

UiPath Excel Activities

Excel:

Microsoft Excel is a helpful and powerful program for data analysis and documentation. It is a spreadsheet program, which contains a number of columns and rows, where each intersection of a column and a row is a “cell.” Each cell contains one point of data or one piece of information.

Required Package:

Need to install UiPath.Excel.Activities Package.

UiPath offers 2 separate ways of accessing and manipulating workbooks:

- 1) Workbook or File Access Level
- 2) Excel or Excel App Integration

1) Workbook - File Access Level

All workbook activities will be executed in the background.

- Doesn't require Microsoft Excel to be installed, can be faster and more reliable for some operations just by not opening the file in the Excel application;
- Works only for .xls and .xlsx files.
- Doesn't work with .xlsm files.
- The file should not be open in Excel at runtime.

2) Excel - Excel App Integration

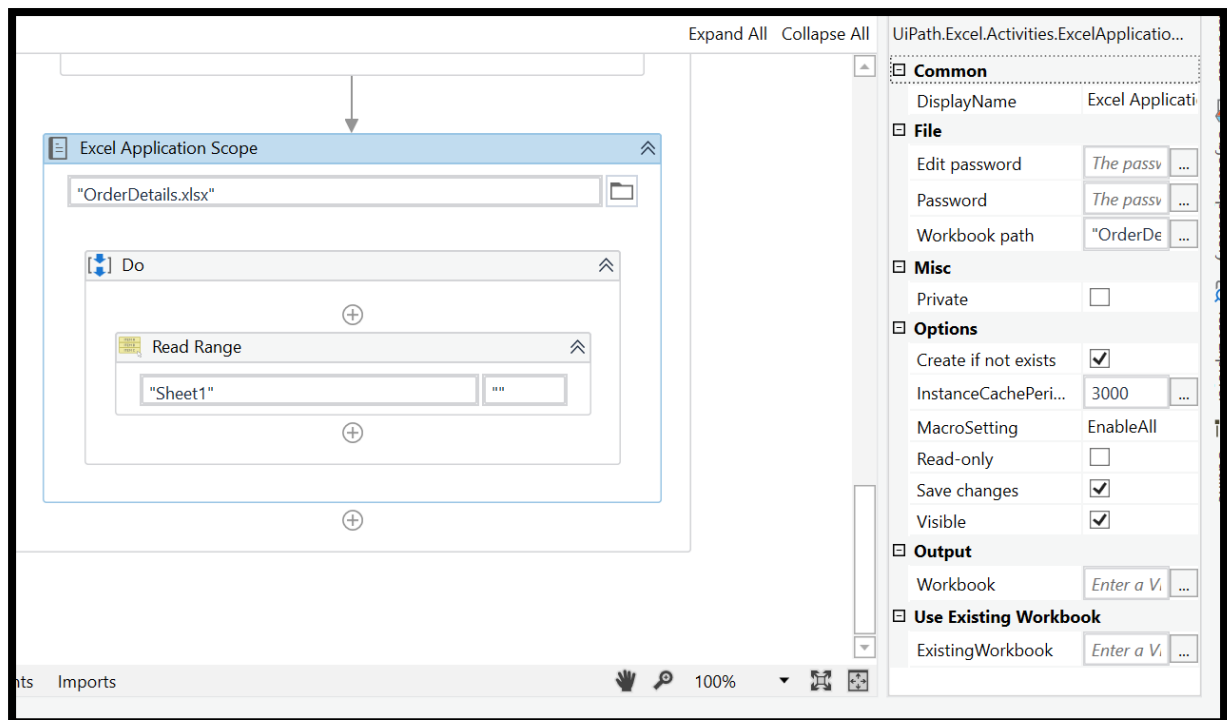
UiPath will open Excel just like a human would.

- Works with .xls, .xlsx and .xlsm, and it has some specific activities for working with .csv. All activities can be set to either be visible to the user or run in the background. The file can be open in Excel at runtime.
- Microsoft Excel must be installed even when the 'Visible' box is unchecked. If the file isn't open, it will be opened, saved, and closed for each activity.

The Excel Application Scope Activity

The integration with Excel is enabled by using an Excel Application Scope activity. It is a container and all the other Excel activities used to work with the specified Excel file have to be placed inside the container. When the execution ends, the specified workbook and the Excel application are closed.

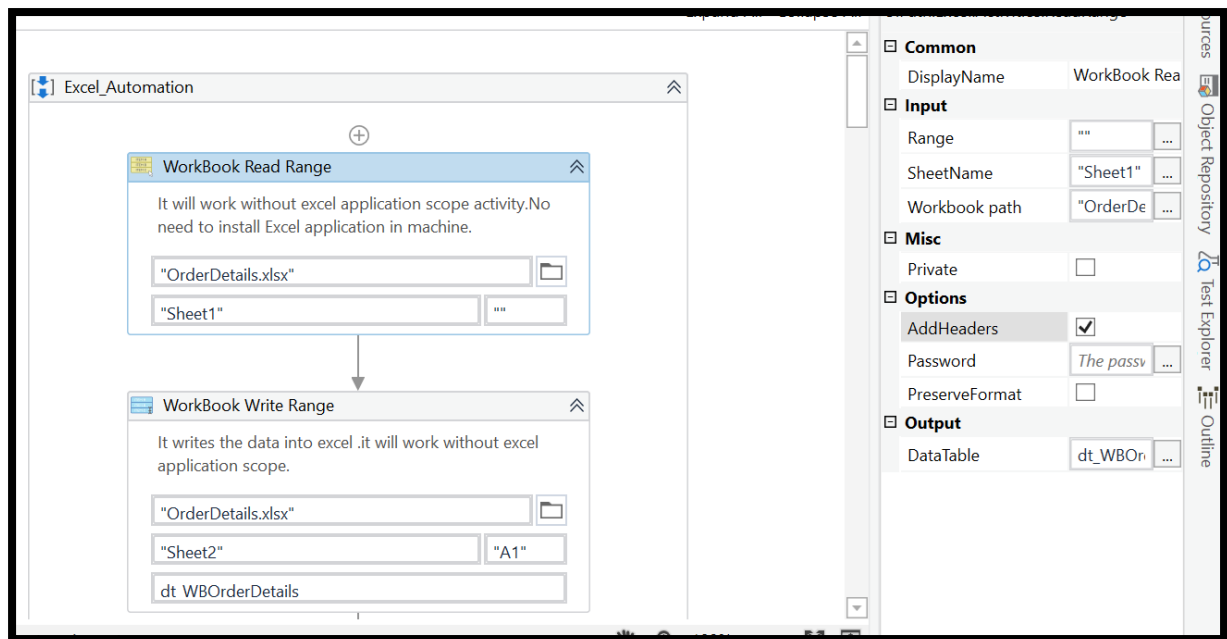
The Excel App Integration activities work within the Excel Application scope activity.



