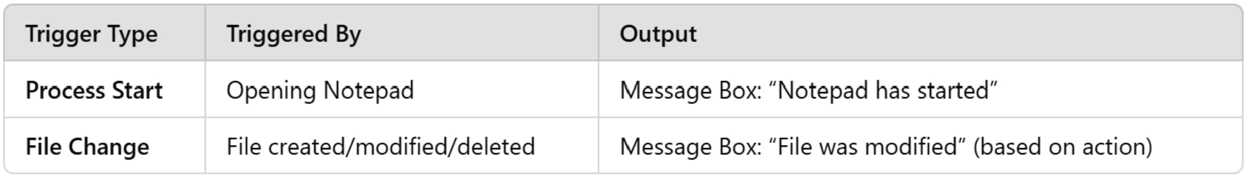
🔹 **To test File Change Trigger:**

- Go to the monitored file path.
- Perform the action configured in the trigger (create, modify, or delete the file).
- Confirm the automation is triggered automatically and displays/logs the expected message.

Step 6: Monitor and Manage Automation

- Check the execution status in UiPath Assistant under Jobs/Execution Logs.
- Ensure that the job status is Successful.
- Use UiPath Orchestrator or Assistant to disable, edit, or delete the trigger if needed.

Expected Output



Trigger Type	Triggered By	Output
Process Start	Opening Notepad	Message Box: “Notepad has started”
File Change	File created/modified/deleted	Message Box: “File was modified” (based on action)

Result:

Two RPA processes were successfully created and published using different System Trigger types in UiPath:

1. Process Start Trigger to respond to Notepad launch, and
2. File Change Trigger to detect file modifications.

The automation workflows ran successfully without manual execution, validating UiPath's event-based automation capabilities.