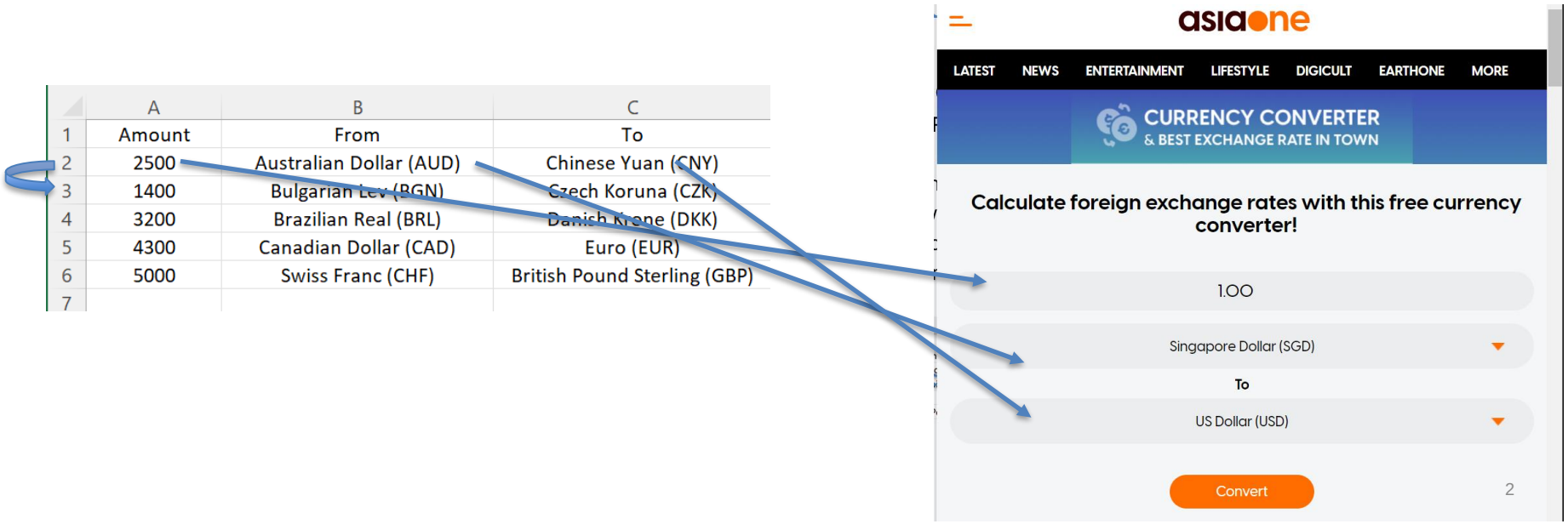
Supplementary Notes

Use Case 5

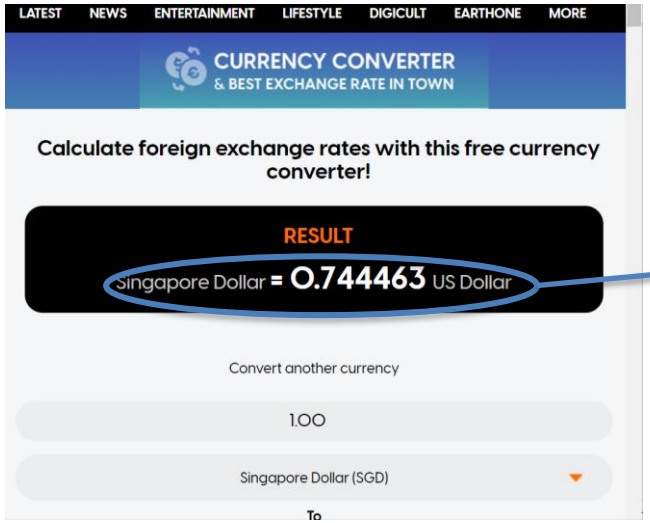
Activities explored – Use Case 1

- Use Case 1 (Convert Currency)
  - Open browser: Ask UIPath to open a webpage
  - Type Into: Type text
  - Select Item: Dropdown
  - Close Tab: Close browser tab
  - Read Range Workbook: read Excel file -> data table (in computer memory)
  - For each row in data table: Loop through each row in data table



Use Case 2

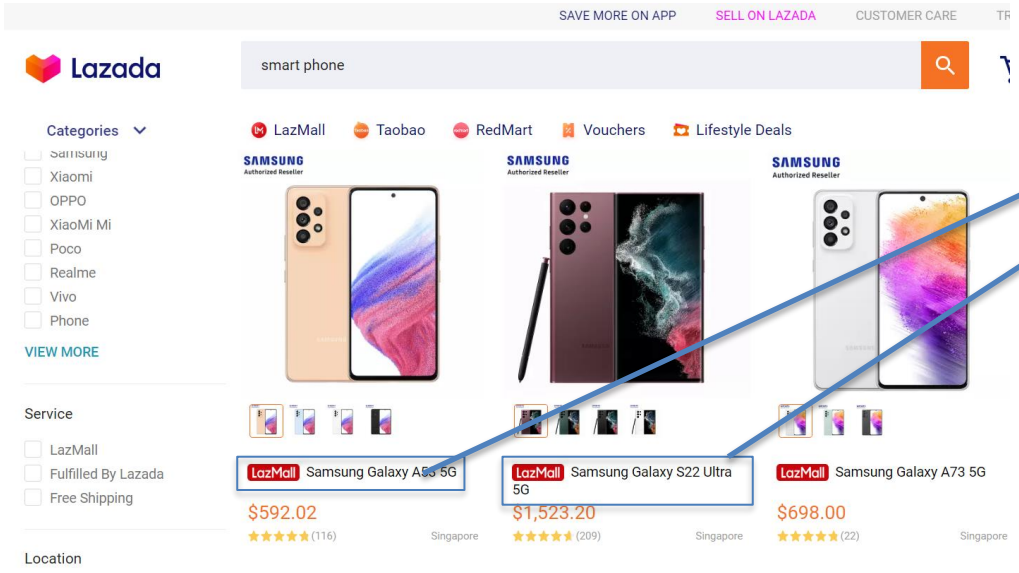
- Use Case 2 (Get currency conversion from webpage and write to excel)
  - Get Text: Get text from webpage
  - Assign: put a value into a variable, eg PriceValue = 5
  - Log Message: Print contents of variables for debugging (Output tab)
  - Write Range Workbook: write data table -> Excel file
  - Find Matching Patterns: Regular expression -> find match of specified pattern