Workbook Read Range activity will work without excel application scope activity and provide all input details filepath, sheet name and range, if we have to read entire sheet no need to specify range.

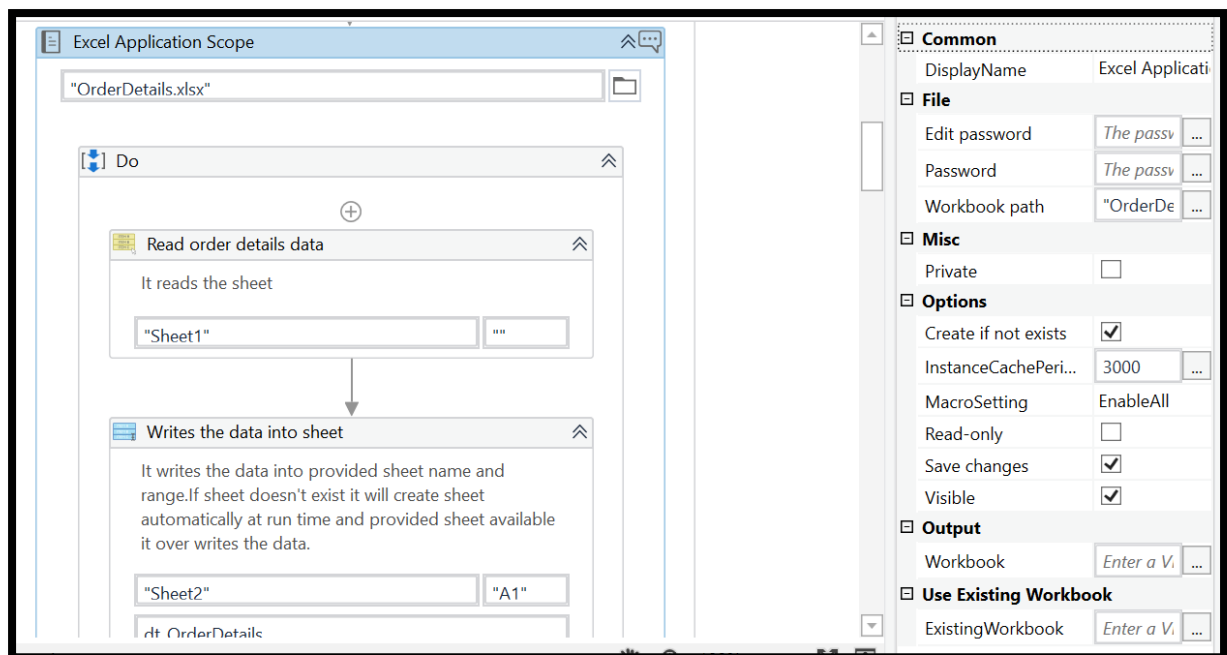
Create variable for store read data and variable type is DataTable.

Workbook Write Range activity it writes the data into excel file and provide the all-input details filepath, sheetname, datatable input to write the data. Output of read range activity it will take as input for write range activity. Specified file name or sheet doesn't exist automatically it will create the file.



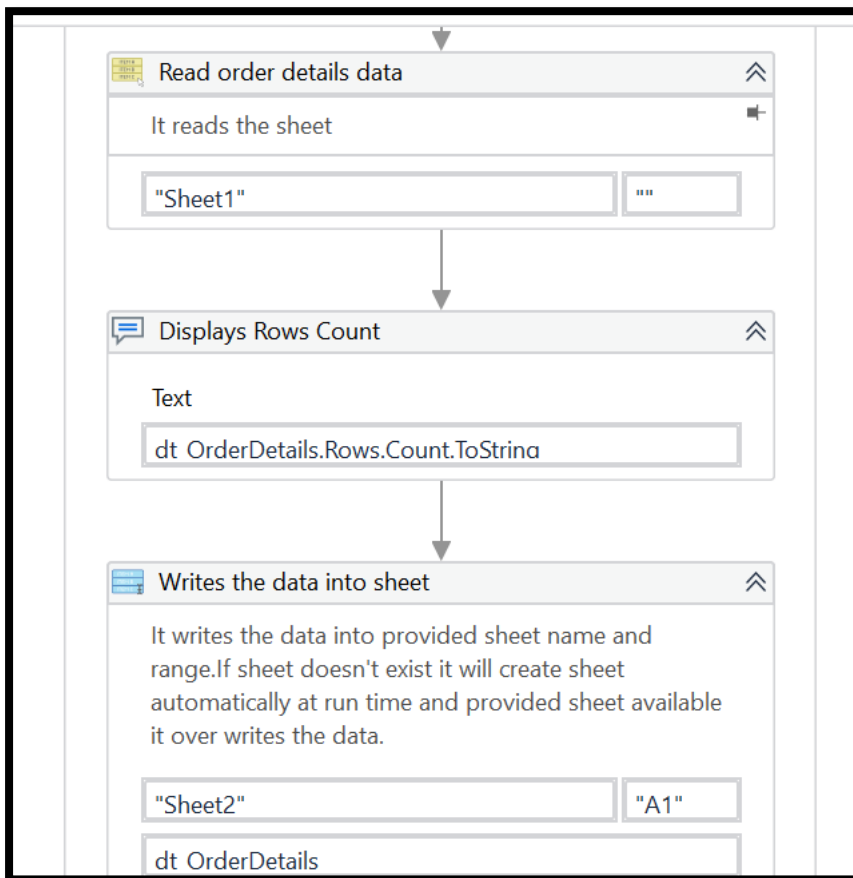
Below one is using Excel App Integration activities. In excel application scope we specify the excel file path, for read range activity provide the sheet name ,range and create datatable variable to store the data .

Write range activity it writes the data into specified excel sheet.



