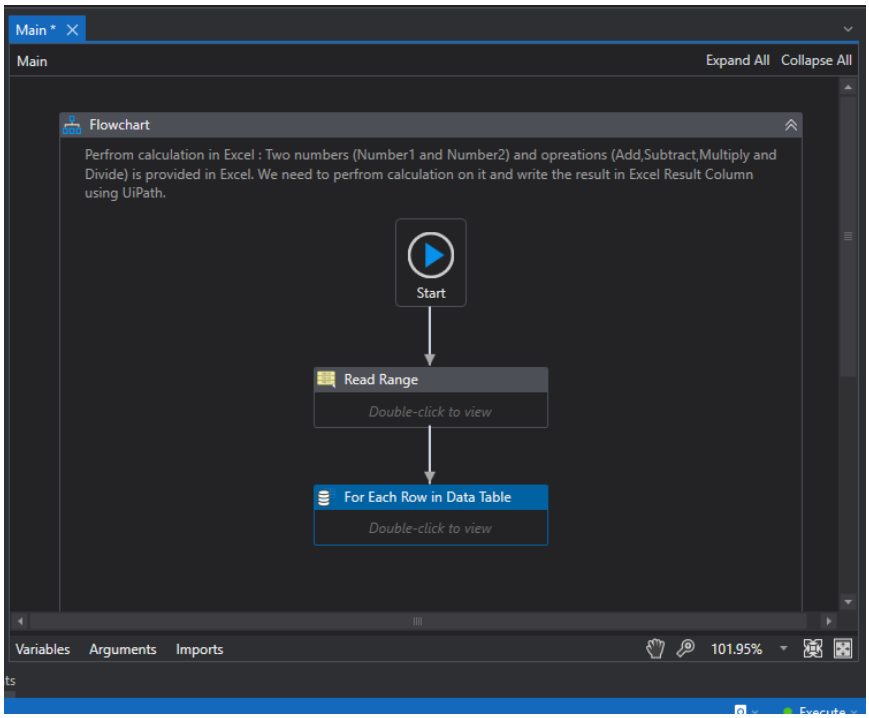
Perform Calculation in Excel using UiPath

In this Usecase, I have created a UiPath Process where UiPath Studio will Perform Calculation of two numbers (Number1 ad Number2) based on operations(Sum, Subtract, Multiply and Divided) which is provided in excel. We need to write the Output in Result Column in Excel using UiPath.

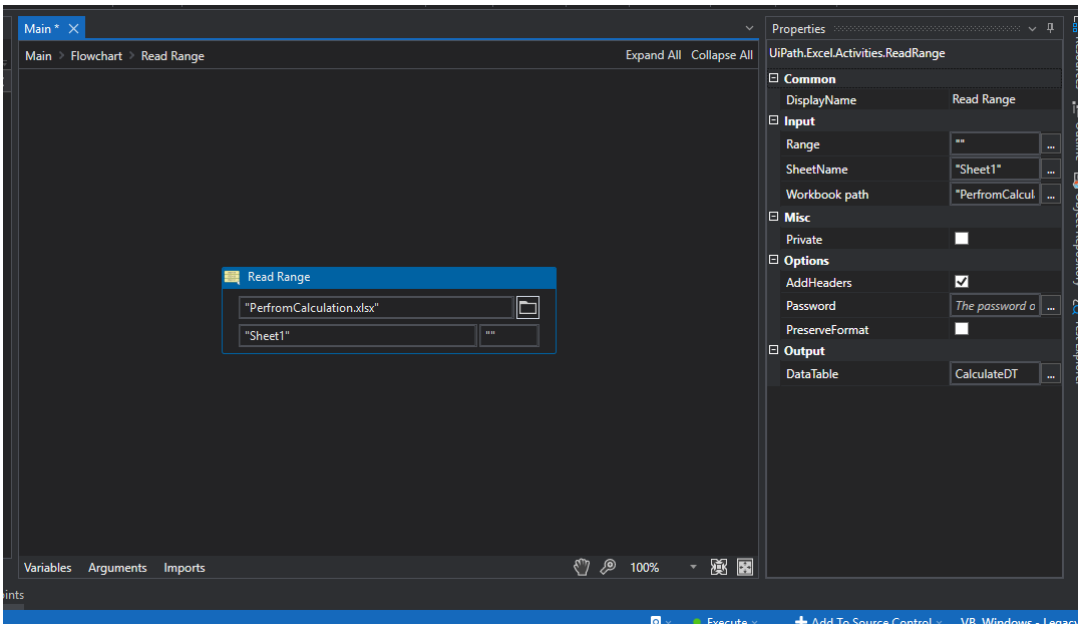
	A	B	C	D
1	Number1	Number2	Opreations	Result
2	45	55	Sum	
3	654	122	Subtract	
4	2133	4	Multiply	
5	45	9	Divide	
6	55	12	Subtract	
7	12	12	Divide	
8	77	33	Sum	
9	10	45	Multiply	
10	10	1	Sum	
11	256	16	Divide	
12	90	81	Subtract	
13	55	45	Sum	
14	30	12	Multiply	
15	45	40	Subtract	
16	144	88	Subtract	

