Excel Automation in Studio X

StudioX :

StudioX is a complete solution for automating business applications. Studio X with the goal of a robot for every employee , assists in day-to-day tasks, taking away the tedious ,repetitive work and allowing to focus on the most productive and creative areas.

With StudioX we are bringing automation to the masses. Citizen developers and regular business users will be able to build and run their own automations with the help of this new profile in UiPath Studio.

General Scenarios:

- Data Movement Between Applications
- Filling Out templates
- File Validation
- Merging/Splitting Excel Spreadsheets
- PowerPoint interaction

Technology Focused Scenarios:

- Microsoft Excel, Outlook, Word & PowerPoint
- Desktop and Web Application
- PDF Files
- File Movement

How to Install StudioX?

To install software you have to navigate to the Browser https://Cloud.UiPath.com Portal. Once you're on the portal you will get installer file with name Install UiPath Studio and select UiPath StudioX profile with that you will able to install the UiPath StudioX in your system.

When you're using the Studio profile, you can switch to StudioX at any time from Studio backstage view by selecting **Home > Settings > License and Profile > View or Change Profile.**

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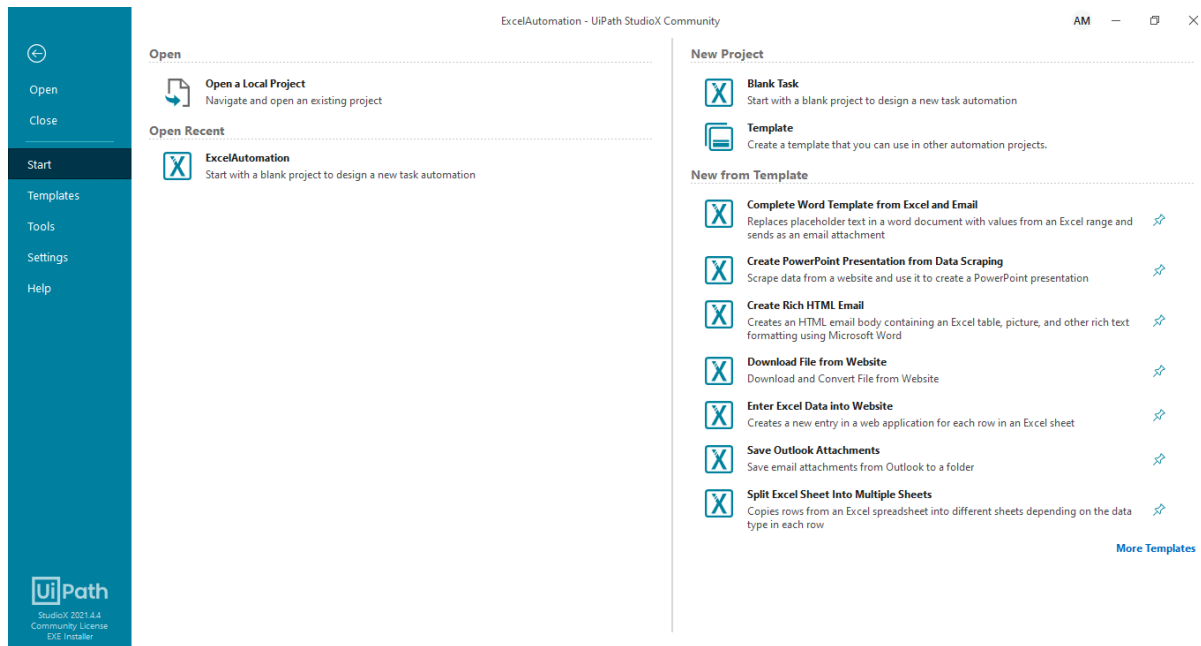
Common Activities in UiPath StudioX:

This include activities that add data such as credentials and downloaded files to the automation, control the flow of the task automation by determining the conditions under which other activities are executed, and help troubleshoot the automation by generating specific messages with information about the outcome of other activities. These common activities can be used with any type of automation.
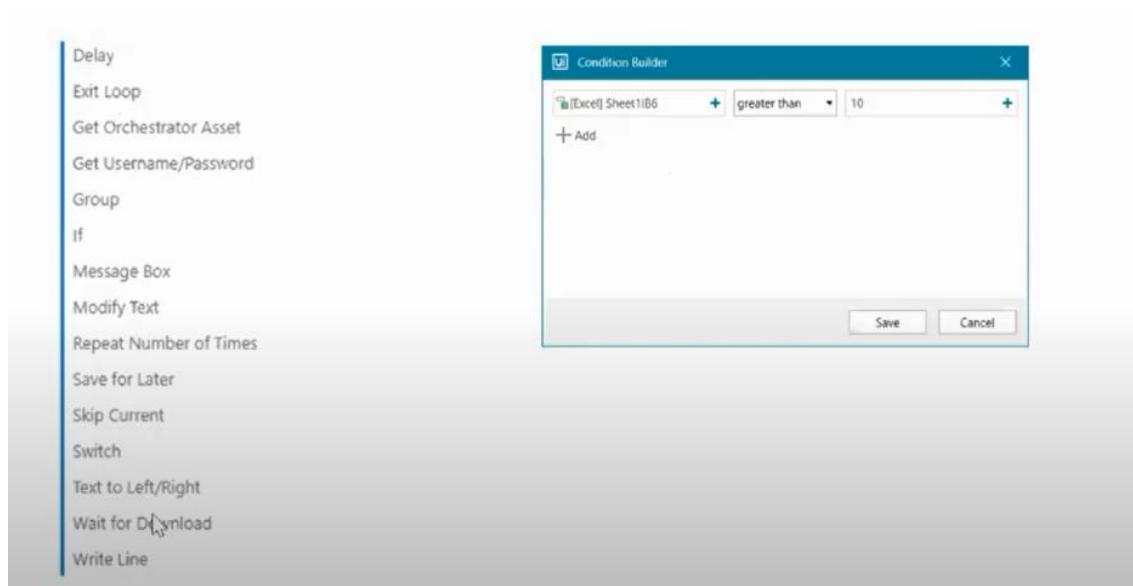
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Decision and Iterations:

At some point in a task, a decision needs to be taken because the Robot has reached a step where one or more options are available.

Depending on the answer given, the Robot will follow certain steps and ignored others. Without decisions, Different paths would not be available for the Robot. This means that the solutions created would not be realistic.

At another point in your task, you will need to repeat the same actions for all files in a folder, for all the rows in Excel file, or for all emails in an Outlook folder.

UiPath StudioX comes with 2 solutions for decisions and iterations: If and For Each, each represented by different Activity card.

## If Activity   - To take Decisions based on conditions:

The **If** activity contains a statement and two conditions. The first condition (the activity in the **Then** section) is executed if the statement is true, while the second one (the activity in the optional **Else** section) is executed if the statement is false.

If activity is used when we want the Robot to choose between two options, under a certain condition.

The condition can be also formulated as a question: "is cell B4 empty/".

If the answer is true, then yes, the Robot will perform the following actions, else, the answer is false (the cell B4 is not empty), meaning the Robot will perform another set of actions.

This type of activity works only when the answer to the questions is Yes or No, or True and False.
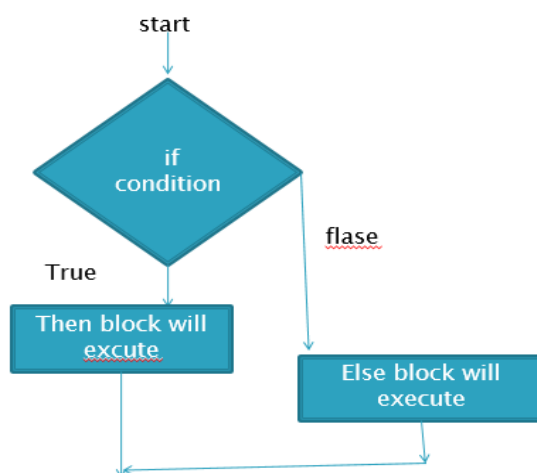
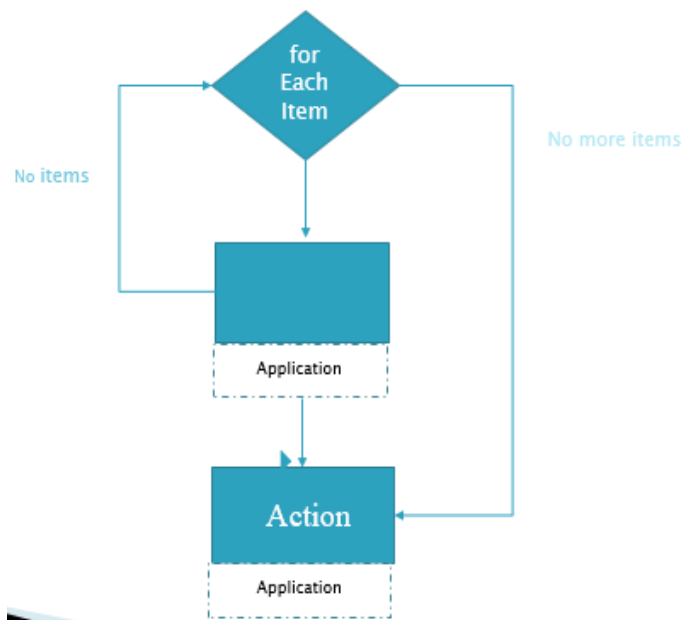# Excel Automation in Studio X

For Each Activity:

Studio X provides 3 types of For Each activities that interact with different applications:

Excel For Each Row - Executes one or more activities for each row in a range, table or sheet.