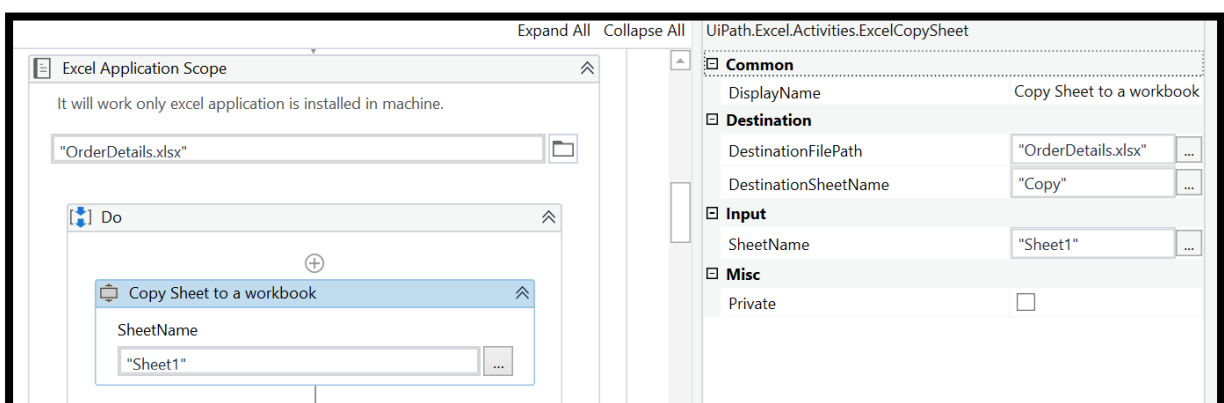
dt_OrderDetails.Rows.Count.ToString it will show rows count from datatable,

dt_OrderDetails is datatable variable it contains data.



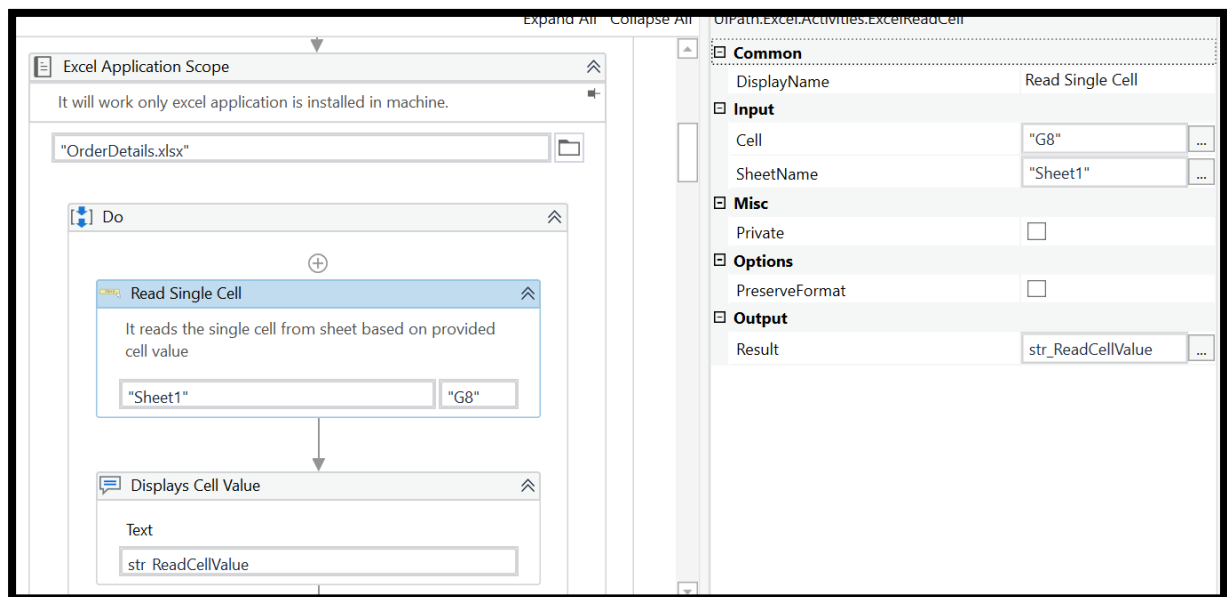
Copy Sheet Activity:

It Will copy data from orderdetails.xlsx file and sheet1 is sheetname and paste it in specified destination path and sheetname.



Read Cell Activity:

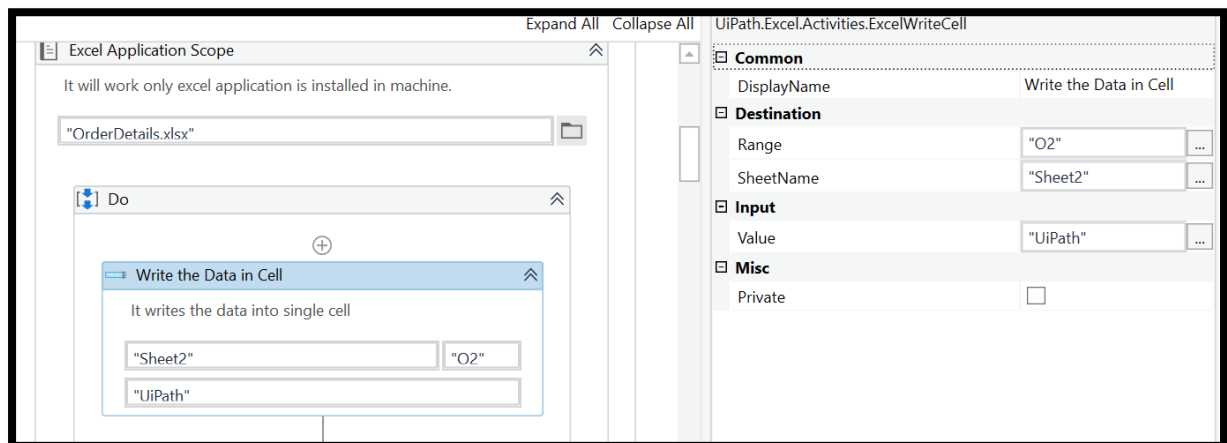
It reads the cell value from specified filepath, sheetname, cell range, it will store the data in string variable and display cell value using message box.



Write Cell Activity:

Writes the data in specified sheet and range.