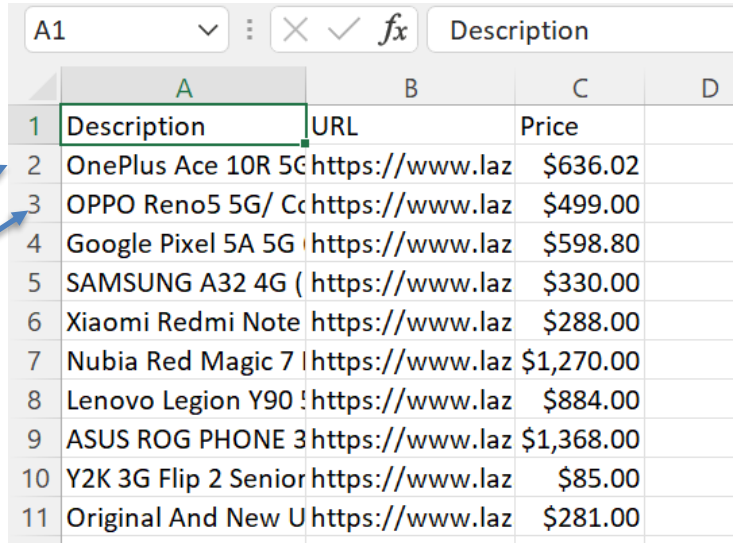


	A	B	C	D	E
1	Amount	From	To	Result	Final result
2	2500	Australian	Chinese Yu		11598.6
3	1400	Bulgarian	Czech Kor		17706.36
4	3200	Brazilian R	Danish Kr		4441.472
5	4300	Canadian	Euro (EUR		3146.1337
6	5000	Swiss Fran	British Pou		4221.88

Use Case 3

- Use Case 3 (Lazada.sg smartphones extract data table)
  - Table Extraction
  - Write CSV: write data table -> CSV file





A1 | Description

	A	B	C
1	Description	URL	Price
2	OnePlus Ace 10R 5G	https://www.laz	$636.02
3	OPPO Reno5 5G/ Cc	https://www.laz	$499.00
4	Google Pixel 5A 5G (	https://www.laz	$598.80
5	SAMSUNG A32 4G (	https://www.laz	$330.00
6	Xiaomi Redmi Note	https://www.laz	$288.00
7	Nubia Red Magic 7 I	https://www.laz	$1,270.00
8	Lenovo Legion Y90 5	https://www.laz	$884.00
9	ASUS ROG PHONE 3	https://www.laz	$1,368.00
10	Y2K 3G Flip 2 Senior	https://www.laz	$85.00
11	Original And New U	https://www.laz	$281.00

Use Case 4

- Use Case 4 (data manipulation, clean up prices)
  - Add Data Column: Add new column to data table
  - Modify Text: Find and Replace Text, Text to Left/Right, Trim
  - (also can be done in codes: ToUpper, ToLower, Replace, Trim, Split, concat, substring)
  - Change data type: Change Type to
  - Try Catch: Exception handling

Items	Price
TV	S$ 220.00
iPhone	S$ 272.58 to S$ 340.72
Wallet	S$ 10.89
Shoes	S$ 40.37
Waterborrle	Item not found
Gloves	S$ 17.39 to S$ 17.55

Items	Price	Price(S$)
TV	S$ 220.00	220.00
iPhone	S$ 272.58 to S$ 340.72	272.58
Wallet	S$ 10.89	10.89
Shoes	S$ 40.37	40.37
Waterborrle	Item not found	0
Gloves	S$ 17.39 to S$ 17.55	17.39

Revision

Variable

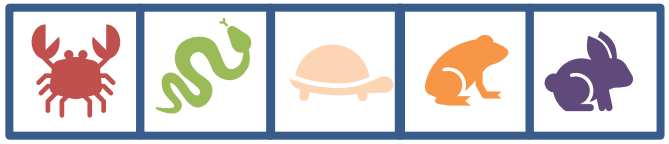
MyVarName

MyAnimal

Array

MyArrayName

MyAnimalBasket



0 1 2 3 4

MyAnimalBasket(0) 

MyAnimalBasket(1) 

MyAnimalBasket(2) =

MyAnimalBasket(3) = 

MyAnimalBasket(4) =

Revision

Data table

Read range (workbook)

Convert Currency.xlsx

Amount	From	To	Result	Final result
2500	Australian Dollar (AUD)	Chinese Yuan (CNY)		
1400	Bulgarian Lev (BGN)	Czech Koruna (CZK)		
3200	Brazilian Real (BRL)	Danish Krone (DKK)		
4300	Canadian Dollar (CAD)	Euro (EUR)		
5000	Swiss Franc (CHF)	British Pound Sterling (GBP)		

Create variable to store whatever that was read (i.e. DTCurrency)

For Each Row in Data Table

ForEach: CurrentRow

In: DTCurrency

Amount	From	To	Result	Final result
2500	Australian Dollar (AUD)	Chinese Yuan (CNY)		
1400	Bulgarian Lev (BGN)	Czech Koruna (CZK)		
3200	Brazilian Real (BRL)	Danish Krone (DKK)		
4300	Canadian Dollar (CAD)	Euro (EUR)		
5000	Swiss Franc (CHF)	British Pound Sterling (GBP)	688	