We use these activity when we are working with the range or sheet with multiple rows and we want to repeat one or more activities for every row.

Outlook For Each Email - Executes one or more activities for each email in an outlook folder or in a selection of messages.

System For Each File In Folder - Executes an activity or series of activities on each file in a specified folder.

Automating With Excel

Excel Add- in had to be installed in studioX .Click on it and install on your system.

StudioX currently supports only files with the .xlsx and .xlsm extensions.

Excel Automation in Studio X
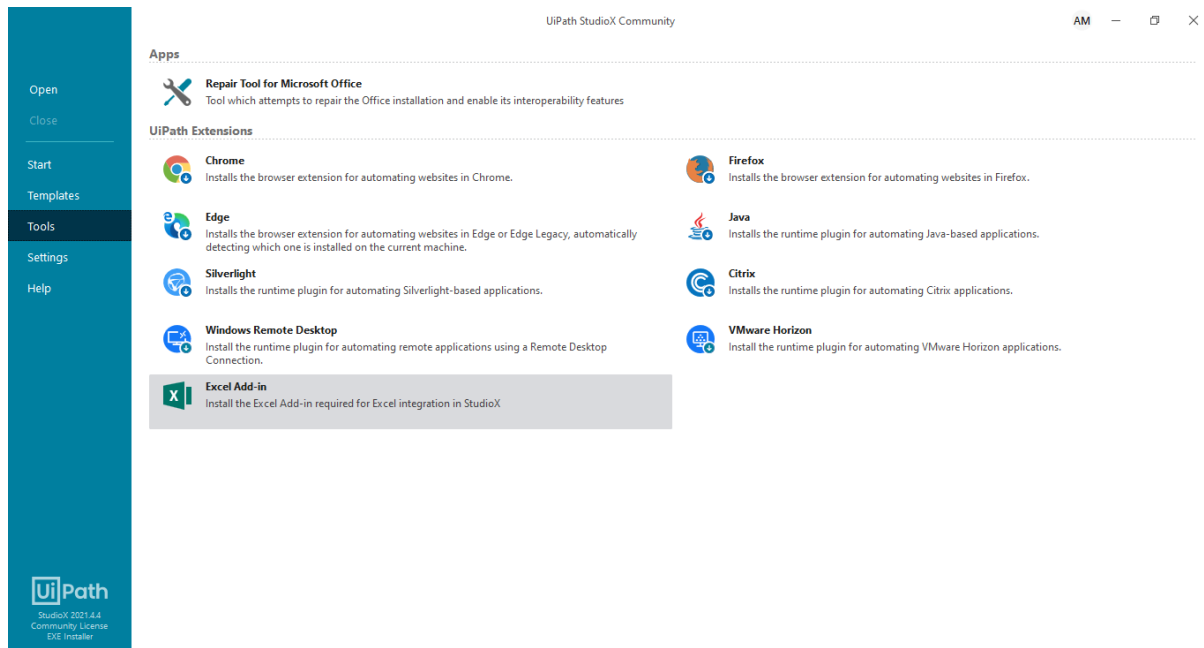
Excel Automation:

Start with adding a Use Excel file Resource and selecting the .xlsx file to work with. You can build automation that uses data from that file without even opening Excel.

The **sheets, tables, named ranges,** and **named cells in the file** and those in the Excel workspace can be selected directly from StudioX when configuring activities.

StudioX comes pre-installed with a Project Notebook.

Excel Automation in Studio X
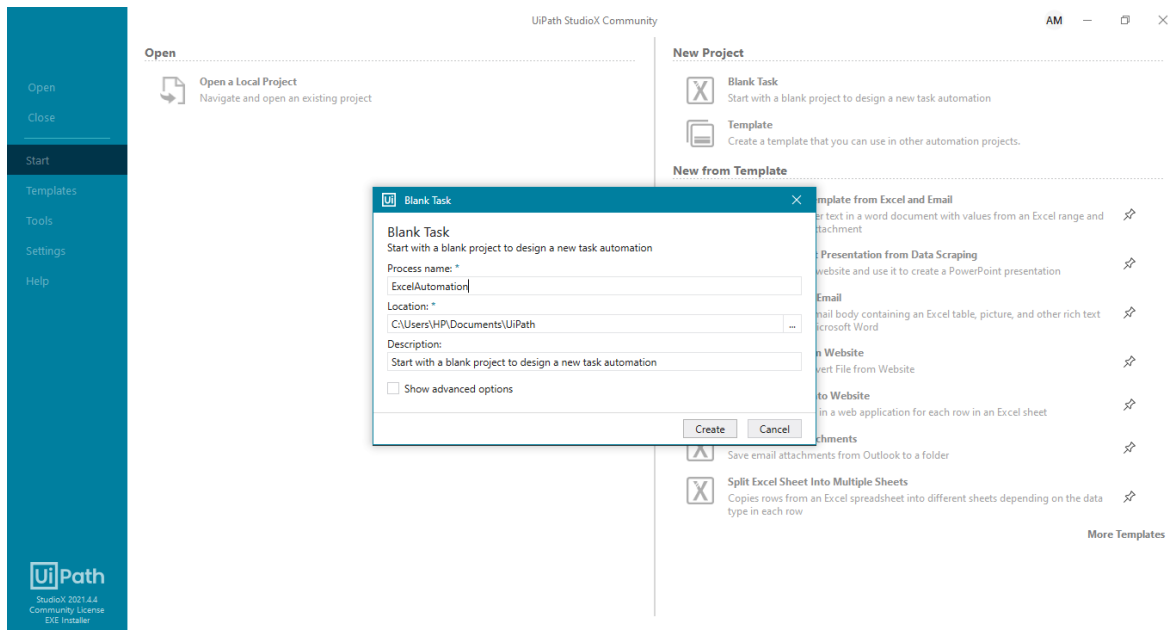
Use Excel Activity:

We can give the **Reference** name to avoid confusion while development.

We can **save changes** by selecting the check box save changes.

If file is not available with this **create if not exits** option it is going to create an excel file and work on it.

