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# Lesson 3 – Variables and Arguments

## Variable Swapping

* + 1. **Objective**

Build a workflow that swaps two numbers using a third variable.

* + - * Ask the user to input two numeric values and store them in two variables.
      * Swap values of both the variables using a third variable.
      * Display initial and swapped values of both the variables in the Output panel.
    1. **Process Overview**
* START
* Use an Input Dialog activity to receive two numeric values from the user.
* Store the received values in two integer variables called **First\_Input\_Value**, and

#### Second\_Input\_Value

* Declare a third integer variable called **Swapping\_Support\_Variable**
* Use Assign activity to assign the value of **First\_Input\_Value** to

#### Swapping\_Support\_Variable

* Use second Assign activity to assign the value of **First\_Input\_Value** to

#### Second\_Input\_Value

* Use third Assign activity to assign the value of **Second\_Input\_Value** to

#### Swapping\_Support\_Variable

* Use a Write Line activity to display initial and final values of **First\_Input\_Value** and

**Second\_Input\_Value** in the Output panel.

* STOP
  + 1. **Step by Step Process**

Step 1: Open UiPath Studio.

Step 2: Create a process and name it as “Variable Swapping”

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

Step 4: Name the Sequence activity as “Sequence – ‘This code is for swapping two numbers using a third variable’”

Step 5: Insert a Comment activity from the Activities panel within the Sequence activity.

Step 6: Add comment “Taking input of two numbers from the user and swap them by using a third variable.”

Step 7: Drag another Sequence activity from the Activities panel and insert it below the Comment activity.

Step 8: Name the Sequence activity as “Sequence – ‘For prompting the user to give the input'”.

Step 9: Right-click on the Sequence activity container and select *Annotations* from the context menu.

Step 10: Enter an annotation “This code is for swapping two numbers by using a third variable.”

Step 11: Insert an Input Dialog activity within the second Sequence activity and name it as “Input Dialog – ‘First Variable by User’”.

Step 12: Right-click on the Input Dialog activity container and select Annotations from the context menu. Add an annotation : “Taking User input and storing the value in "First\_Input"”.

Step 13: In the Input Dialog activity, enter values as shown below:

|  |  |
| --- | --- |
| Title | Label |
| “First Value” | “Please enter the first numeric value: ” |

Step 14: In the Variables panel, create a variable for the above Input Dialog activity as shown below:

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Variable type | Scope | Default |
| First\_Input\_Value | Double | Sequence – ‘This code is for swapping two numbers by using a  third variable’ |  |

Step 15: Go to the Properties panel of the Input Dialog activity and insert

**First\_Input\_Value** in its Output property.

Step 16: Insert a second Input Dialog activity below the previous Input Dialog activity, and name it as “Input Dialog – ‘Second variable by User’”.

Step 17: Right-click on the Input Dialog activity container and select *Annotations* from the context menu. Add an annotation : “Taking User input and storing the value in "Second\_Input\_Value”.

Step 18: In the second Input Dialog activity, enter values as shown below:

|  |  |
| --- | --- |
| Title | Label |
| “Second Value” | “Please enter the second numeric value: ” |

Step 19: In the Variables panel, create a variable for the second Input Dialog activity as shown below:

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Variable type | Scope | Default |
| Second\_Input\_Value | Double | Sequence – ‘This code is for swapping two numbers by using a third  variable’ |  |

Step 20: Go to the Properties panel of the Input Dialog activity and insert the variable

**Second\_Input\_Value** in its Output property.

Step 21: Insert a Write Line activity from the Activities panel after the second Sequence activity, and name it as “Write Line – ‘Value entered before swapping’”.

Step 22: Right-click on the Write Line activity container and select *Annotations* from the context menu. Add an annotation : “Enter the text to get the result in the Output Panel”.

Step 23: In the text box of the Write Line activity, enter the expression: **“First Value is: ” + First\_Input\_Value.ToString + Environment.NewLine + “Second Value is: ” + Second\_Input\_Value.ToString**

Step 24: Insert another Sequence activity from the Activities panel below the Write Line activity, name it as “Sequence – ‘Swapping of numbers’” and annotate it as “This block of code will swap the values of the numbers entered”.

Step 25: In the Variables panel, create a new variable as shown below:

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Variable type | Scope | Default |
| Swapping\_Support\_Variable | Double | Sequence – ‘This code is for swapping two numbers by using  a third variable’ |  |

Step 26: Insert an Assign activity in the third Sequence activity, name it as “Assign – ‘Move the First\_Input\_Value to Swapping\_Support\_Variable’” and enter the annotation : “Swap Swapping\_Support with First\_Input\_Value”.

Step 27: In the Assign activity, enter values as shown below:

|  |  |
| --- | --- |
| To | Value |
| Swapping\_Support\_Variable | First\_Input\_Value |

Step 28: Insert a second Assign activity below the previous Assign activity, name it as “Assign – ‘Move the Second\_Input\_Value to First\_Input\_Value’” and Enter the annotation “Swap First\_Input\_Value with Second\_Input\_Value”.

Step 29: In the second Assign activity, enter values as shown below:

|  |  |
| --- | --- |
| To | Value |
| First\_Input\_Value | Second\_Input\_Value |

Step 30: Insert a third Assign activity below the second Assign activity, name it as “Assign – ‘To swap Swapping\_Support\_Variable with Second\_Input\_Value’” and enter annotation: “Swap Second\_Input\_Value with Swapping\_Support”.

Step 31: In the third Assign activity, enter values as shown below:

|  |  |
| --- | --- |
| To | Value |
| Second\_Input\_Value | Swapping\_Support\_Variable |

Step 32: Insert a Write Line activity below the third Sequence activity, name it as “Write Line – ‘Swapped Result’” and enter annotation: “Enter the text to get the result in Output Panel”.

Step 33: In the text box of the Write Line activity, enter the expression: **“First Value after swapping is: “ + First\_Input\_Value.ToString + Environment.NewLine + “Second Value after swapping is: “ + Second\_Input\_Value.ToString”**

Step 34: Save and run the workflow.