



Excel Automation

Excel Automation - Agenda




Excel vocabulary

-  Workbook, sheet, range, cell

Access modes

-  Excel application scope
-  Direct .xlsx file access

Excel activities

-  ReadRange, WriteRange, ReadCell, WriteCell
-  Relevant properties: AddHeaders, Starting Cell
-  ExecuteMacro

Best Practices

Q&A

Test

Online Resources

Excel Vocabulary

Workbook: a collection of spreadsheets, used for organizing tabular data.

Worksheet: a single spreadsheet that contains cells, organized by **Rows** and **Columns**

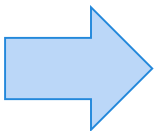
Cell: the basic storage unit for data in a worksheet (at the intersection point of a vertical column and a horizontal row)

Range: a group or block of cells in a worksheet

Access Modes

Open Workbook

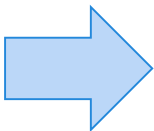
Use Excel Application



- Ms Office Excel Installed
- Share Files Between Processes
- Visible Real Time Changes

Common	
DisplayName	Open workbook
File	
Password	The passwo ...
WorkbookPath	"C:\Users\lc ...
Misc	
Private	<input type="checkbox"/>
Open	
UseExcelApplication	<input checked="" type="checkbox"/>
Output	
Workbook	InputExData ...

File Access Level



- Works Only for Xlsx Format
- No Need for Office
- Access Restriction
- Background automation

Excel Activities

Read Range activity

The screenshot displays the UiPath Excel Activities interface. On the left, the 'Process Get Prices' workflow is visible, containing an 'Open workbook' activity (set to 'ID.xlsx') and a 'Read product IDs' activity (highlighted in yellow). The 'Read product IDs' activity has two input fields: 'Workbook path. Text must be quoted' set to '"Sheet1"' and 'Range' set to '"A2:A6"'. Below these is an 'Assign' activity with 'aux' and '1'. On the right, the 'UiPath.Excel.Activities.ReadRange' properties window is open, showing the following configuration:

UiPath.Excel.Activities.ReadRange	
Search: <input type="text"/> Clear	
Common	
DisplayName	Read product IDs
File	
Password	The password of the workbook
WorkbookPath	Full path of the workbook
Input	
Range	"A2:A6"
SheetName	"Sheet1"
Misc	
Private	<input type="checkbox"/>
Options	
AddHeaders	<input type="checkbox"/>
Output	
DataTable	DataTable1
Use Workbook	
Workbook	Workbook1Ds

Open Workbook:

In: workbook path

Out: an workbook object

Read Range:

In: Workbook path **or**
an workbook object

Out: Data table

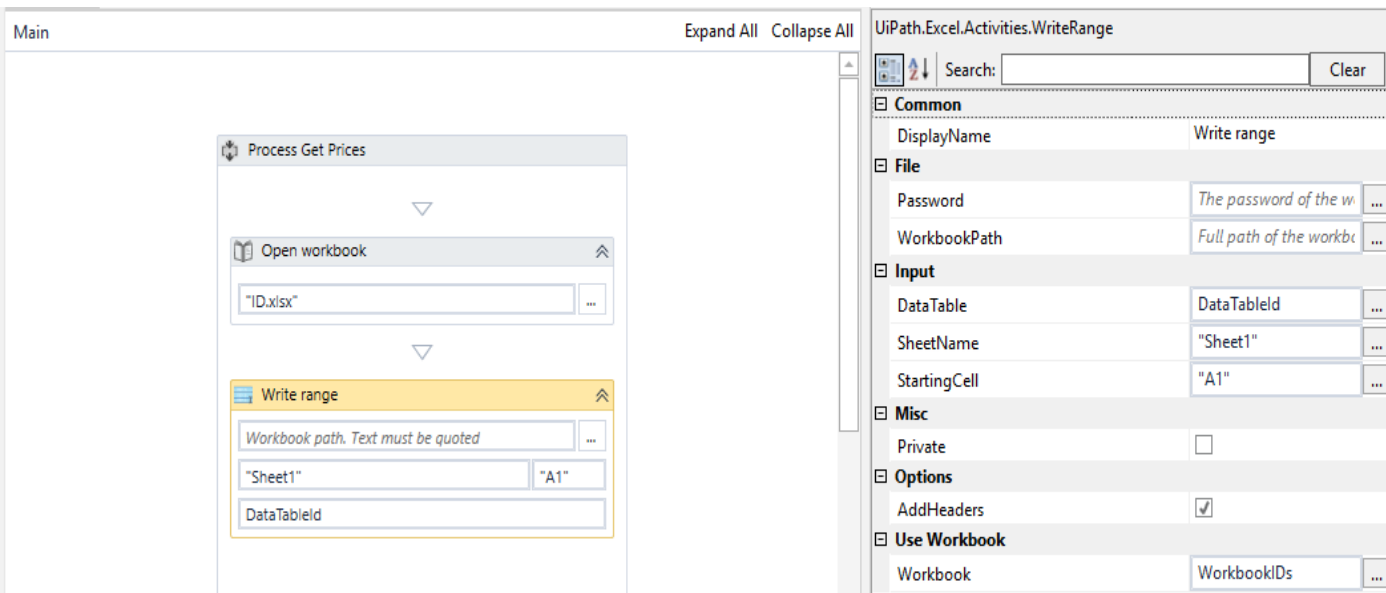
Must: SheetName

Optional: Range

Check "Add Headers" if
you want the first row
from your document to
become header for your
data table.

Excel Activities

Write Range activity



Open Workbook:

In: workbook path

Out: an workbook object

Write Range:

In: Data table

Out: Workbook path **or**
an workbook object

Must: SheetName and
the starting cell

Optional: Check "Add
Headers" if you want to
add the header for your
data table.