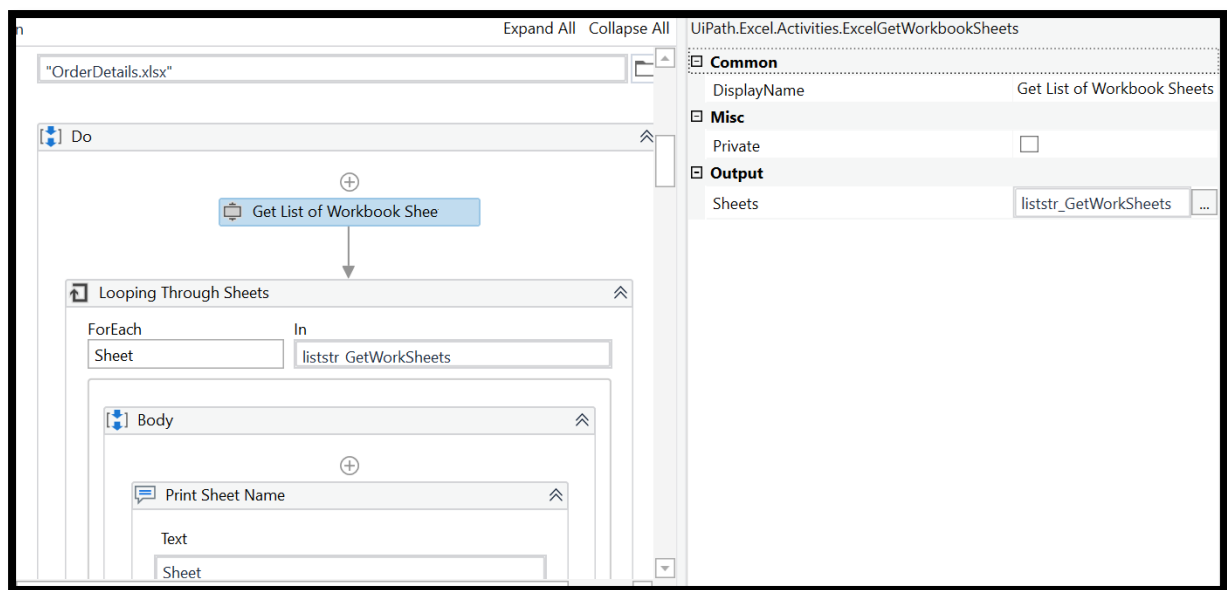
"UiPath" is value but will write this value in "O2" is the range. It will write value in single cell.



Get Workbook Sheets:

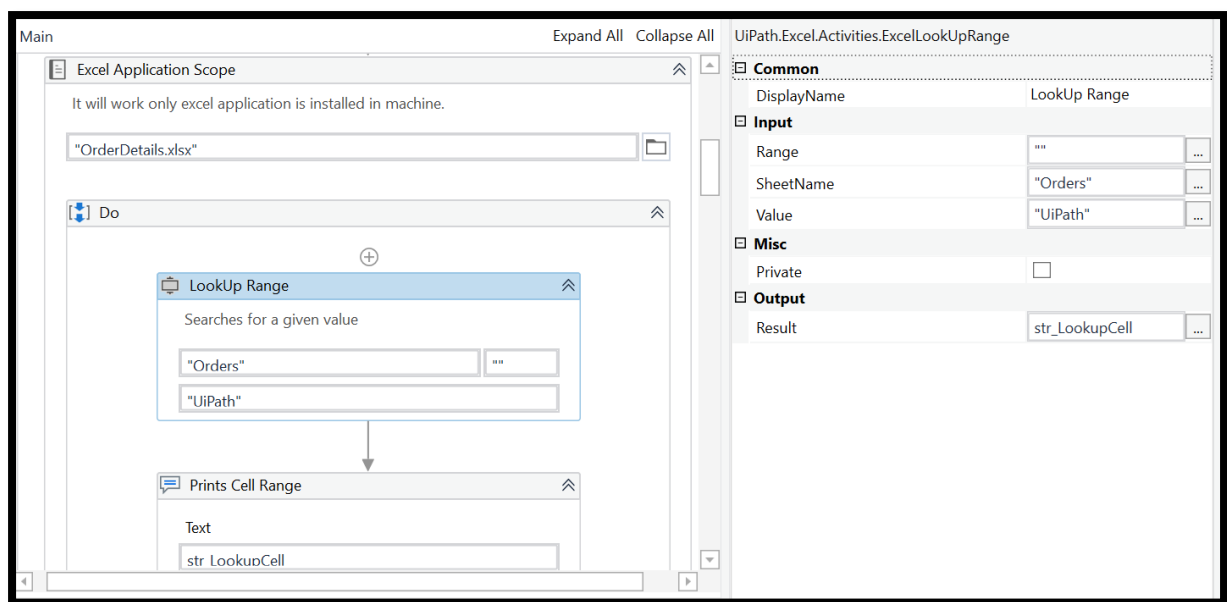
It will show all available sheets with names in specified excel file. Create a list variable to store all sheets.

Use for each activity it will loop all sheets and display in message box one by one.



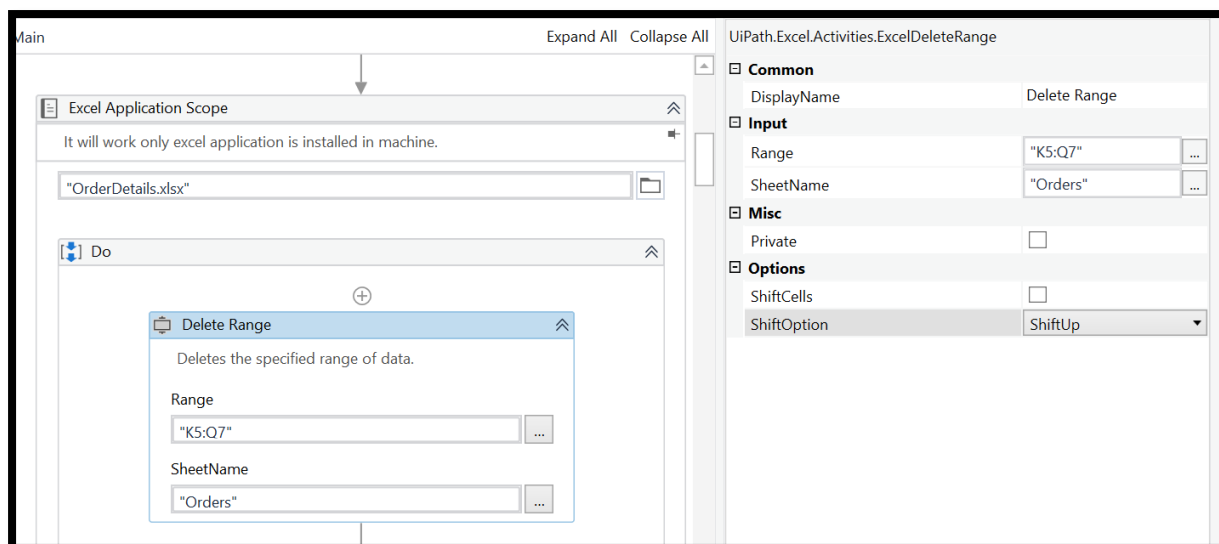
LookUp Range Activity:

This activity searches for a given value in a range. “UiPath” is value using this lookup range activity it will show the cell range of uipath value and stored in string variable. By using message box, it will display the cell range of UiPath.