In UiPath Process, I used **Flowchart** as a workflow with Read range of workbook as first activity and For Each Row in Datatable as second. Inside for each row in datatable I used multiple assign and Switch Case as activities and inside Switch case I have used assign and write cell of workbook as activities for 4 different cases.



In **Read Range** activity of workbook, I have provided the excel path along with Sheet name which is “Sheet1” in our case as well as excel Range which is left empty so that it reads all ranges.

Output of Read range is stored in CalculateDT as Datatable type Variable.



After Read range, I have used **for each row in datatable**. The reason behind using this activity is to make sure the bot iterates through every single row within the datatable (CalculateDT). In body we have used Multiple assign and switch case.

In **Multiple assign**, I have used 4 variables:

1. Number1: Int32 Type Variable
   Value: CInt(Row("Number1"))

   [CInt is one of Data Conversion functions.
   It provides function convert from some type (such as String, Double and so on) to Integer (Int32) type.]

   Row("Number1") is to read the row column Number1 from CalculateDT.

2. Number2: Int32 Type Variable
   Value: CInt(Row("Number2"))

   Row("Number2") is to read the row column Number2 from CalculateDT.

3. Operations: String Type variable.
   Value: Row("Operations").ToString

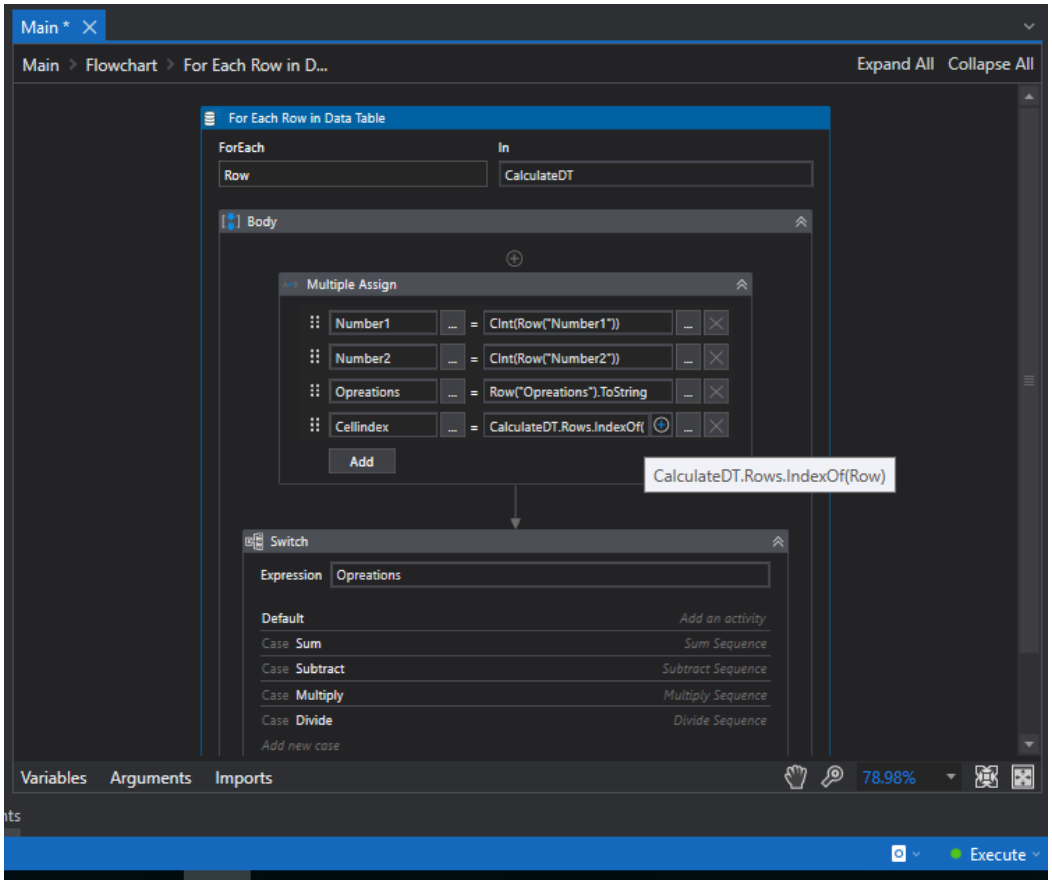
   Row("Operations") is to read the row column Operations from CalculateDT.