CurrentRow("Amount").toString

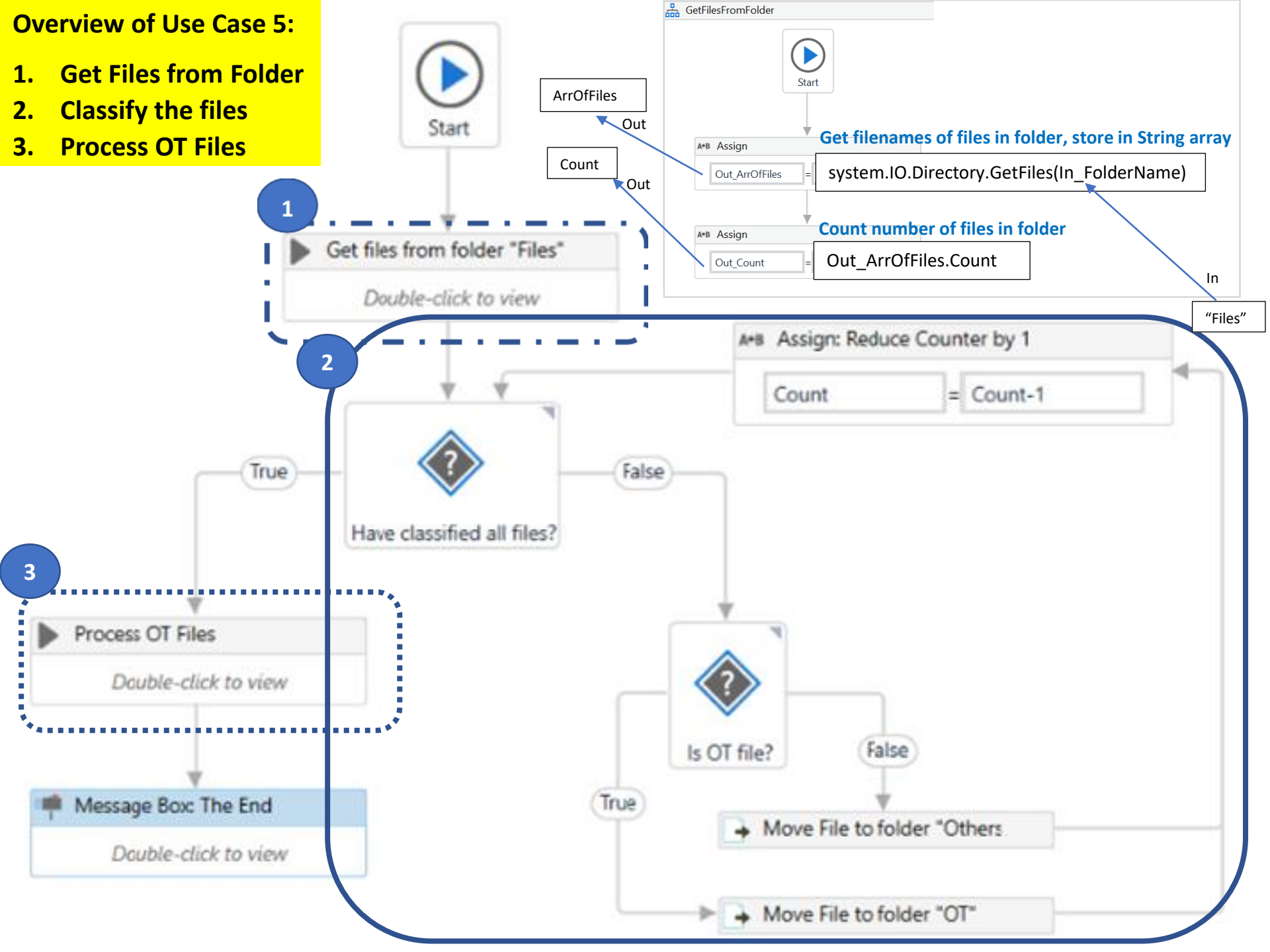
CurrentRow("From").toString

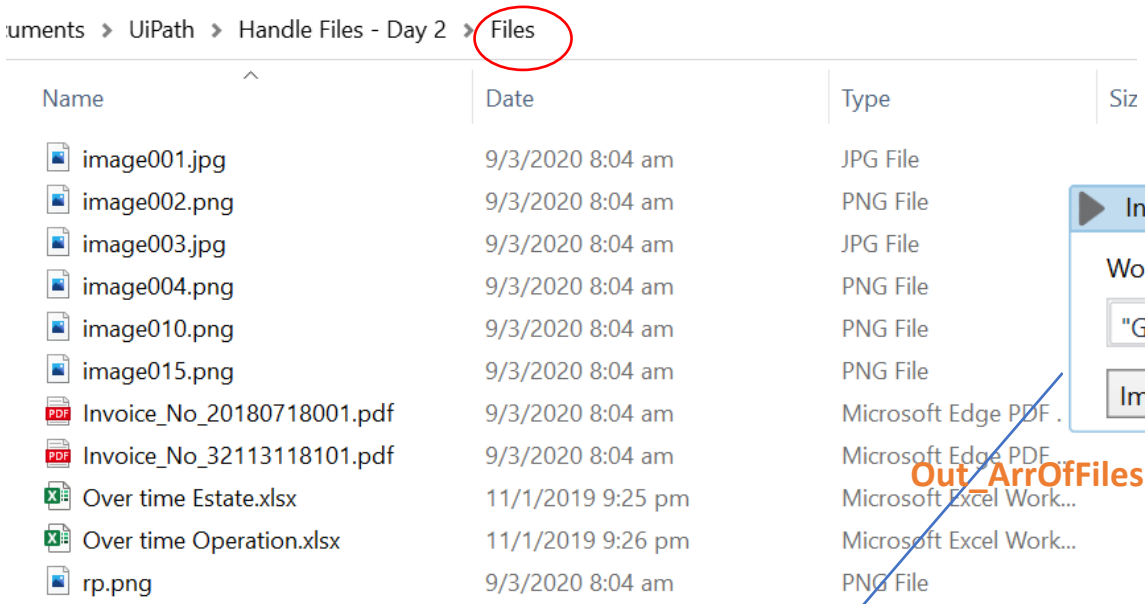
CurrentRow("To").toString

CurrentRow("Result")= "688"