Template File - when you need to use a different file at design time, select this option, and then indicate a file on your computer with a similar format to the file to automate.
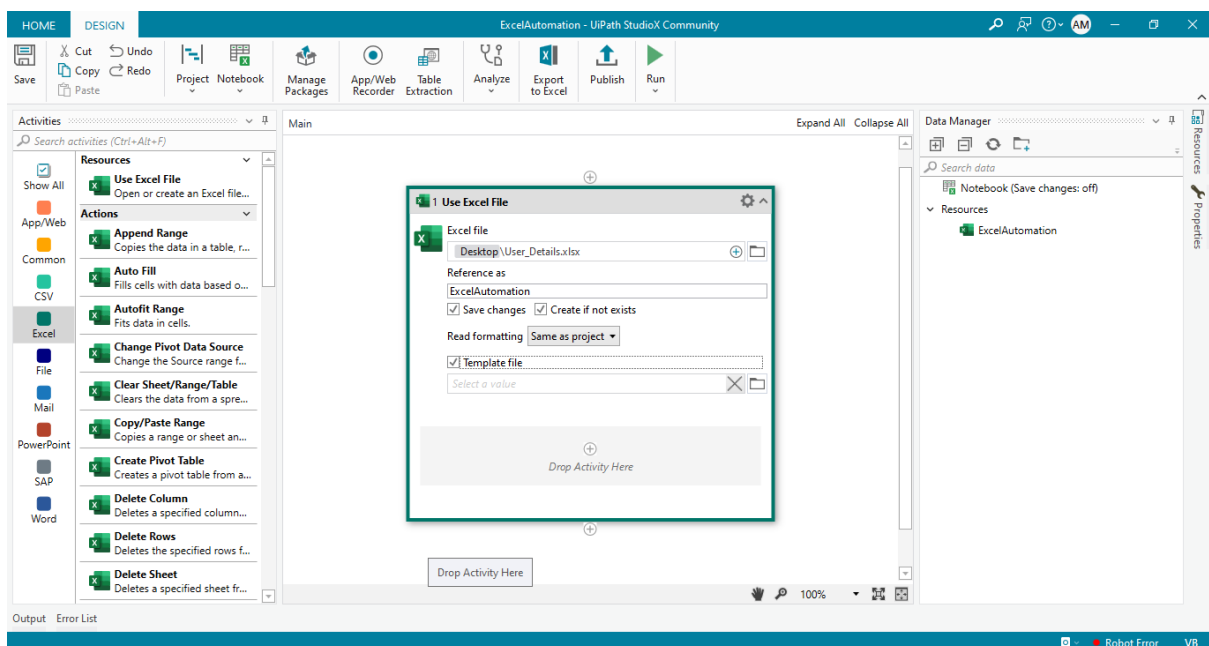
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These are the different activities that can help you to perform and make sure that you put all your actions inside the Use Excel File container otherwise you will get an error.

Use Case:

Multiple Iteration in Excel:

Concept Used – For Each –If/Excel

Steps:

1. Open Excel File User Details.xlsx

2. Check If there is a password already generated or not.

   If there is not, then:

   i.   Set default text
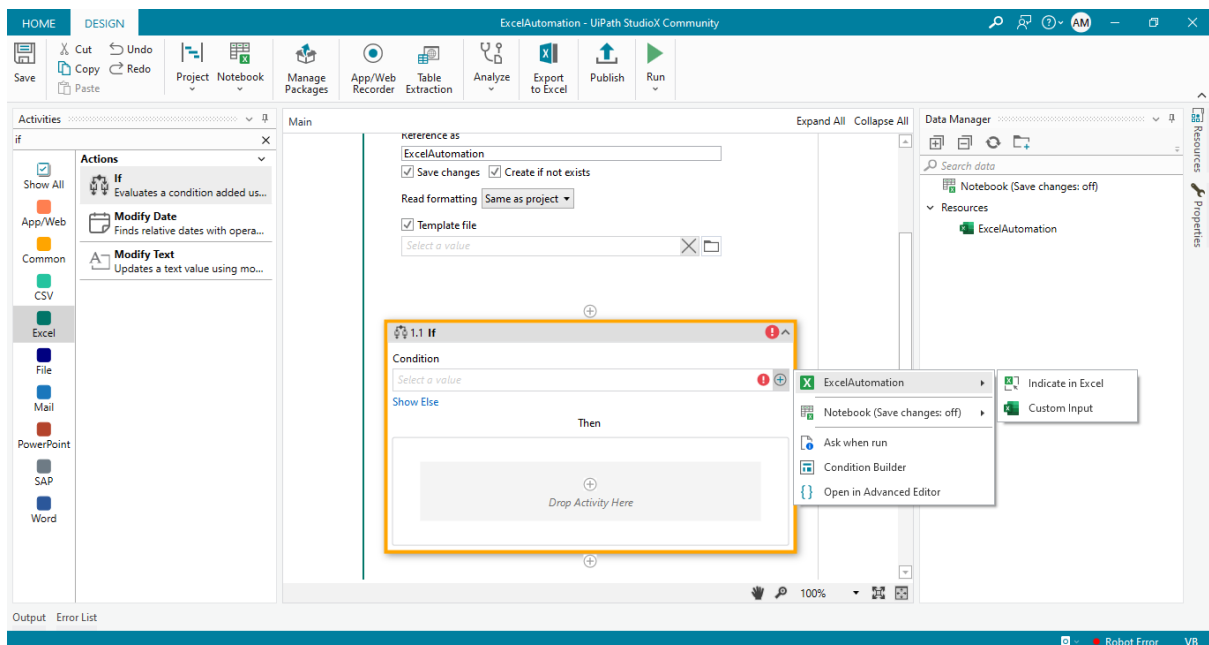
While using if activity in condition click on plus '+' it will show your reference name your using.ExcelAutomation (reference name) when you click it provides two options:

1. Indicate in Excel - It reads one row or one cell which you indicate.

2. Custom Input- It reads entire range or table.

Excel Automation in Studio X
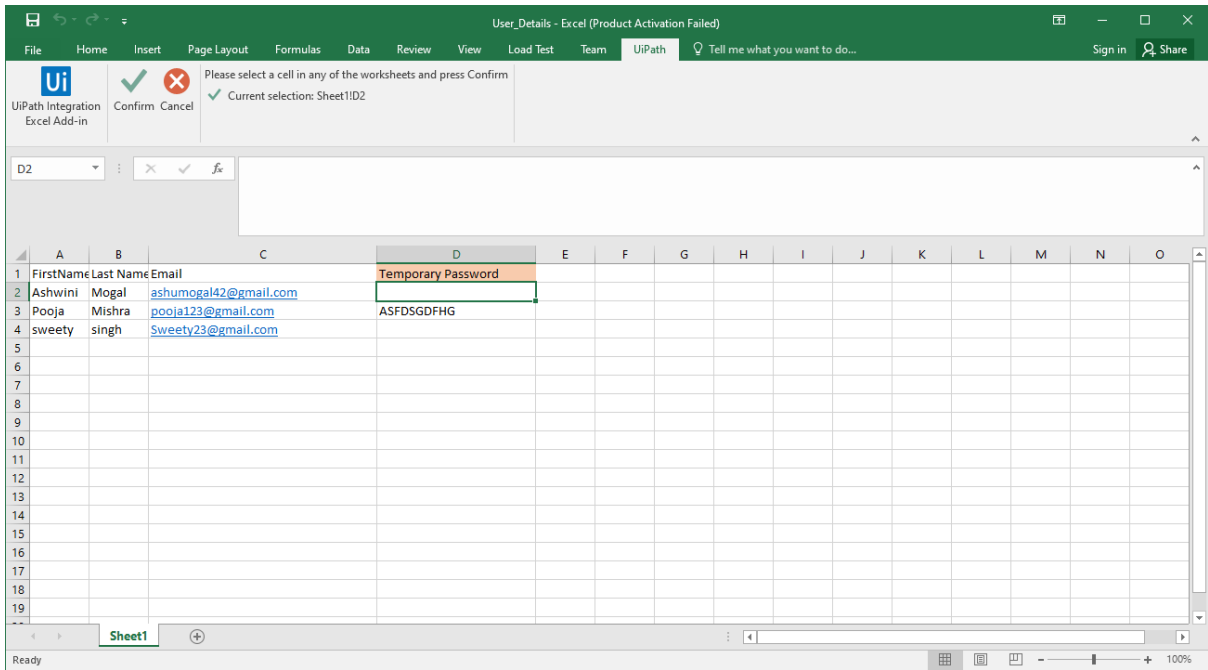
Adding condition by Clicking on '+' select >**Condition builder**
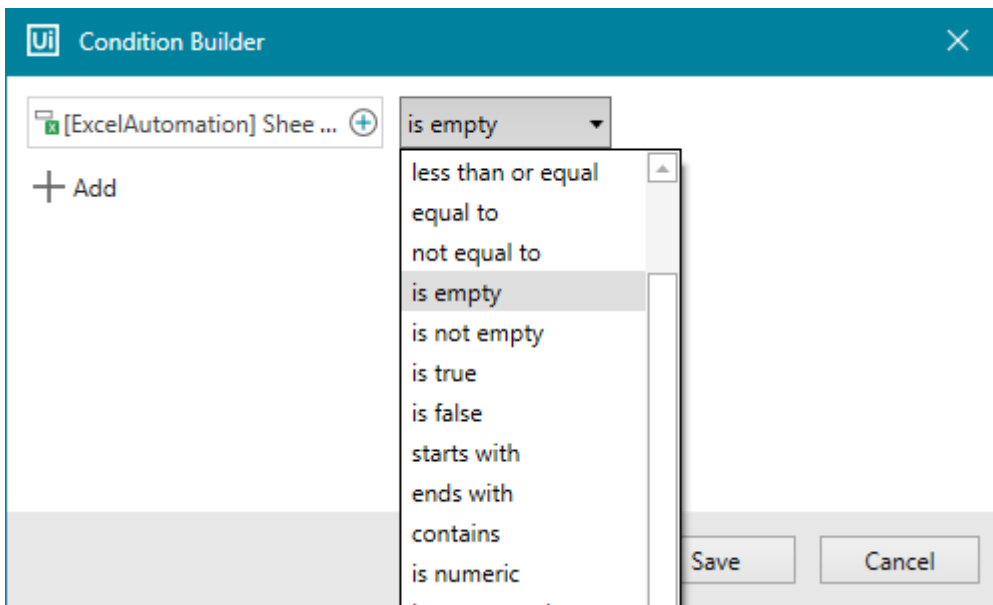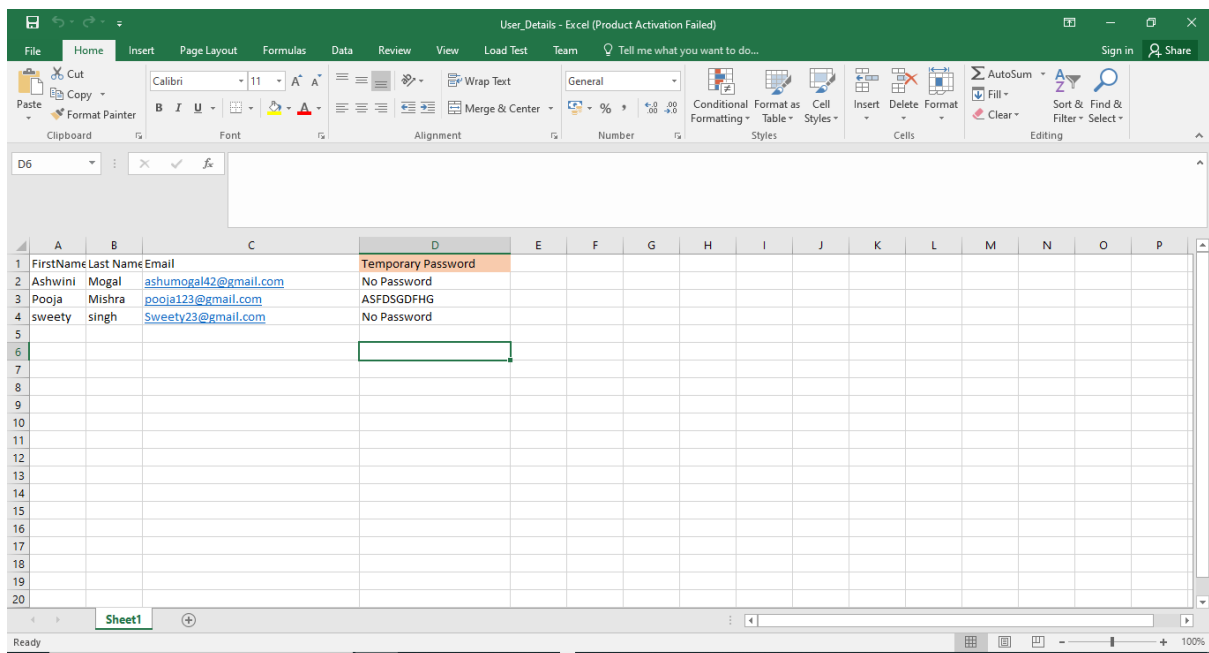
Excel Automation in Studio X
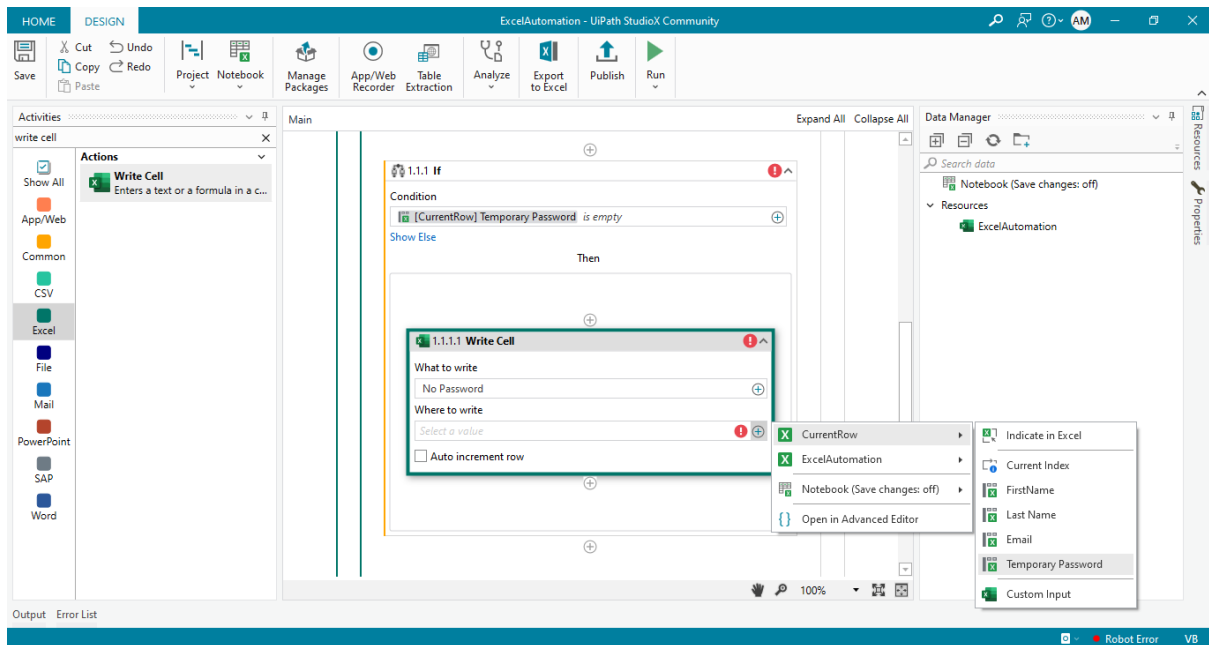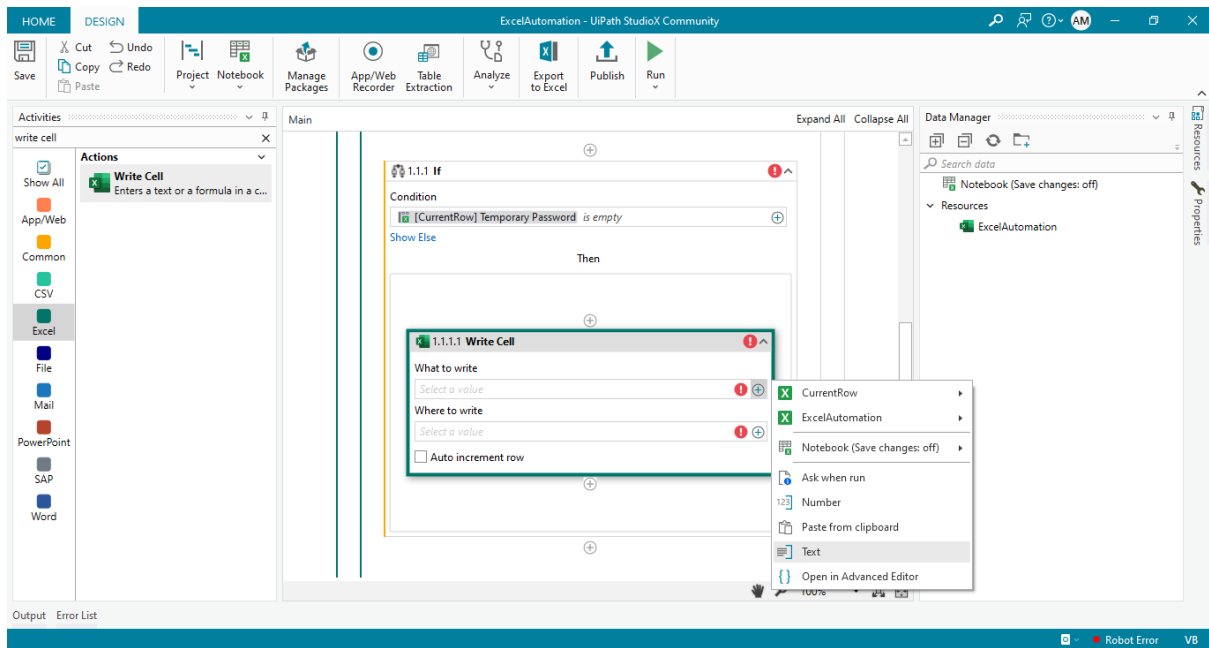
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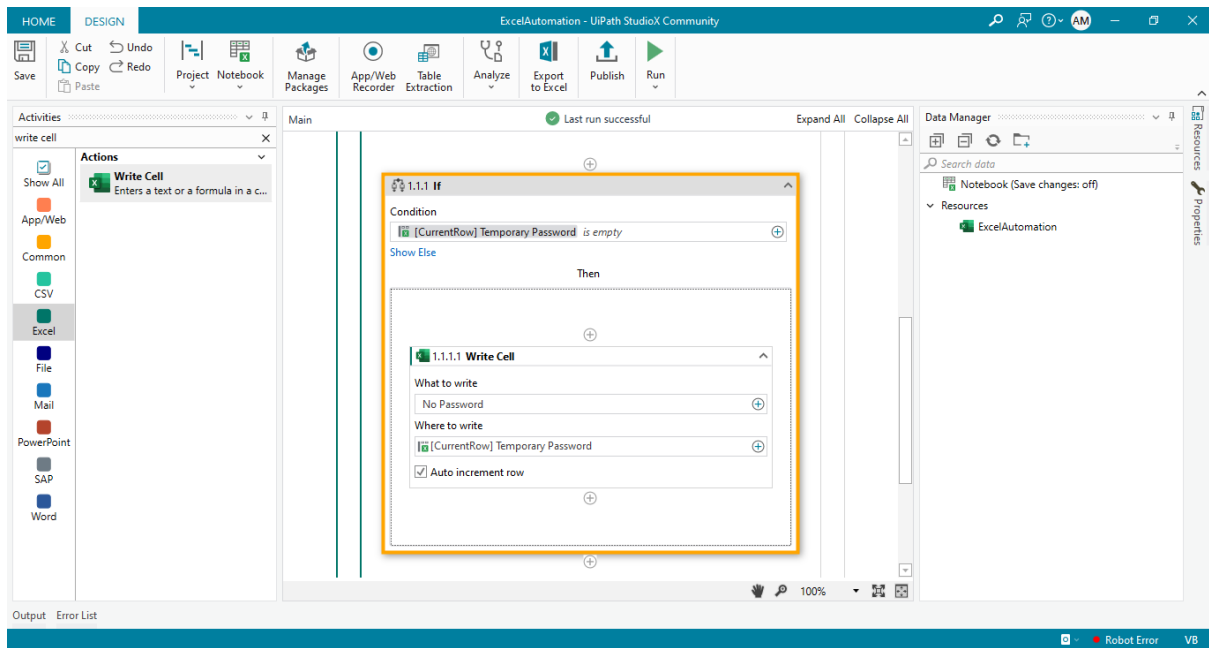