Delete Range Activity:

Deletes a specified range in an Excel workbook. Can also be used to shift an entire row or column by using the ShiftCells and ShiftOption property fields.



Range: The range you want to delete. This field supports only strings and String variables.

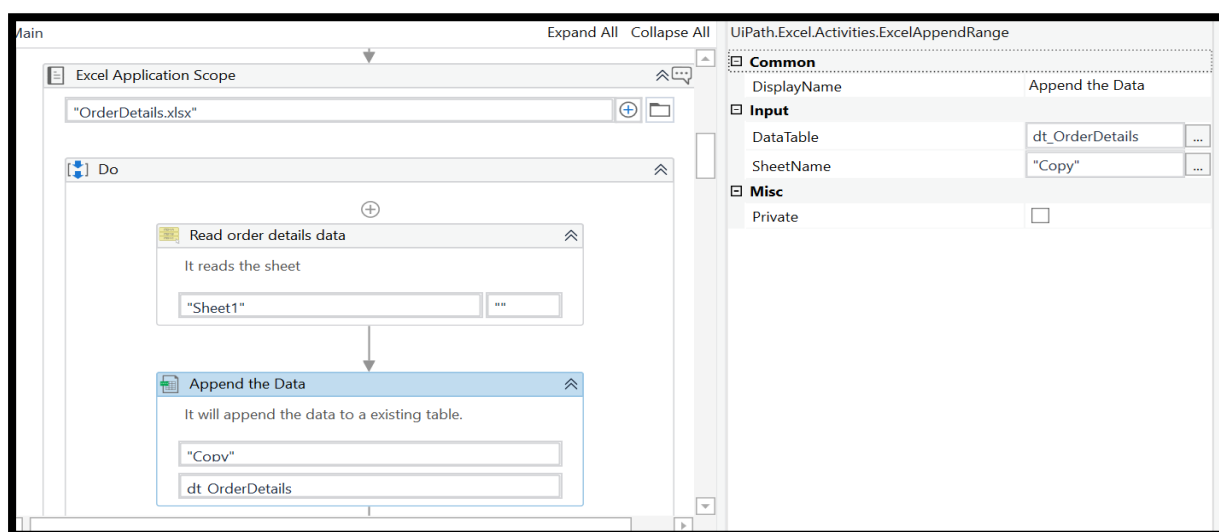
SheetName: The name of the sheet you want to create the workbook from. This field supports only strings and String variables.

ShiftCells: If this box is cleared, only the cell data is deleted, leaving the formatting unmodified. If selected, cell formatting is shifted according to what is specified in the ShiftOption property. By default, this check box is cleared.

ShiftOption: Specifies how to shift the cells in the deleted range. The available options are ShiftUp, ShiftDown, EntireRow, and EntireColumn.

Append Range Activity:

Adds the information stored in a DataTable variable to the end of a specified Excel spreadsheet. If the sheet does not exist, a new one is created with the name indicated in the SheetName field. It will not overwrite the data.



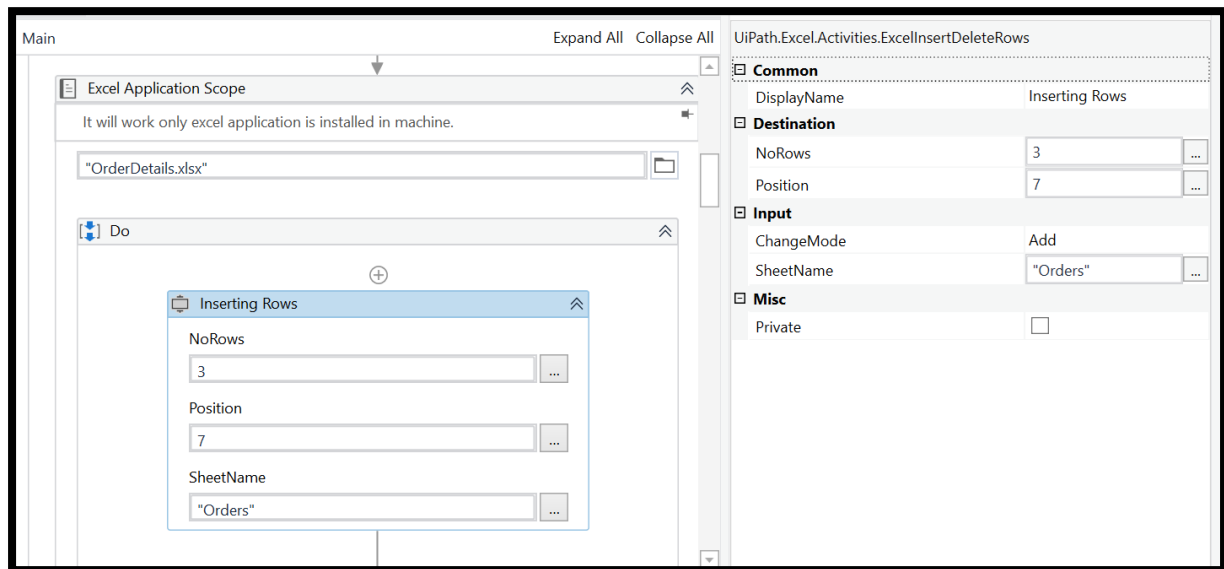
DataTable: The data to be added. This field supports only DataTable variables.

WorkbookPath: The full path of the Excel spreadsheet that we want to use.

SheetName: The name of the sheet in which to add the specified range. By default, this is filled in with "Sheet1." Only String variables and strings are supported.