Overview of Use Case 5:

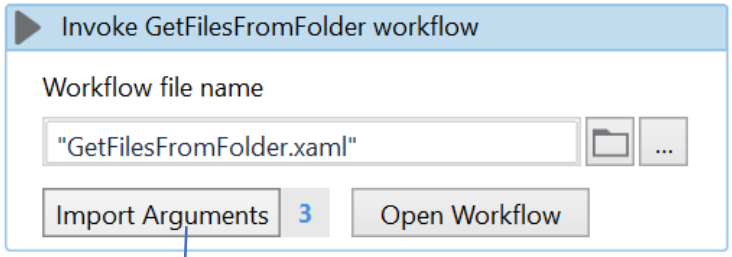
1. **Get Files from Folder**
2. **Classify the files**
3. **Process OT Files**





"Files"

In_FolderName



Out_ArrOfFiles

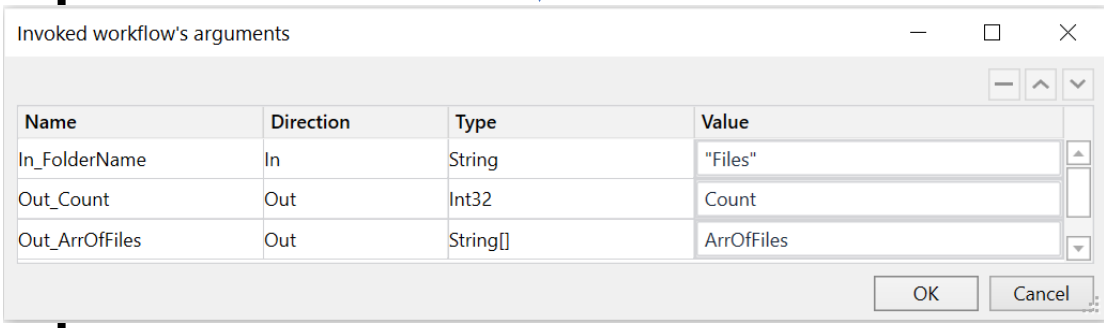
Out_Count

11

Count

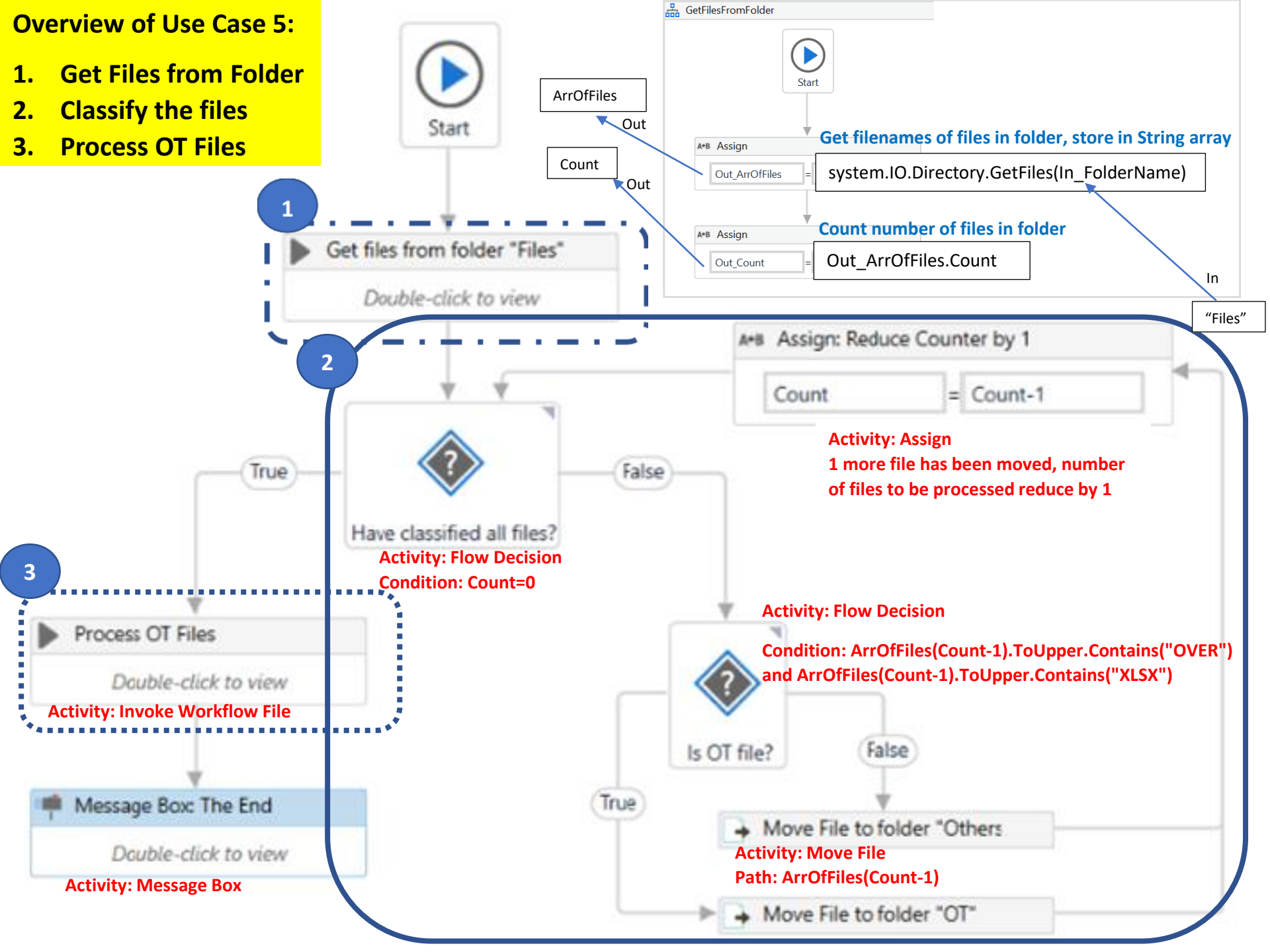
ArrOfFiles

```
string[11] {
"Files\image001.jpg",
"Files\image002.png",
"Files\image003.jpg",
"Files\image004.png",
"Files\image010.png",
"Files\image015.png",
"Files\Invoice_No_20180718001.pdf",
"Files\Invoice_No_32113118101.pdf",
"Files\Over time Estate.xlsx",
"Files\Over time Operation.xlsx",
"Files\rp.png" }
```