Expected Output:

Project Notebook:

The Project Notebook is an Excel workbook that you can use as scratchpad.

It's a separate file from the workbooks you want to work with in your automation and it's where you keep formulas and manipulate Excel data.
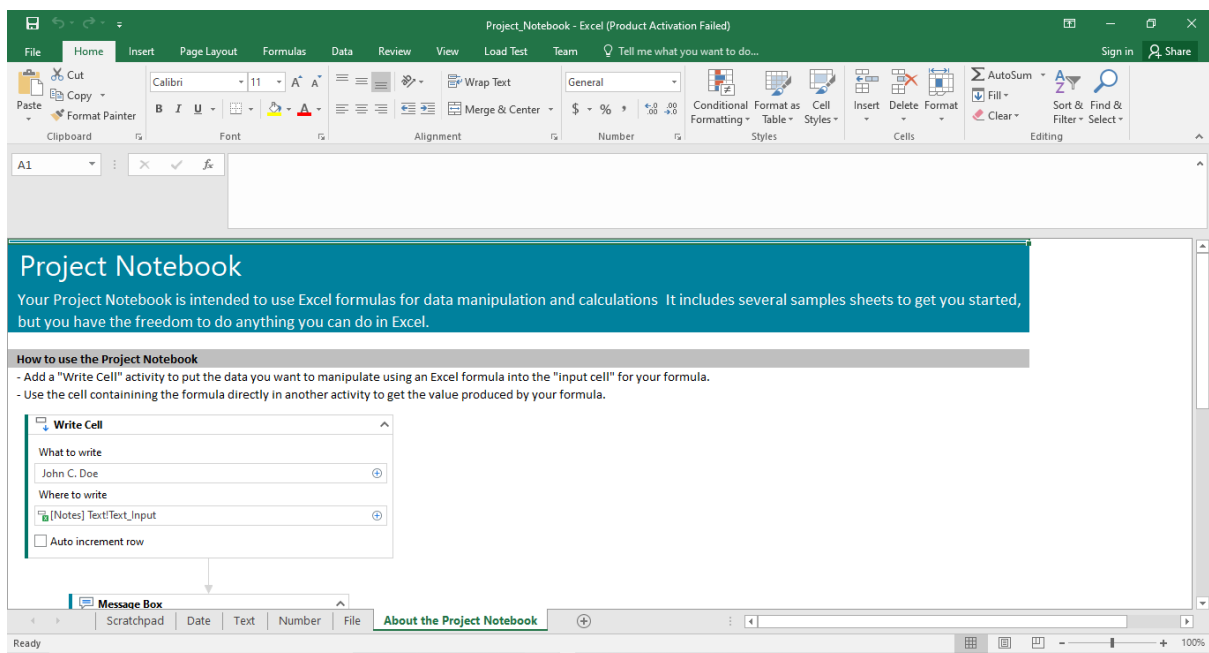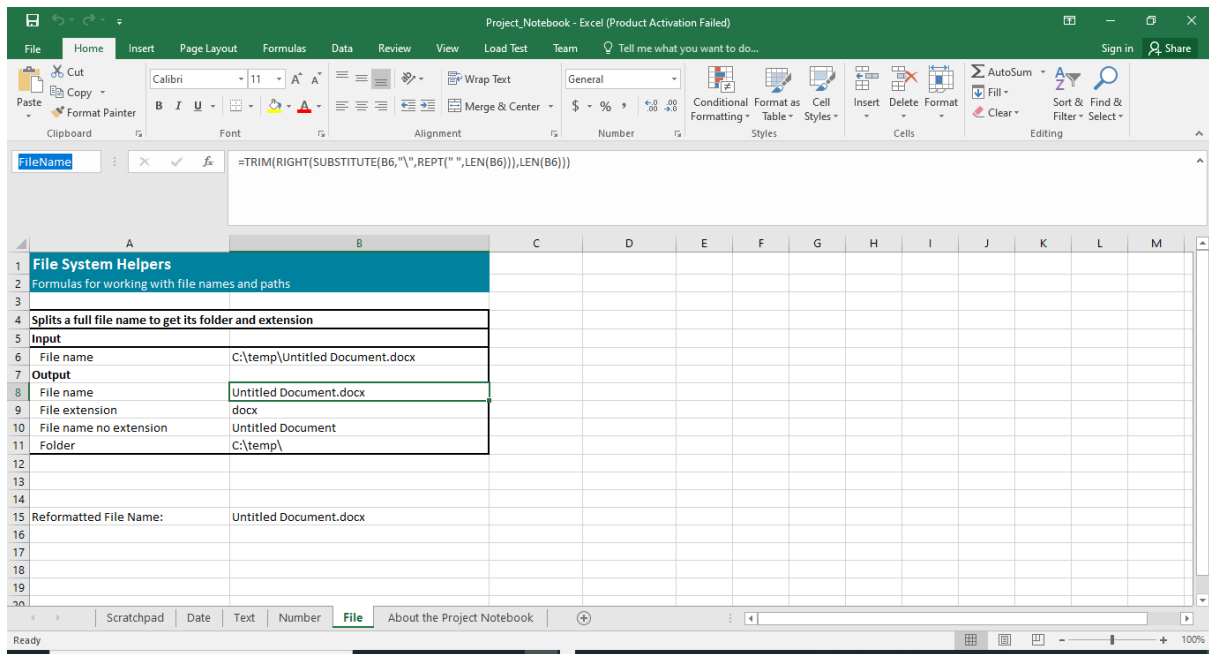
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Need for Project Notebook

- The Notebook offers quick access to predefined Dates, Text, Number and File formulas which you can use for data transformation in your StudioX Excel automation.