4. Cellindex: Int32 Type Variable
   Value: CalculateDT.Rows.IndexOf(Row)

   [IndexOf is used to return the index within the calling string object of the first occurrence of the specified value (i.e. Row) starting the search at from index which is 0.]

Switch Activity: The Switch activity enables you to select one choice out of multiple, based on the value of a specified expression. In our case the expression we have is Operations variable.

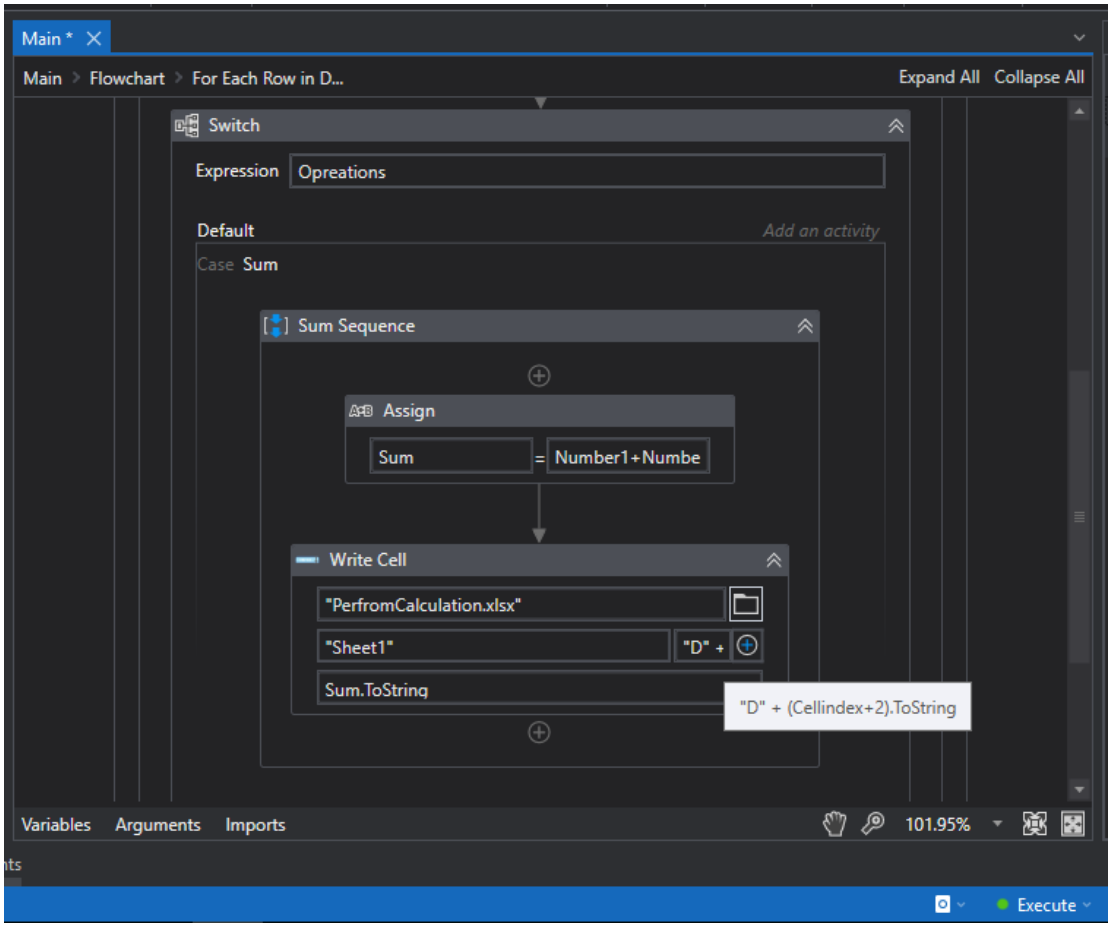
Also TypeArgument was changed from Int32 to String.