Overview of Use Case 5:

1. Get Files from Folder
2. Classify the files
3. Process OT Files



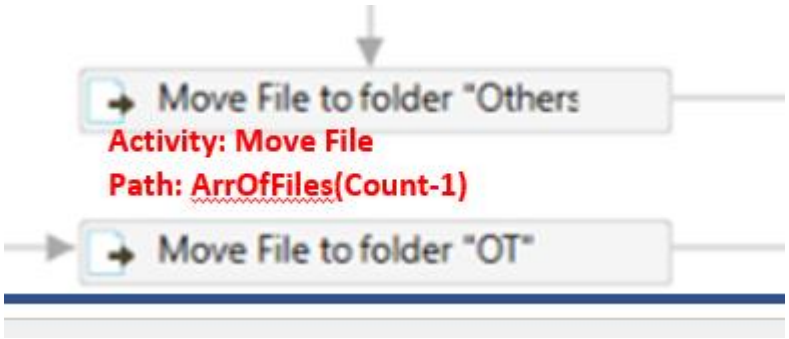
Index	Filename
0	image001.jpg
1	image002.png
2	image003.jpg
3	image004.png
4	image010.png
5	image015.png
6	Invoice_No_20180718001.pdf
7	Invoice_No_32113118101.pdf
8	Over time Estate.xlsx
9	Over time Operation.xlsx
10	rp.png

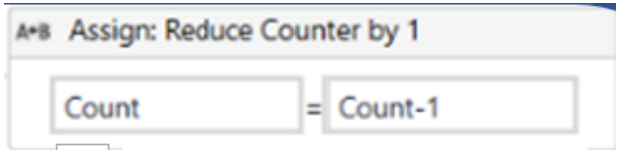
Other Files

OT

Count = 11

ArrOfFiles(Count-1)
= ArrOfFiles(10)
= rp.png





Index	Filename
0	image001.jpg
1	image002.png
2	image003.jpg
3	image004.png
4	image010.png
5	image015.png
6	Invoice_No_20180718001.pdf
7	Invoice_No_32113118101.pdf
8	Over time Estate.xlsx
9	Over time Operation.xlsx

Other Files
rp.png

OT

Count = 10

ArrOfFiles(Count-1)
= ArrOfFiles(9)
= Over time Operation.xlsx

Index	Filename
0	image001.jpg
1	image002.png
2	image003.jpg
3	image004.png
4	image010.png
5	image015.png
6	Invoice_No_20180718001.pdf
7	Invoice_No_32113118101.pdf
8	Over time Estate.xlsx

Other Files
rp.png

OT
Over time Operation.xlsx

Count = 9

ArrOfFiles(Count-1)
= ArrOfFiles(8)
= Over time Estate.xlsx

Index	Filename
0	image001.jpg
1	image002.png
2	image003.jpg
3	image004.png
4	image010.png
5	image015.png
6	Invoice_No_20180718001.pdf
7	Invoice_No_32113118101.pdf

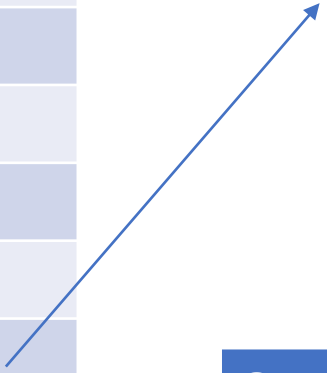
Other Files
rp.png

OT
Over time Operation.xlsx Over time Estate.xlsx

Count = 8

ArrOfFiles(Count-1)
= ArrOfFiles(7)
= Invoice_No_32113118101.pdf

Index	Filename
0	image001.jpg
1	image002.png
2	image003.jpg
3	image004.png
4	image010.png
5	image015.png
6	Invoice_No_20180718001.pdf



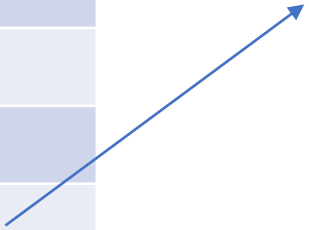
Other Files
rp.png Invoice_No_32113118101.pdf

OT
Over time Operation.xlsx Over time Estate.xlsx

Count = 7

ArrOfFiles(Count-1)
= ArrOfFiles(6)
= Invoice_No_32113118101.pdf

Index	Filename
0	image001.jpg
1	image002.png
2	image003.jpg
3	image004.png
4	image010.png
5	image015.png



Other Files
rp.png Invoice_No_32113118101.pdf Invoice_No_20180718001.pdf

OT
Over time Operation.xlsx Over time Estate.xlsx

Count = 6

ArrOfFile(Count-1)
= ArrOfFiles(5)
= image015.png

Index	Filename
0	image001.jpg
1	image002.png
2	image003.jpg
3	image004.png
4	image010.png

Other Files
rp.png Invoice_No_32113118101.pdf Invoice_No_20180718001.pdf image015.png

OT
Over time Operation.xlsx Over time Estate.xlsx

Count = 5

ArrOfFile(Count-1)
= ArrOfFiles(4)
= image010.png

Index	Filename
0	image001.jpg
1	image002.png
2	image003.jpg
3	image004.png

Other Files
rp.png Invoice_No_32113118101.pdf Invoice_No_20180718001.pdf image015.png image010.png

