

RPA Specialization

Course 4: Control Flow in RPA

Practice Exercise-Loops in Flowcharts

Loops in Flowcharts

Build a workflow that asks the user for their name and two-digit lottery number and displays if they are a winner.

- Ask the name of the user and a two-digit lottery number
- Give the user five chances to enter the correct lottery number
- If the number entered is below 54 and above 64, display "Enter your lottery number. *X* chance remaining." Here, *X* is the number of remaining chances for the user
- If the number entered is between 54 and 64, display, "Congratulations, *User*! You won the lottery." Replace *User* with the name of the user
- If chances end before the correct entry, display "Sorry, you lost. No more chances are remaining."

Process Overview

- START
- Use an Input Dialog activity within a Flowchart activity to get the name of the user
- Use another Input Dialog activity to take a lottery number from the user
- Also, display the remaining chances using the above Input Dialog activity in the format "Enter your lottery number. **X** chance remaining."
- Use a Flow Decision activity to check if the input is above 54
    - If the input is below 54, use an Assign activity to increment the count of chances used by 1
    - If the input is above 54, use another Flow Decision activity to check if the input is below 64
    - If the input is above 64, use an Assign activity to increment the count of chances used by 1
    - If the input is below 64, use a Message Box activity to display "Congratulations, User! You won the lottery." Replace User with the name of the user
- Use a Flow Decision activity to check if the count of chances used by the user reaches five
    - Use a Message Box activity to display, "Sorry, you lost. No more chances are remaining."
- STOP

Step-by-Step Process

Step 1: Open Studio.

Step 2: Create a new process and name it as “Loop in Flowchart”.

Step 3: Drag a Flowchart activity from the Activities panel and drop it in the Designer panel.

Step 4: Name the Flowchart activity as “Flowchart - Loop in Flowchart”.

Step 5: Right-click on the Flowchart activity container and select *Annotations* from the context menu.

Step 6: Enter the annotation “This code demonstrated a workflow that asks user for his name and two-digit lottery number and displays if he is a winner.” .

Step 7: Under the Start node, insert an Input Dialog activity, name it as “Input Dialog - User Name”, add an annotation: “Take input from the user” and enter values as shown below:

Dialog Title	Input Label	Input Type
“Name”	“Enter your name”	Text Box

Step 8: In the panel, define a new variable as shown below:

Name	Variable type	Scope	Default
name	String	Flowchart - Loop in Flowchart	
intChance	Int32	Flowchart - Loop in Flowchart	

Step 9: In the Properties panel of Input Dialog activity, enter **name** in the Output property.

Step 10: Insert another Input Dialog activity, name it as “Input Dialog - Lottery Number”, add an annotation: “Takes Lottery number as Input from user” and enter values as shown below:

Dialog Title	Input Label	Input Type
“Lottery Number”	“Enter your lottery number.” + (5-intChance).ToString + “chance remains”	Text Box

Step 11: In the Variables panel, define a new variable as shown below:

Name	Variable type	Scope	Default
intEnteredNum	Int32	Flowchart - Loop in Flowchart	

Step 12: In the Properties panel of Input Dialog activity, enter **intEnteredNum** in the Output property.

Step 13: Connect a Flow Decision activity to the "Input Dialog – Lottery Number" activity, and name it as "Flow Decision - 1". Add an annotation: "This judge the Input whether it is greater than User input or smaller".

Step 14: Enter the condition **54 < intEnteredNum** in the "Flow Decision 1" activity.

Step 15: Connect another Flow Decision activity with the True node of "Flow Decision – 1" activity and name it as "Flow Decision - 2". Add an annotation: "If the user input is smaller than 64 and greater than 64 he/she wins the lottery"

Step 16: Enter the condition **intEnteredNum<64** in the "Flow Decision - 2" activity.

Step 17: At the True node of "Flow Decision - 2", insert a Message Box activity

Step 18: In the text area of Message Box activity, name it as "Message Box - Success" and add an annotation: "User wins the lottery".

Step 19: Enter the expression: **"Congratulations!"+ name +" You won the lottery."**

Step 20: Insert an Assign activity, name it as "Assign - ' intChance' Increment" and connect it with False nodes of "Flow Decision – 1" and "Flow Decision - 2" activities. Add an annotation "As the user fails to guess the correct number, the intChance will get incremented by 1".

Step 21: In the Assign activity, enter values as shown below:

To	Value
intChance	intChance + 1

Step 22: Insert another Flow Decision activity and connect to a node of the Assign activity and name it as "Flow Decision - 3". Add an annotation: "If the intChance is greater or equal to 5, the process ends and displays No more Chances left message".

Step 23: Enter the condition **intChance<5** in the "Flow Decision – 3" activity.

Step 24: Connect the True node of “Flow Decision – 3" activity with “Input Dialog – Lottery Number” activity.

Step 25: At the False node of “Flow Decision - 3”, insert a Message Box activity and name it as “Message Box - No more chances”. Add an annotation: “No more chances - Message”.

Step 26: In the text area of the Message Box activity, enter the text "Sorry, you lost. No more chances are remaining."

Step 27: Save and Run the workflow.