We have 4 switch cases:

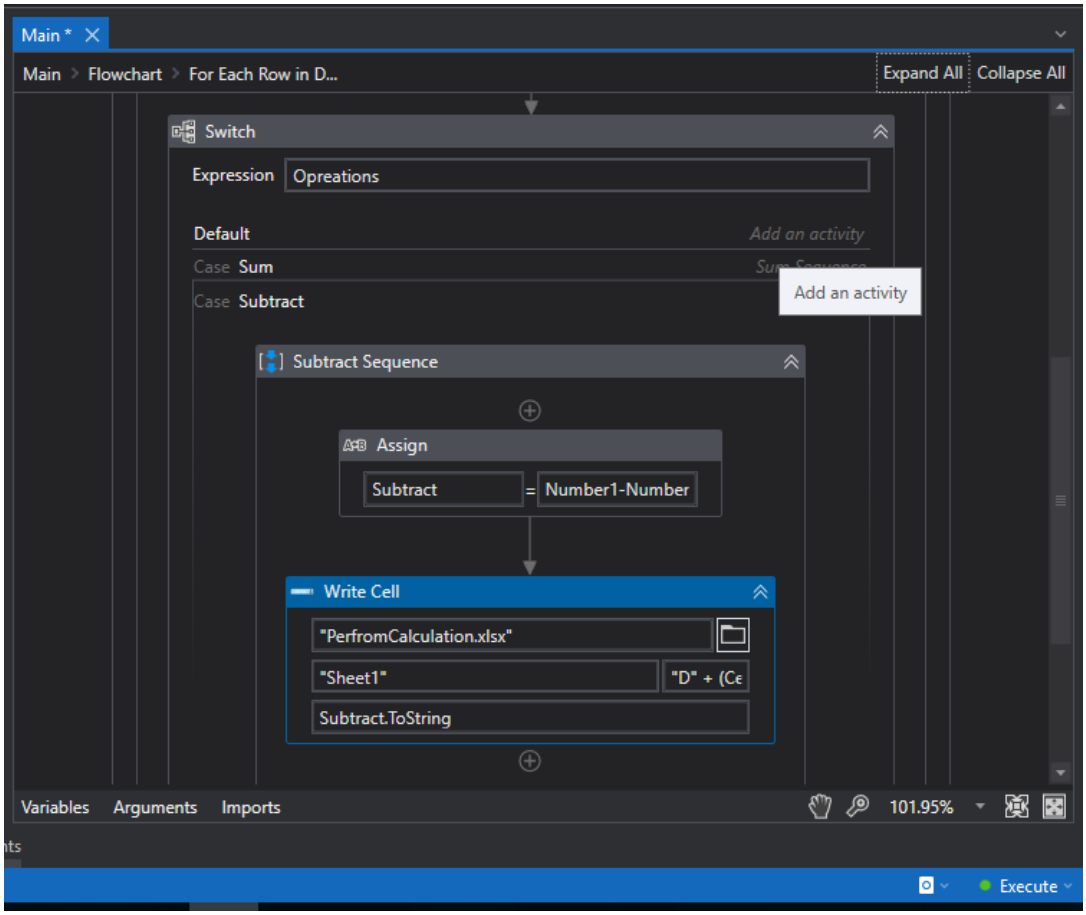
1. **Sum case**: In Sum case we have added a Sum sequence. Inside sum sequence we have assign activity in which we have declared a int32 variable called Sum. Value of Sum is Number1 Variable + Number2 Variable.