Insert/Delete Rows Activity:

Adds or removes a specified number of rows at a certain position.



NoRows: The number of rows you wish to add or remove. This field supports only integers or Int32 variables.

Position: The row where the insertion or removal begins. This field supports only integers or Int32 variables.

ChangeMode: Selects whether the activity adds or removes rows. Selecting Add will add rows to the document, while selecting Remove will remove them.

SheetName: The name of the sheet in the workbook where the change must be made. This field supports only strings and String variables.

Output:

Inserted 3 rows at 7th position.

The screenshot shows the Microsoft Excel interface with the 'Data' tab selected in the ribbon. The ribbon includes options like 'Get Data', 'Refresh All', 'Queries & Connections', 'Sort', and 'Filter'. The spreadsheet below has columns labeled A through I. The first row (row 1) is highlighted in yellow and contains the following data:

	A	B	C	D	E	F	G	H	I
1	OrderDate	Region		Rep	Item	Units	Unit Cost	Total	
2	09-10-2015	Central		Gill	Pencil	7	1.29	9.03	
3	10-31-15	Central		Andrews	Pencil	14	1.29	18.06	
4	5-14-15	Central		Gill	Pencil	53	1.29	68.37	
5	12-12-2014	Central		Smith	Pencil	67	1.29	86.43	
6	04-10-2015	Central		Andrews	Pencil	66	1.99	131.34	
7									
8									
9									
10	4-18-14	Central		Andrews	Pencil	75	1.99	149.25	
11	07-12-2014	East		Howard	Binder	29	1.99	57.71	
12	01-06-2014	East		Jones	Pencil	95	1.99	189.05	
13	5-22-14	West		Thompson	Pencil	32	1.99	63.68	
14									
15									
16									
17									
18									
19									

The bottom of the window shows the 'Sheet1' tab, and the 'Orders' tab is selected in the 'Pivot' section.

Insert/Delete Columns Activity:

Adds or removes a specified number of columns at a certain position.

The screenshot shows the 'Excel Application Scope' dialog box. The 'Do' section contains a list of activities, with 'Inserting Column' selected. The 'Inserting Column' activity configuration is shown in the right pane, with the following settings:

- DisplayName:** Inserting Column
- Destination:**
 - NoColumns: 1
 - Position: 3
- Input:**
 - ChangeMode: Add
 - SheetName: "Orders"
- Misc:**
 - Private: ☐

NoColumns: The number of columns you wish to add or remove. This field supports only integers or Int32 variables.

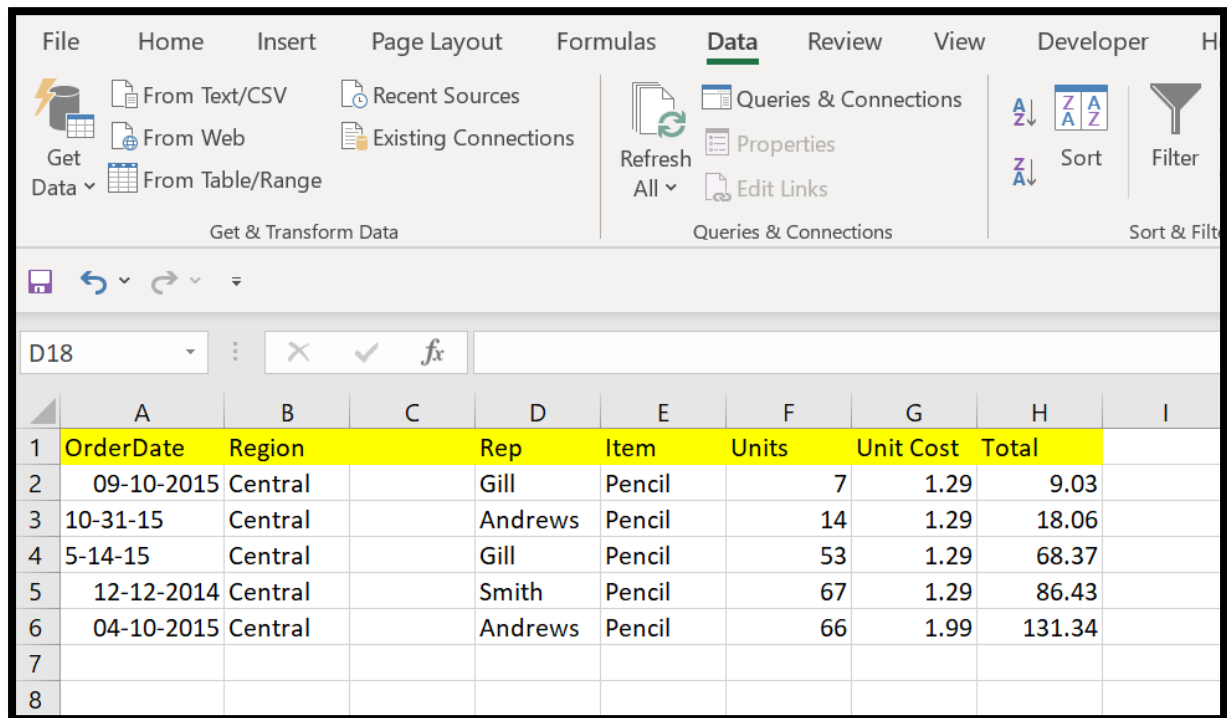
Position: The column where the insertion or removal begins. This field supports only integers or Int32 variables.

ChangeMode: Selects whether the activity adds or removes columns. Selecting Add will add columns to the document, while selecting Remove will remove them.

SheetName: The name of the sheet in the workbook where the change must be made. This field supports only strings and String variables.

Output:

Inserted one column at 3rd position.