- It also act as repository for any other custom formulas you need and want to use in your automation.
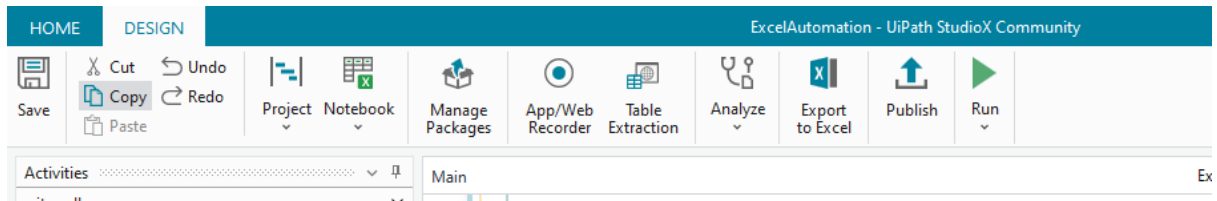
To access it go to the **Design** tab in your automation project and select the **Open Project Notebook** option.
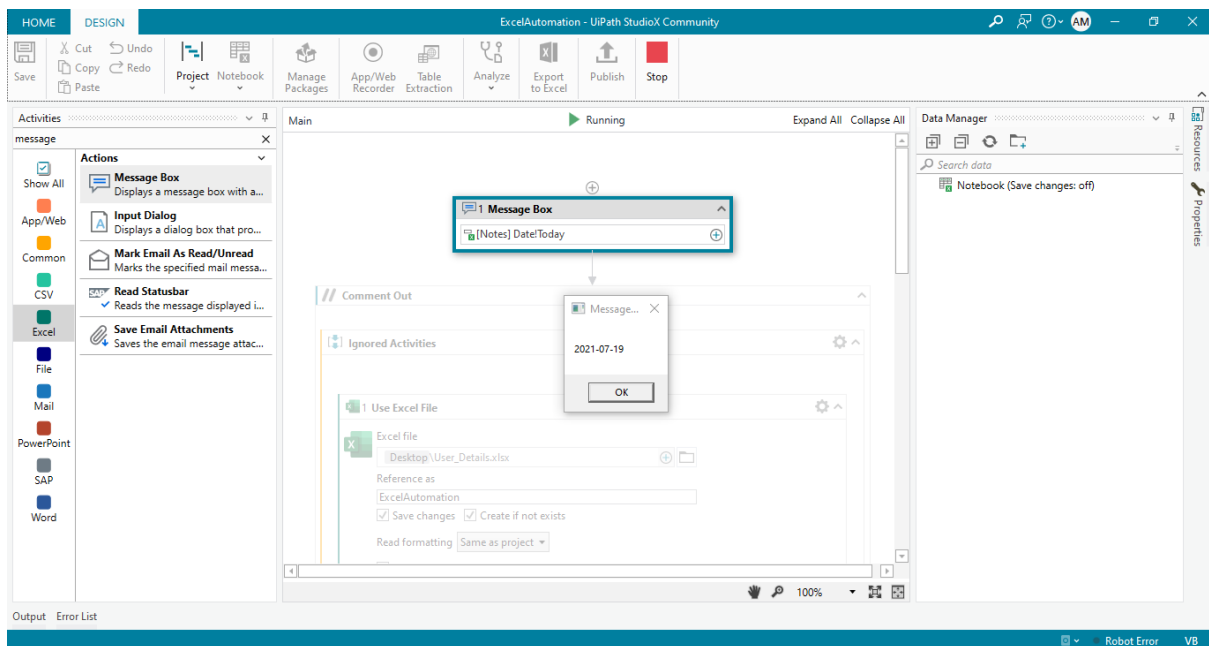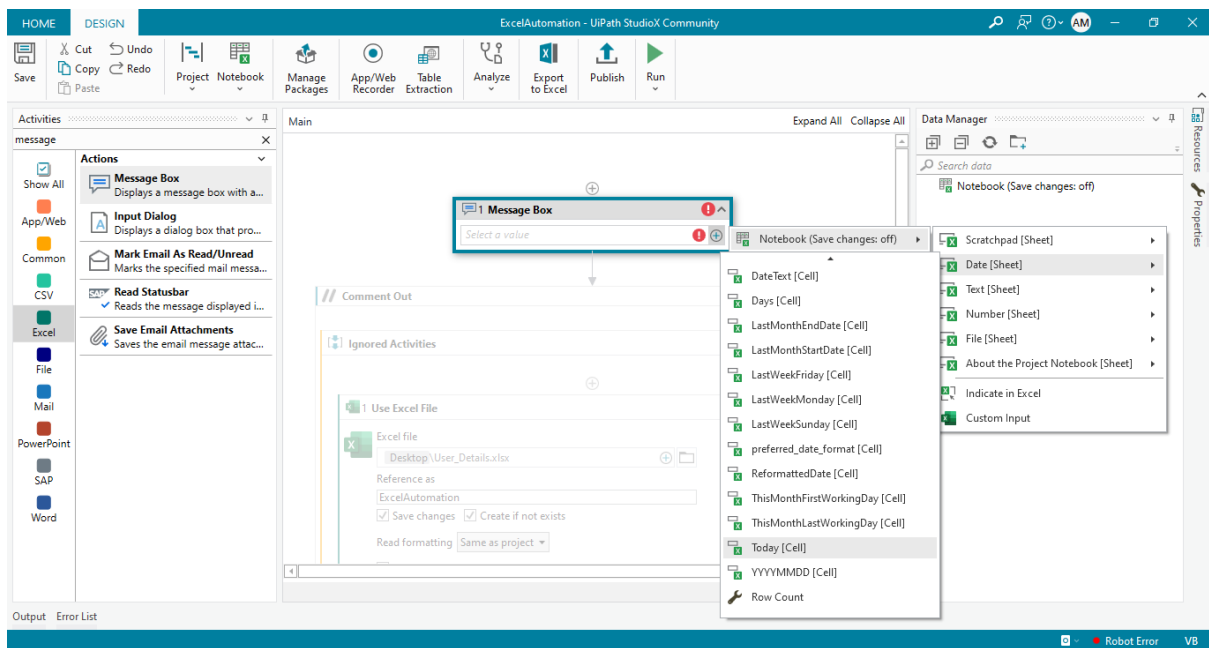