OT
Over time Operation.xlsx Over time Estate.xlsx

Count = 4

ArrOfFiles(Count-1)
= ArrOfFiles(3)
= image004.png

Index	Filename
0	image001.jpg
1	image002.png
2	image003.jpg

Other Files
rp.png
Invoice_No_32113118101.pdf
Invoice_No_20180718001.pdf
image015.png
image010.png
image004.png

OT
Over time Operation.xlsx
Over time Estate.xlsx

Count = 3

ArrOfFiles(Count-1)
= ArrOfFiles(2)
= image003.jpg

Index	Filename
0	image001.jpg
1	image002.png

Other Files
rp.png
Invoice_No_32113118101.pdf
Invoice_No_20180718001.pdf
image015.png
image010.png
image004.png
image003.jpg

OT
Over time Operation.xlsx
Over time Estate.xlsx

Count = 2

ArrOfFiles(Count-1)
= ArrOfFiles(1)
= image002.png

Index	Filename
0	image001.jpg

Other Files
rp.png
Invoice_No_32113118101.pdf
Invoice_No_20180718001.pdf
image015.png
image010.png
image004.png
image003.jpg
image002.png

OT
Over time Operation.xlsx
Over time Estate.xlsx

Count = 1

ArrOfFiles(Count-1)
= ArrOfFiles(0)
= image001.jpg

Index	Filename

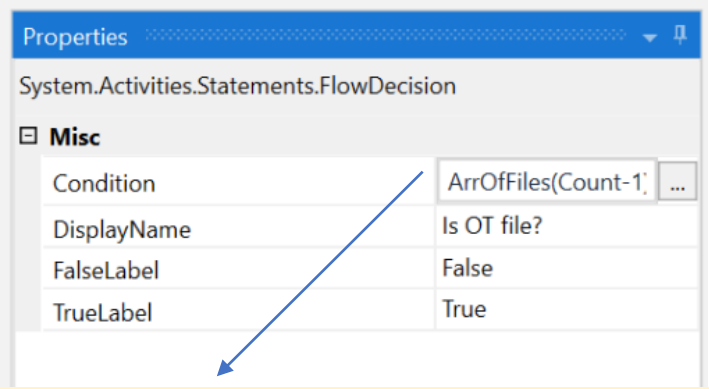
Other Files
rp.png
Invoice_No_32113118101.pdf
Invoice_No_20180718001.pdf
image015.png
image010.png
image004.png
image003.jpg
image002.png
image001.jpg

OT
Over time Operation.xlsx
Over time Estate.xlsx

Count = 0

No more files

Check if current file is an OT file



ArrOfFiles(Count-1).ToUpper.Contains(*"OVER"*) and **ArrOfFiles(Count-1).ToUpper.Contains(*"XLSX"*)**

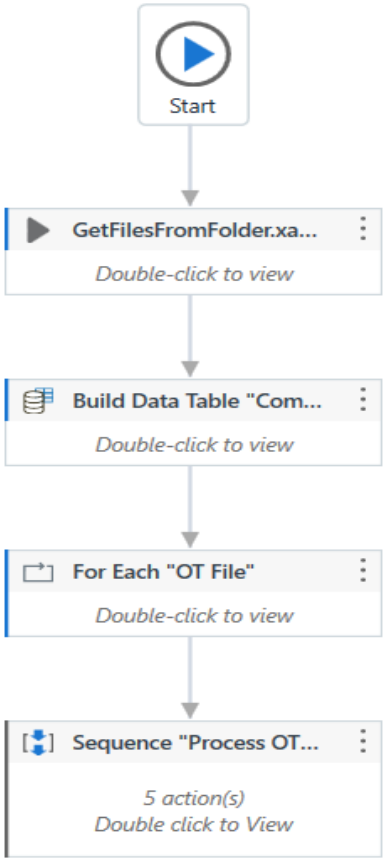
Last file in the collection that is still unsorted. Index is number of files (i.e. Count) minus 1.

Convert Name to All UPPER CASE

UPPER-CASE Filename contain the word "OVER". True/False?

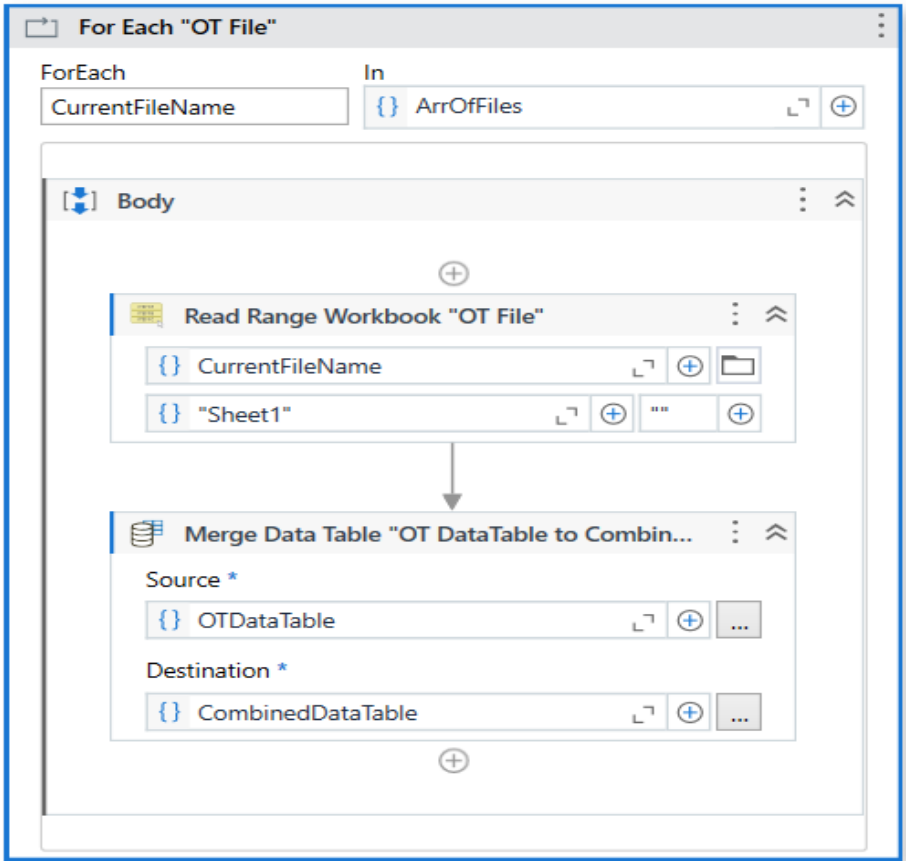
"and" is used to connect multiple conditions