   After Assign we drag write cell of workbook activity into Sum sequence. We provide the excel path along with Sheet Name. We also provide Excel Range. We have to write the output in Result column so we write “D” + (cellindex+2).ToString in Range. Since the cellindex starts from index 0, so we have to add 2 within it and we use ToString to convert it into String format. Inside Text we write the Sum variable (declared in assign) and Convert it into string format using ToString.



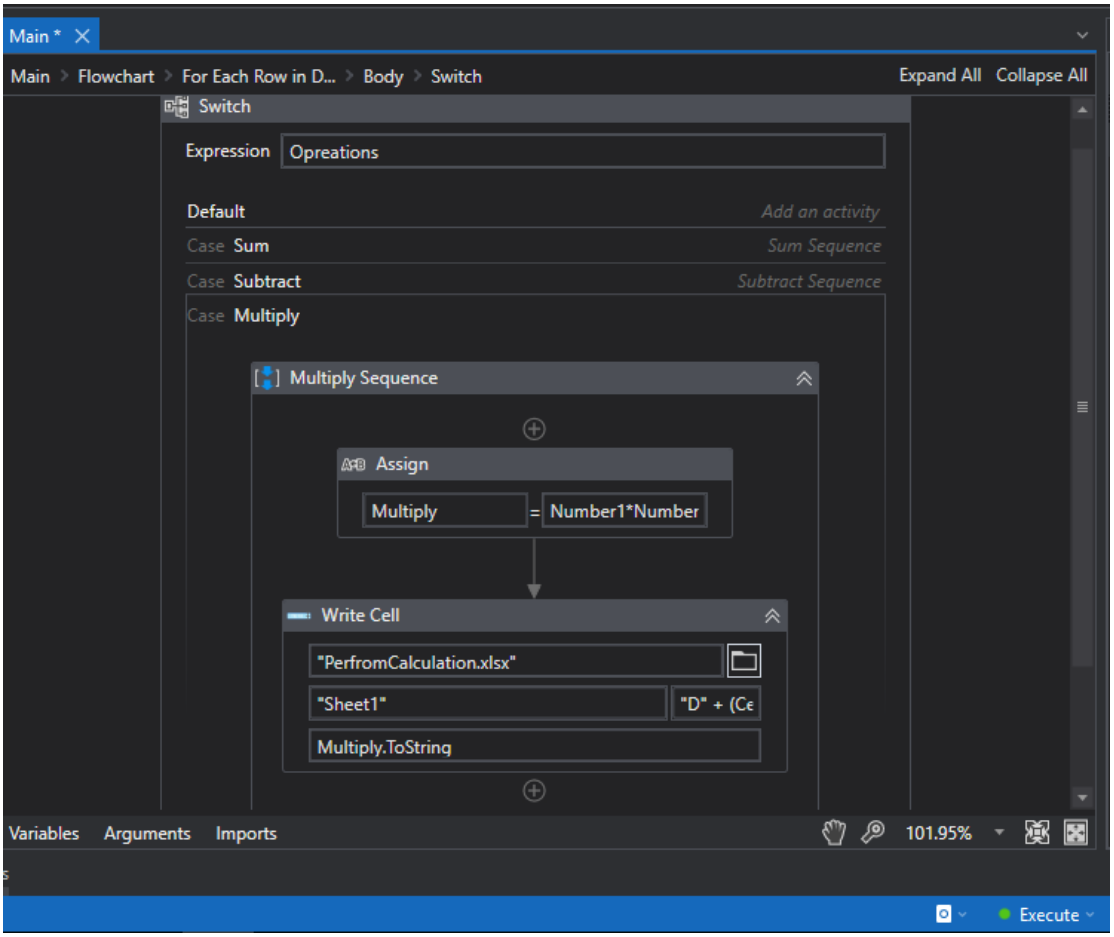
2. **Subtract case**: In Subtract case we have added a Subtract sequence. Inside subtract sequence we have assign activity in which we have declared a int32 variable called Subtract. Value of Subtract is Number1 Variable - Number2 Variable.

   After Assign we drag write cell of workbook activity into Subtract sequence. We provide the excel path along with Sheet Name. We also provide Excel Range. We have to write the output in Result column so we write “D” + (cellindex+2).ToString in Range. Since the cellindex starts from index 0, so we have to add 2 within it and we use ToString to convert it into String format. Inside Text we write the Subtract variable (declared in assign) and Convert it into string format using ToString.