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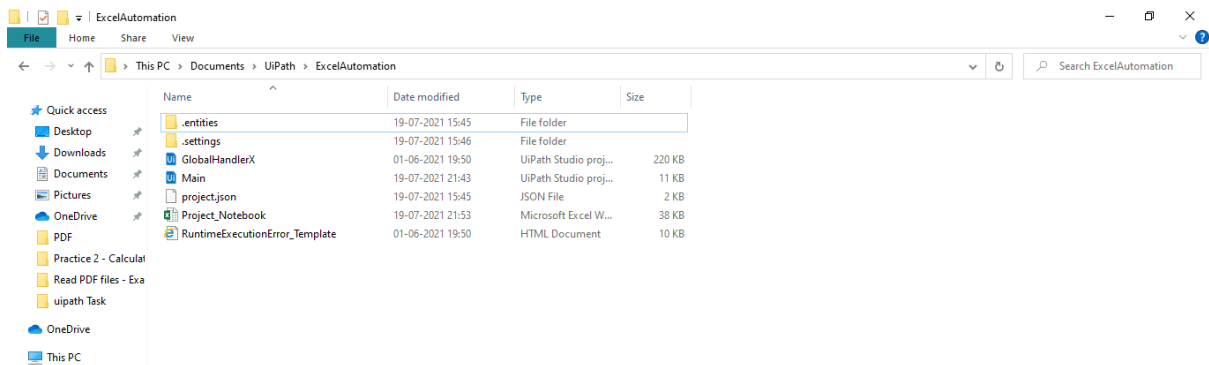# Example: Fetching Todays Date using Project Notebook:
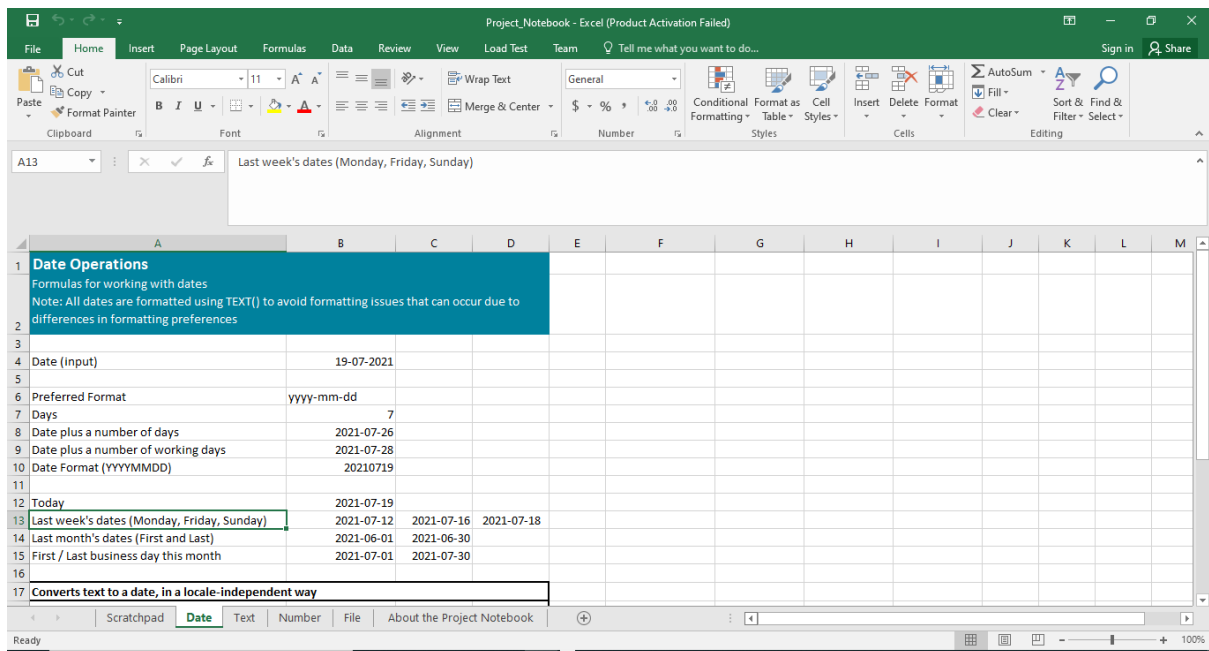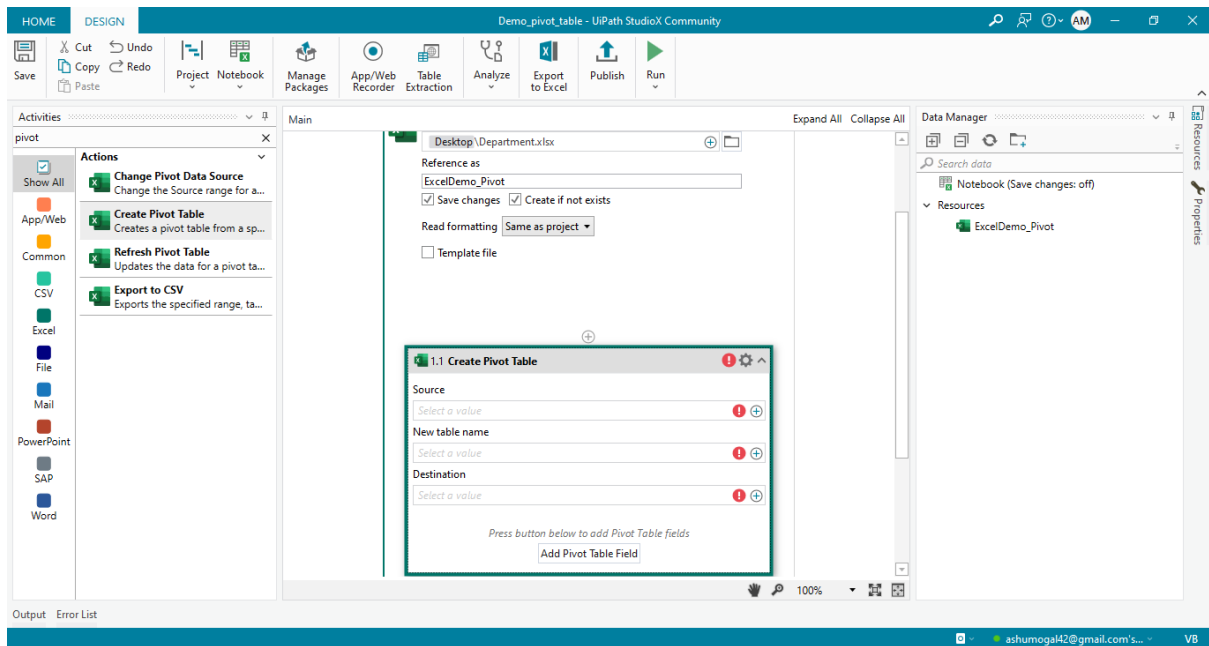
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Selecting **Notebook > Date [Sheet1] > Today [cell]**
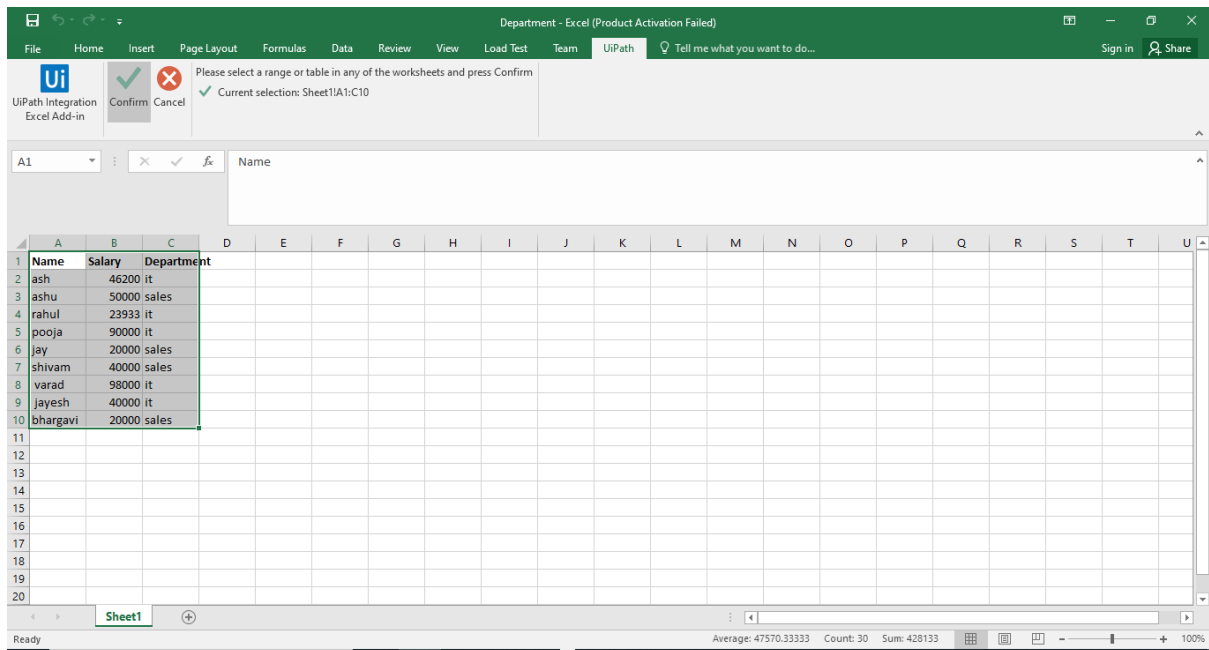
Excel Automation in Studio X
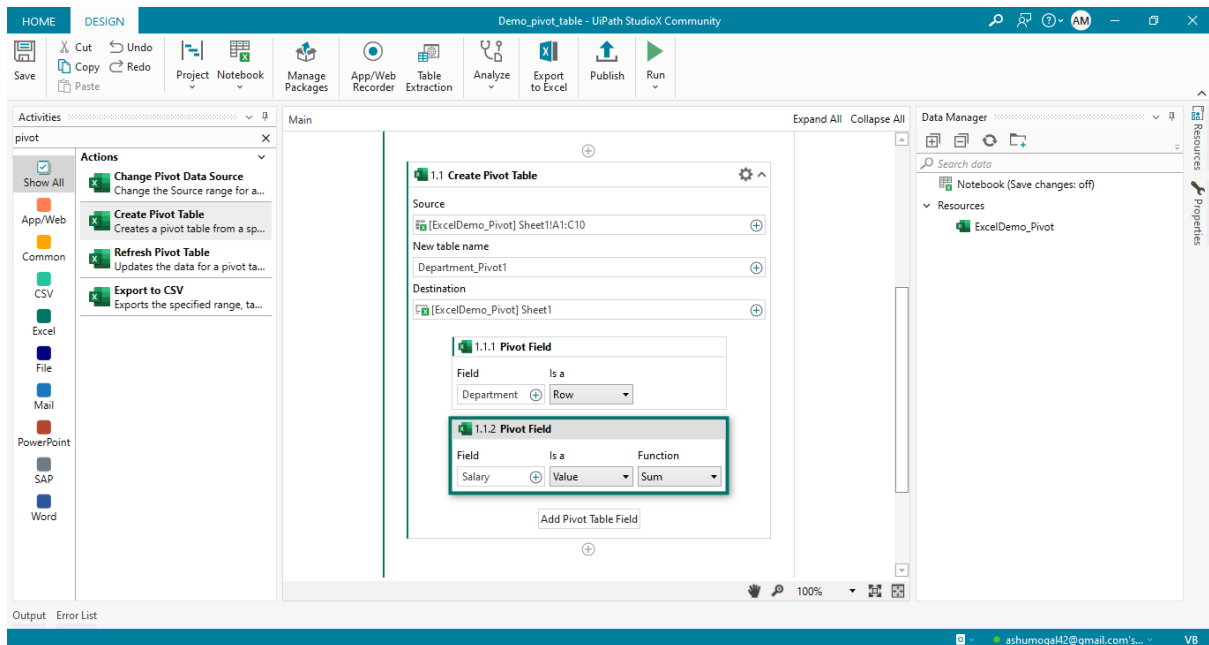