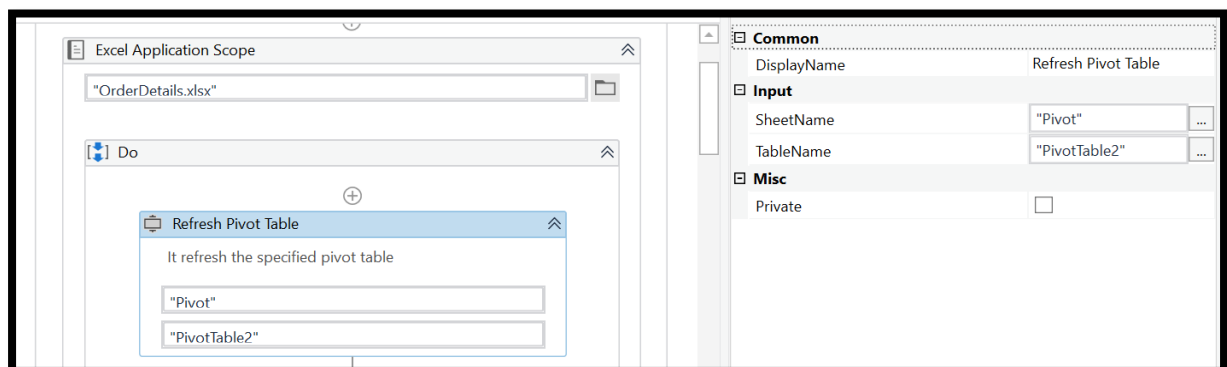
	A	B	C	D	E	F	G	H	I
1	OrderDate	Region		Rep	Item	Units	Unit Cost	Total	
2	09-10-2015	Central		Gill	Pencil	7	1.29	9.03	
3	10-31-15	Central		Andrews	Pencil	14	1.29	18.06	
4	5-14-15	Central		Gill	Pencil	53	1.29	68.37	
5	12-12-2014	Central		Smith	Pencil	67	1.29	86.43	
6	04-10-2015	Central		Andrews	Pencil	66	1.99	131.34	
7									
8									

Refresh Pivot Table Activity:

Refreshes a specified pivot table.

SheetName: The name of the sheet in the workbook where you want to refresh the pivot table. This field supports only strings and String variables.

TableName: The name of the pivot table that you want to refresh. This field supports only strings and String variables.



To create pivot table in excel select the data in excel then go to insert tab click PivotTable icon and select FromTableRange and choose the existing workbook option and give the

location where we have to create the pivot table within same sheet. We can select column names also.

The screenshot shows an Excel spreadsheet with a PivotTable. The PivotTable is located in the range A1:L19. The PivotTable Fields task pane is visible on the right side of the screen, showing the 'Row Labels' and 'Sum of Total' fields.

OrderDate	Region	Rep	Item	Units	Unit Cost	Total
09-10-2015	Central	Gill	Pencil	7	1.29	9.03
10-31-15	Central	Andrews	Pencil	14	1.29	18.06
5-14-15	Central	Gill	Pencil	53	1.29	68.37
12-12-2014	Central	Smith	Pencil	67	1.29	86.43
04-10-2015	Central	Andrews	Pencil	66	1.99	131.34
4-18-14	Central	Andrews	Pencil	75	1.99	149.25
07-12-2014	East	Howard	Binder	29	1.99	57.71
01-06-2014	East	Jones	Pencil	95	1.99	189.05
5-22-14	West	Thompson	Pencil	32	1.99	63.68
9-27-15	West	Sorvino	Pen	76	1.99	151.24
3-15-14	West	Sorvino	Pencil	56	2.99	167.44
11-17-15	Central	Jardine	Binder	11	4.99	54.89
12-21-15	Central	Andrews	Binder	28	4.99	139.72
02-09-2014	Central	Jardine	Pencil	36	4.99	179.64
3-24-15	Central	Jardine	Pen Set	50	4.99	249.5
05-05-2014	Central	Jardine	Pencil	90	4.99	449.1
06-05-2014	Central	Indi	Pencil	90	4.99	449.1
07-05-2014	North	Dine	Pencil	90	4.99	449.1
Grand Total						3062.65

Join DataTables Activity:

Combines rows from two tables by using values common to each other, according to a Join rule, which is specified in the JoinType property.

This wizard helps configure the properties of the Join Data Tables activity. It can be opened by using the Join Wizard button.

DataTable1:

	A	B	C	D	E	
1	Emp ID	Name	Job Location			
2	100001	Peter	New York			
3	100002	Mary	San Jose			
4	100003	John	Chicago			
5	100004	David	Houston			
6	100005	James	Dallas			
7	100006	Chris	New York			
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Sheet1 Sheet2 Tables Sheet4 **Sheet3**

DataTable2:

	A	B	C	D	E	
1	Emp ID	Gender	Blood Gro	Weight		
2	100001	Male	A	68		
3	100002	Female	O	52		
4	100003	Male	B+	72		
5	100004	Male	AB	85		
6	100005	Male	A	69		
7	200005	Female	AB	55		
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Sheet1 Sheet2 Tables **Sheet4** Sheet3

Input DataTable1: The DataTable variable containing the first table you want to use.