Process OT files



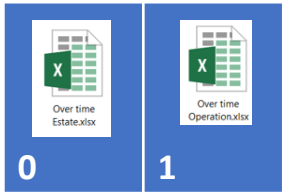
Retrieve list of files from “OT” folder. Variable *ArrOfFiles* contains 2 files.

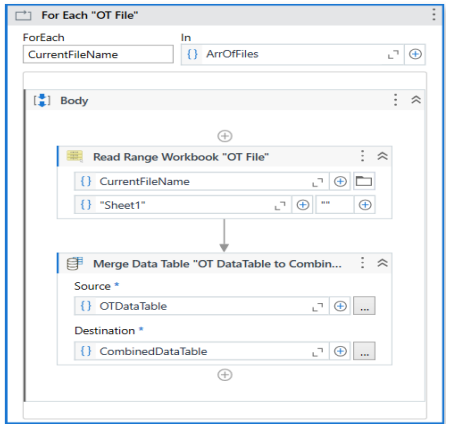
Create an empty (no row, no column) data table named *CombinedDataTable*.



Process OT files

Array Variable: ***ArrOfFiles***





1st Round:

1) Read *file* "Over time Estate.xlsx" from *ArrOfFiles* to *OTDatatable* (below)

	Name	Department	Basic Salary	Month	Year	Hourly OT ($)	Overtime (hrs)
2	Shilpa R	Operation	3740	January	2018	32	10
3	Sindhu J.P	Operation	4000	January	2018	34	4
4	Deepthi P.S	Estate	4000	January	2018	34	3
5	Lijin k c	Estate	1500	January	2018	12	20
6	Sayad K M	Estate	1750	January	2018	14	5
7	Ajil k Mohanan	Estate	1100	January	2018	9	16
8	Edison ML	Estate	3200	January	2018	27	8
9	Basil P E	Estate	1100	January	2018	9	15
10	Jobin George	Estate	3000	January	2018	25	10
11	Jismon Tomy	Estate	4000	January	2018	34	13
12	Sharafali P	Estate	4000	January	2018	34	13

2) Merge *OTDatatable* with *CombineDataTable* (Empty). *CombineDataTable* now contains rows from "Over time Estate.xlsx" file.

2nd Round:

1) Read *file* "Over time Operations.xlsx" from *ArrOfFiles* to *OTDatatable* (below)

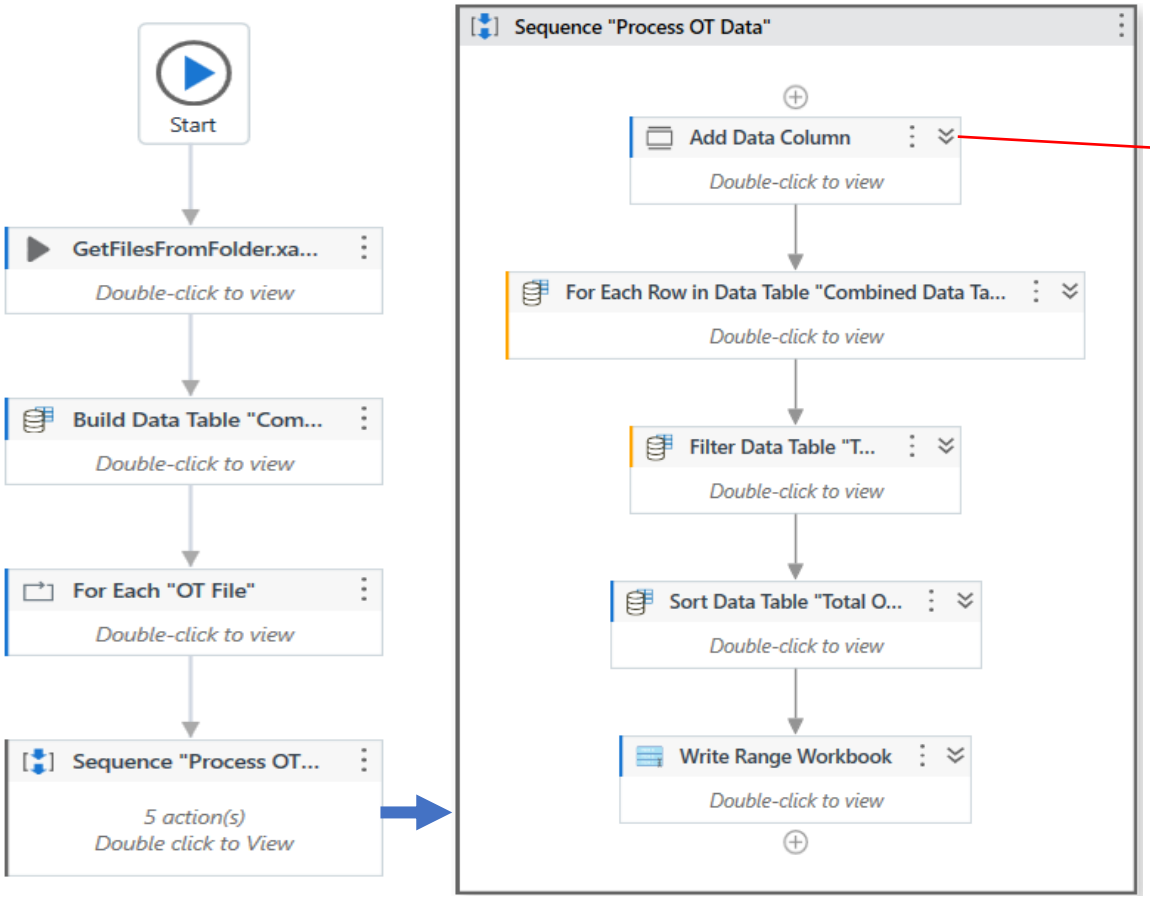
	Name	Department	Basic Salary	Month	Year	Hourly OT ($)	Overtime (hrs)
2	Raj Sharma	Operation	3000	January	2018	26	10
3	Sharad Gandhi	Operation	2500	January	2018	21	9
4	Danish D'Souza	Operation	2000	January	2018	17	11
5	Pawan Patil	Operation	2250	January	2018	19	7
6	Rijo Paul	Operation	2100	January	2018	18	15
7	Joseph P	Operation	4000	January	2018	34	11
8	Aakash Patel	Operation	3500	January	2018	30	12
9	Ganesh Rahu	Operation	3000	January	2018	26	14
10	Vinudas K.S	Operation	3000	January	2018	26	18
11	Divya Kumar	Operation	4000	January	2018	34	19