Example: Creating pivot table

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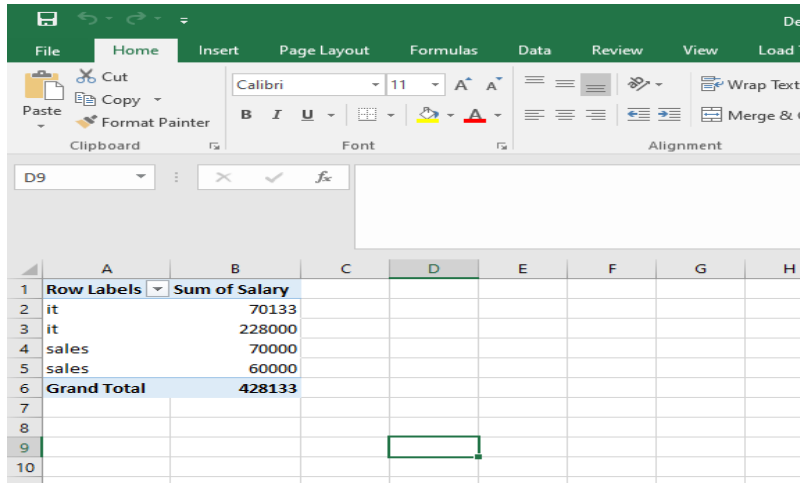Indicating Row or Table from worksheet A1:C10 and confirming.

Adding Pivot fields - Department and salary
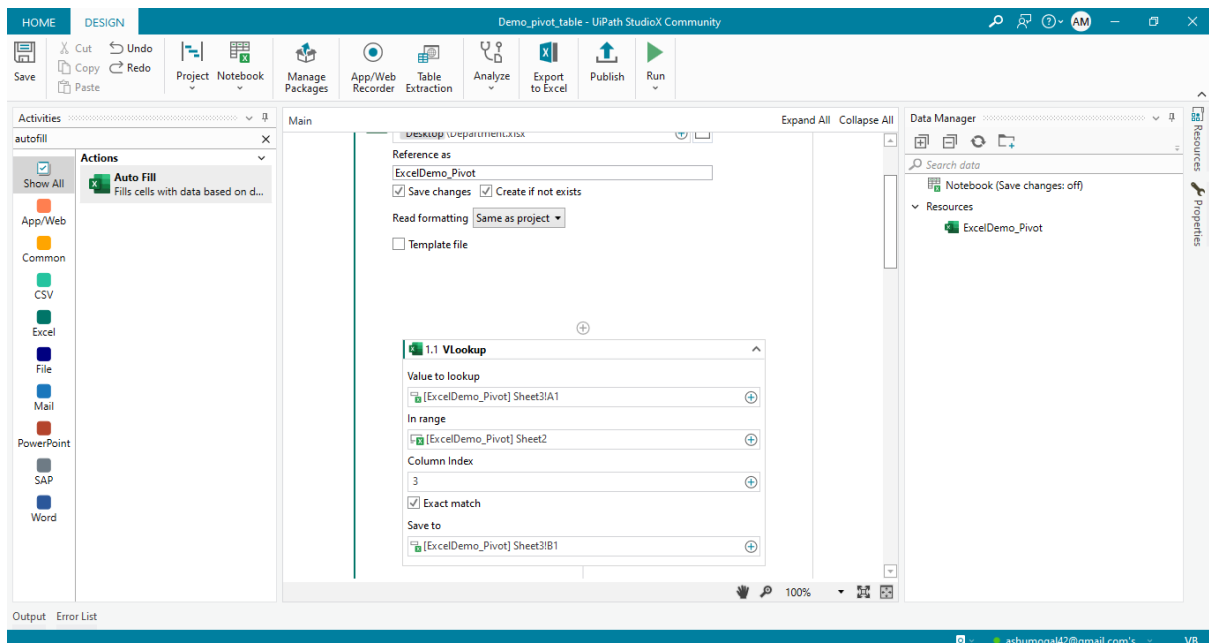
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Output: Pivot Table which gives the total salary according to Department
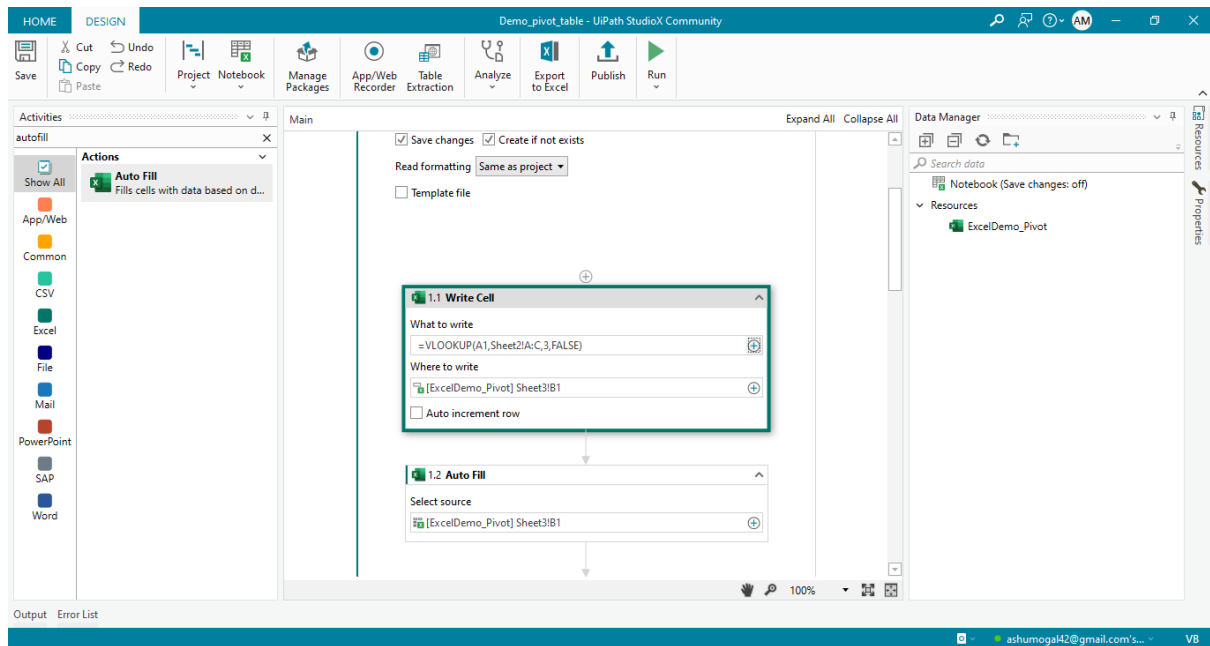

VLookup Activity:

VLOOKUP stands **for 'Vertical Lookup'**. It is a function that makes Excel search for a certain value in a column (the so called 'table array'), in order to return a value from a different column in the same row.

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Below Screenshot shows Using vlookup formula (=VLOOKUP (A1,Sheet2!A:C,3,FALSE) in write cell activity which gives the same output like vlookup activity.

Autofill Activity - Fills cells with data based on data in other cells using the AutoFill feature in Excel. Similar to double-clicking the Fill Handle in Excel to copy the formula from one or more adjacent cells down to the empty cells in the rows with data.

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