Excel Activities Summary

Activity Name	Read Range	Read Cell	Read Column	Read Row	Write range	Write cell
Input	Range SheetName WorkbookPath or Workbook object				Data Table	String
Output	Data Table	String	IEnumerable	IEnumerable	WorkbookPath or Workbook object	

Best Practice

You can access only xlsx files using UiPath Excel activities otherwise if you have a xls file you have to work with the Excel application.

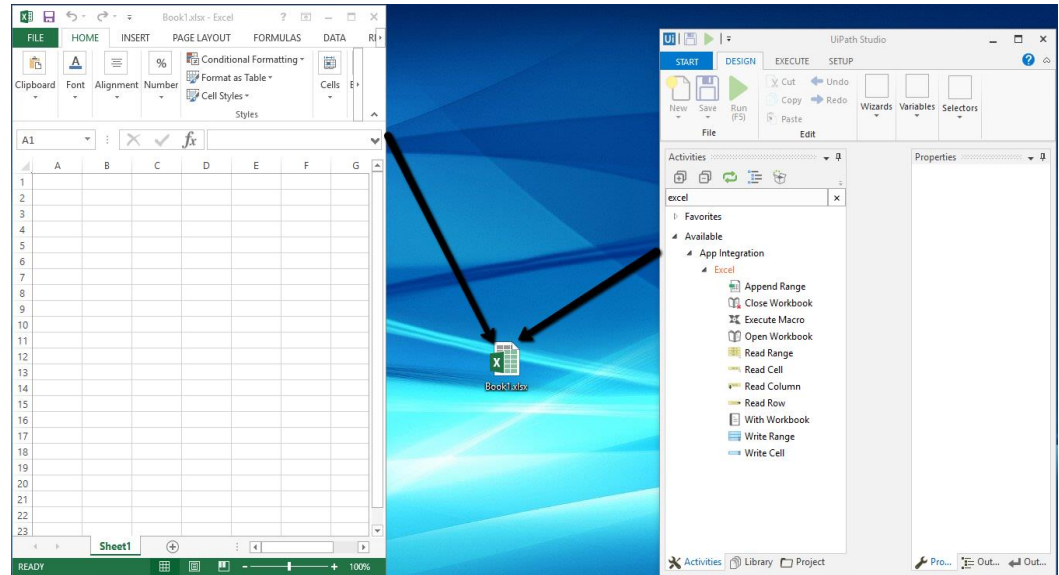
If you want to apply a formula over a cell you need to use Excel application.



Best Practice

The Excel file is a unique resource and this resource could not be used by 2 applications in the same time. You have two approaches:

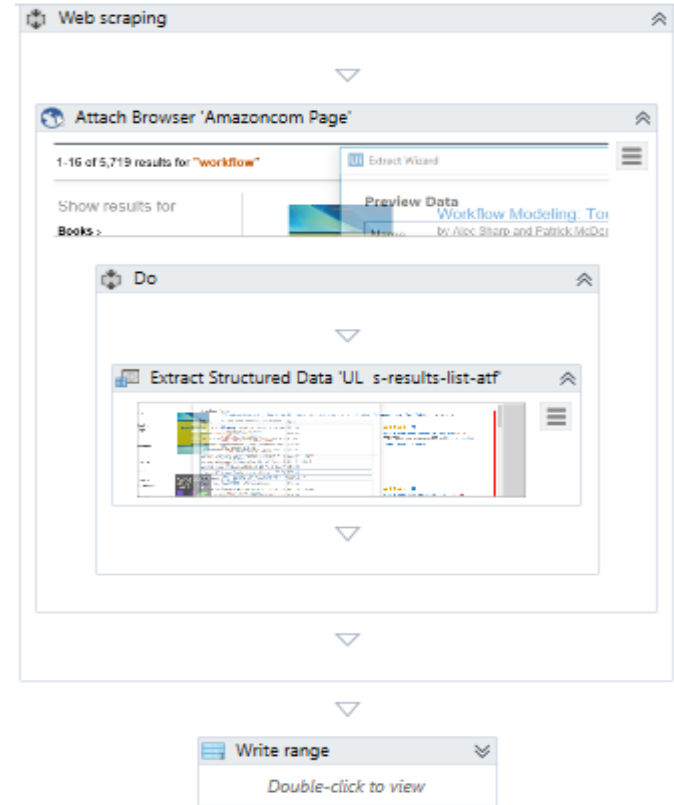
1. Open the workbook without checking “Use Excel Application”, in this case you are able to access the information from a xlsx file. There is no need to install MS Office.
2. Open the workbook with “Use Excel Application” checked. You will be able to see in real time the changes.



Practical Example

Extract the first page (title, price, rating) of [amazon.com](https://www.amazon.com) and save to a spreadsheet the items that have rating above 4.

1. Use Web Scraping to extract structured data
2. Save structured data into a data table
3. Write the data table into an Excel sheet



Practical Example

Read a range from Excel file and add to a new column the text “Match” to all rows that match a criteria

1. Iterate through the data table using “For each row” loop
2. If the items are the same write in the new column “Match”
3. Write the result in a new Excel sheet



Q&A



Test

Online Resources

 Excel Integration Approaches

<http://www.uipath.com/kb-articles/excel-integration-approaches>

 Compare Two Columns In Excel

<http://www.uipath.com/examples/compare-two-columns-in-excel>

 Delete Duplicate Rows

<http://www.uipath.com/examples/excel-automation-delete-duplicate-rows>

 Remove Excel Rows That Contain Keywords

<http://www.uipath.com/examples/excel-automation.remove-rows-that-contain-keywords>