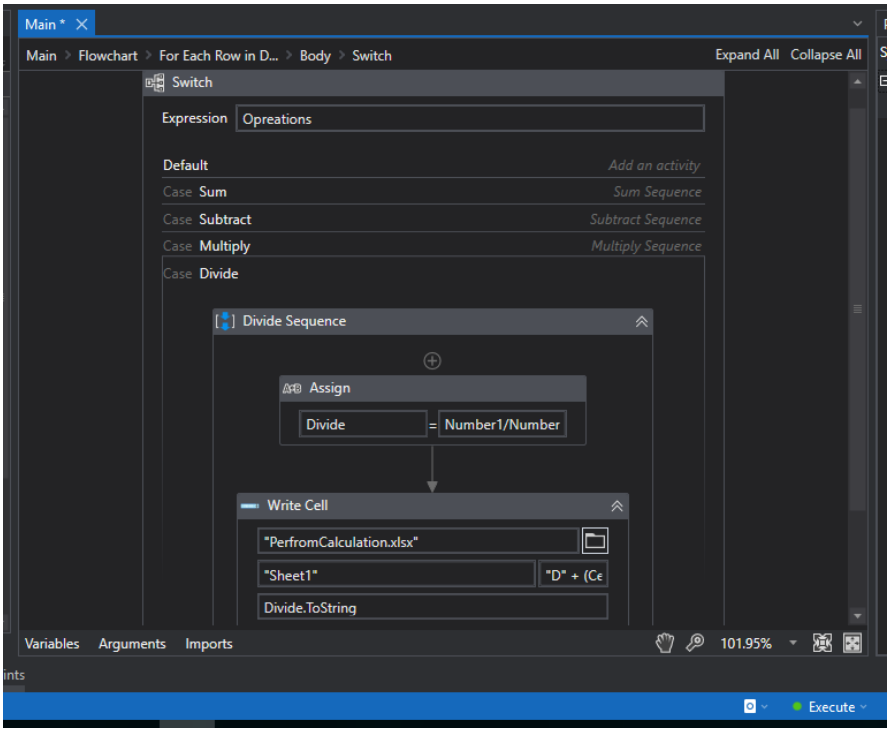
3. **Multiply case**: In Multiply case we have added a multiply sequence. Inside multiply sequence we have assign activity in which we have declared a int32 variable called Multiply. Value of Multiply is Number1 Variable * Number2 Variable.

   After Assign we drag write cell of workbook activity into multiply sequence. We provide the excel path along with Sheet Name. We also provide Excel Range. We have to write the output in Result column so we write “D” + (cellindex+2).ToString in Range. Since the cellindex starts from index 0, so we have to add 2 within it and we use ToString to convert it into String format. Inside Text we write the Multiply variable (declared in assign) and Convert it into string format using ToString.



4. **Divide case**: In Divide case we have added a Divide sequence. Inside Divide sequence we have assign activity in which we have declared a Double variable called Divide. Value of Divide is Number1 Variable / Number2 Variable.

   After Assign we drag write cell of workbook activity into divide sequence. We provide the excel path along with Sheet Name. We also provide Excel Range. We have to write the output in Result column so we write “D” + (cellindex+2).ToString in Range. Since the cellindex starts from index 0, so we have to add 2 within it and we use ToString to convert it into String format. Inside Text we write the Divide variable (declared in assign) and Convert it into string format using ToString.



Final Result

When we run the UiPath Process we will complete the execution without any errors. The Final output of the process will be Stored in Result Column in Excel. Based on Operations we will perform calculation and UiPath will complete the execution.

	A	B	C	D
1	Number1	Number2	Opreations	Result
2	45	55	Sum	100
3	654	122	Subtract	532
4	2133	4	Multiply	8532
5	45	9	Divide	5
6	55	12	Subtract	43
7	12	12	Divide	1
8	77	33	Sum	110
9	10	45	Multiply	450
10	10	1	Sum	11
11	256	16	Divide	16
12	90	81	Subtract	9
13	55	45	Sum	100
14	30	12	Multiply	360
15	45	40	Subtract	5
16	144	88	Subtract	56