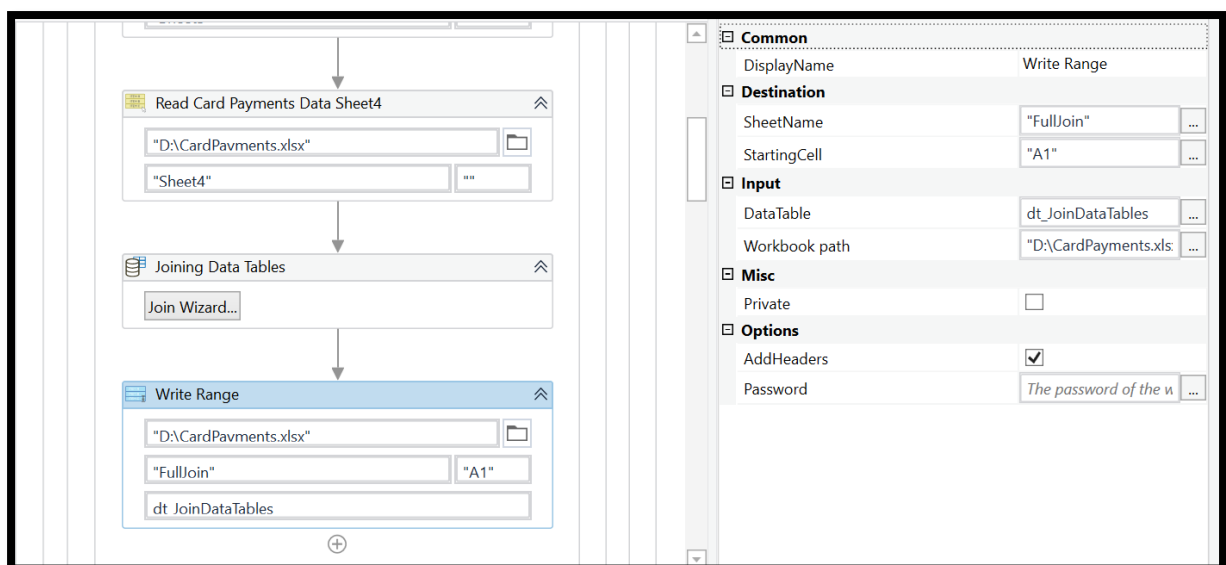
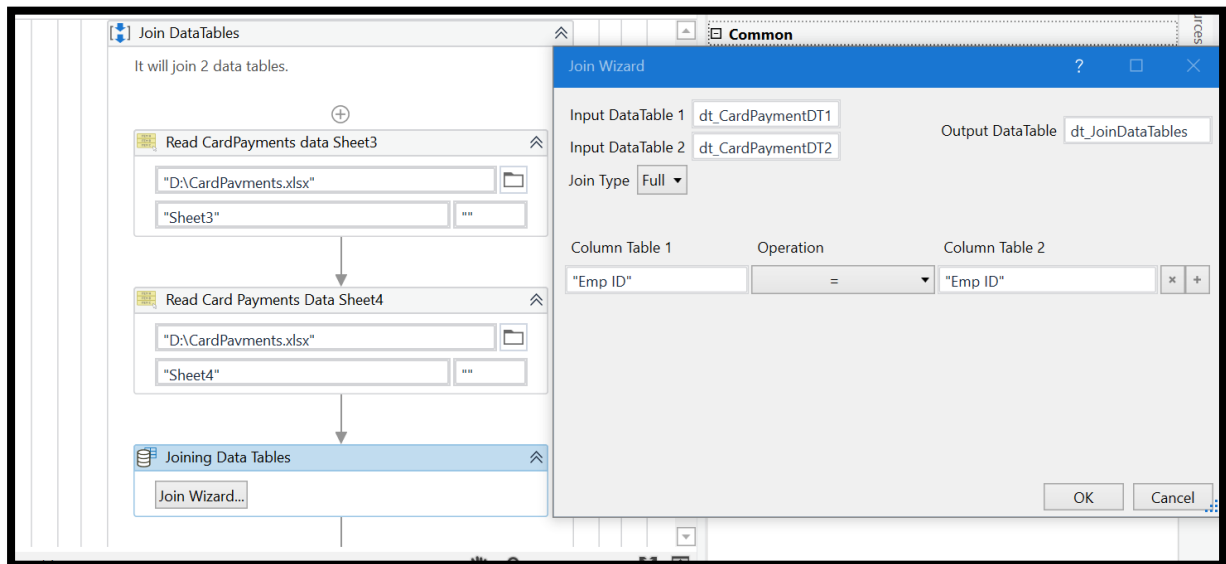
Input DataTable2: The DataTable variable containing the second table you want to use.

Output DataTable: The DataTable variable in which we want to store the resulting table.

Join Type: The type of Join operation we want to use. JoinTypes are Full, Inner, Left.

Full Join:

Full: Keep all rows from DataTable1 and DataTable2, regardless of whether the join condition is met. Null values are added into the rows from both tables that don't have a match.



Output:

	A	B	C	D	E	F	G	H
1	Emp ID	Name	Job Location	Emp ID_1	Gender	Blood Group	Weight	
2	100001	Peter	New York	100001	Male	A	68	
3	100002	Mary	San Jose	100002	Female	O	52	
4	100003	John	Chicago	100003	Male	B+	72	
5	100004	David	Houston	100004	Male	AB	85	
6	100005	James	Dallas	100005	Male	A	69	
7	100006	Chris	New York					
8				200005	Female	AB	55	
9								
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Inner Join:

Keep all rows from DataTable1 and DataTable2 which meet the Join rule. Any rows that do not meet the rule are removed from the resulting table.

The screenshot shows the Alteryx interface with the following components:

- Read Card Payments Data Sheet4:** Input file "D:\CardPayments.xlsx" and sheet "Sheet4".
- Joining Data Tables:** Tool with "Join Wizard..." button.
- Write Range:** Output file "D:\CardPayments.xlsx", sheet "InnerJoin", and range "A1".
- Common Properties:**
 - DisplayName: Joining Data Tables
 - Input: DataTable1 (dt_CardPaymentDT1), DataTable2 (dt_CardPaymentDT2)
 - Misc: Private (unchecked)
 - Options: JoinType (Inner)
 - Output: DataTable (dt_JoinDataTables)

Output:

	A	B	C	D	E	F	G	H
1	Emp ID	Name	Job Locati	Emp ID_1	Gender	Blood Gro	Weight	
2	100001	Peter	New York	100001	Male	A	68	
3	100002	Mary	San Jose	100002	Female	O	52	
4	100003	John	Chicago	100003	Male	B+	72	
5	100004	David	Houston	100004	Male	AB	85	
6	100005	James	Dallas	100005	Male	A	69	
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Left Join:

Keep all rows from DataTable1 and only the values from DataTable2 which meet the Join rule. Null values are inserted into the column for the rows from DataTable1 that don't have a match in the DataTable2 rows.

The screenshot displays the Power Query Editor interface. On the left, the query steps are listed: 'Read Card Payments Data Sheet4', 'Joining Data Tables', and 'Write Range'. The 'Joining Data Tables' step is selected, showing a 'Join Wizard...' button. The 'Write Range' step is also visible, with fields for the file path 'D:\CardPayments.xlsx', the range 'A1', and the output table 'dt_JoinDataTables'. On the right, the 'Common' pane shows the configuration for the 'Joining Data Tables' operation. It includes the following settings:

- Common**: DisplayName: Joining Data Tables
- Input**: DataTable1: dt_CardPaymentDT1, DataTable2: dt_CardPaymentDT2
- Misc**: Private: ☐
- Options**: JoinType: Left
- Output**: DataTable: dt_JoinDataTables

Output:

	A	B	C	D	E	F	G	H
1	Emp ID	Name	Job Locati	Emp ID_1	Gender	Blood Gro	Weight	
2	100001	Peter	New York	100001	Male	A	68	
3	100002	Mary	San Jose	100002	Female	O	52	
4	100003	John	Chicago	100003	Male	B+	72	
5	100004	David	Houston	100004	Male	AB	85	
6	100005	James	Dallas	100005	Male	A	69	
7	100006	Chris	New York					
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InnerJoin LeftJoin

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