2) Merge *OTDatatable* with *CombineDataTable*. *CombineDataTable* now contains rows from both OT files.

Variable: ***CombinedDataTable***

	Name	Department	Basic Salary	Month	Year	Hourly OT ($)	Overtime (hrs)
2	Shilpa R	Operation	3740	January	2018	32	10
3	Sindhu J.P	Operation	4000	January	2018	34	4
4	Deepthi P.S	Estate	4000	January	2018	34	3
5	Lijin k c	Estate	1500	January	2018	12	20
6	Sayad K M	Estate	1750	January	2018	14	5
7	Ajil k Mohanan	Estate	1100	January	2018	9	16
8	Edison ML	Estate	3200	January	2018	27	8
9	Basil P E	Estate	1100	January	2018	9	15
10	Jobin George	Estate	3000	January	2018	25	10
11	Jismon Tomy	Estate	4000	January	2018	34	13
12	Sharafali P	Estate	4000	January	2018	34	13
13	Raj Sharma	Operation	3000	January	2018	26	10
14	Sharad Gandhi	Operation	2500	January	2018	21	9
15	Danish D'Souza	Operation	2000	January	2018	17	11
16	Pawan Patil	Operation	2250	January	2018	19	7
17	Rijo Paul	Operation	2100	January	2018	18	15
18	Joseph P	Operation	4000	January	2018	34	11
19	Aakash Patel	Operation	3500	January	2018	30	12
20	Ganesh Rahu	Operation	3000	January	2018	26	14
21	Vinudas K.S	Operation	3000	January	2018	26	18
22	Divya Kumar	Operation	4000	January	2018	34	19

Process OT files



Add a new data column “Total OT ($)”

Name	Department	Basic Salary	Month	Year	Hourly OT ($)	Overtime (hrs	Total OT ($)
Shilpa R	Operation	3740	January	2018	32	10	
Sindhu J.P	Operation	4000	January	2018	34	4	
Deepthi P.S	Estate	4000	January	2018	34	3	
Lijin k c	Estate	1500	January	2018	12	20	
Sayad K M	Estate	1750	January	2018	14	5	
Ajil k Mohanan	Estate	1100	January	2018	9	16	
Edison ML	Estate	3200	January	2018	27	8	
Basil P E	Estate	1100	January	2018	9	15	
Jobin George	Estate	3000	January	2018	25	10	
Jismon Tomy	Estate	4000	January	2018	34	13	
Sharafali P	Estate	4000	January	2018	34	13	
Raj Sharma	Operation	3000	January	2018	26	10	
Sharad Gandhi	Operation	2500	January	2018	21	9	
Danish D'Souza	Operation	2000	January	2018	17	11	
Pawan Patil	Operation	2250	January	2018	19	7	
Rijo Paul	Operation	2100	January	2018	18	15	
Joseph P	Operation	4000	January	2018	34	11	
Aakash Patel	Operation	3500	January	2018	30	12	
Ganesh Rahu	Operation	3000	January	2018	26	14	
Vinudas K.S	Operation	3000	January	2018	26	18	
Divya Kumar	Operation	4000	January	2018	34	19	

Activities explored

- Use Case 5 (Invoke workflow, Process data files)
  - Message Box: pop up message box
  - For Each: loop through objects/array of contents (not data table)
  - Invoke Workflow File: Call another helper file
  - Flow Decision: Check if condition met
  - Move File: Move file from source to destination path
  - Build Data Table: Create a new data table
  - Merge Data Table: Combine 2 data table
  - Filter Data Table: Keep/Remove rows, Keep/Remove Columns
  - Sort Data Table: Sort contents in ascending/descending order

Activities explored

- Use Case 6 and 7 (Email receiving and sending)
  - Get Outlook mail message: get emails from Outlook
  - Save Attachments: save attachments attached with emails
  - Read Text File: read contents of a text file
  - If: check if a condition is true
  - Send Outlook mail message: send emails through Outlook

- ArrOfFiles
- Count=11, count-1 = 10, ArrOfFiles(10) -> files\rp.png

```
string[11] {
"Files\image001.jpg",
"Files\image002.png",
"Files\image003.jpg",
"Files\image004.png",
"Files\image010.png",
"Files\image015.png",
"Files\Invoice_No_20180718001.pdf",
"Files\Invoice_No_32113118101.pdf",
"Files\Over time Estate.xlsx",
"Files\Over time Operation.xlsx",
"Files\rp.png" }
```