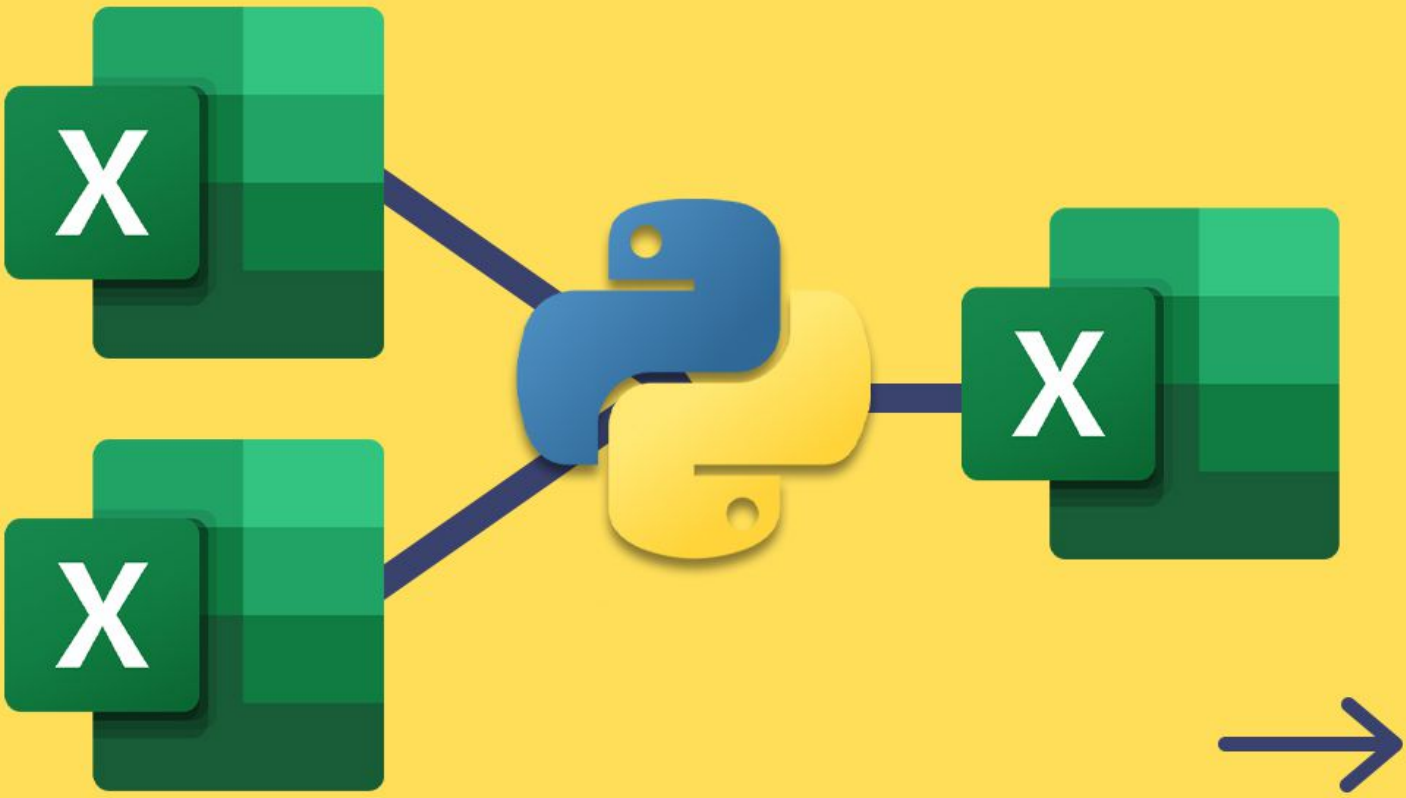
Merging Multiple Excel Files into One Using Python



Transitioning from Excel to Python?
You're in for a treat!
With Python's pandas library, merging multiple Excel files becomes a breeze.
Here's a beginner-friendly guide:

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What You Need:

Python: Ensure it's installed.

pandas: Install via:

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Step-by-Step Guide:

1. Import the pandas Library:

```
import pandas as pd
```

2. Write the Merging Function:

This function will help us merge our files.

```
def merge_excel_files(filenames, sheetname):
    all_data = []  # To store individual file data

    for file in filenames:
        df = pd.read_excel(file, sheet_name=sheetname) #read excel data
        all_data.append(df)

    merged_data = pd.concat(all_data, ignore_index=True)  # Combine the data
    return merged_data
```

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3. Let's look at an example. Suppose we have multiple Excel files named by city, and each contains its respective city data. For instance::

	A	B	C	D	E
1	Name	Age	City		
2	Alice	23	London		
3	David	42	London		
4	Grace	25	London		
5	Irene	21	London		
6	Kelly	24	London		
7	Mia	27	London		
8	Olivia	18	London		
9	Quinn	26	London		
10	Sam	22	London		
11					

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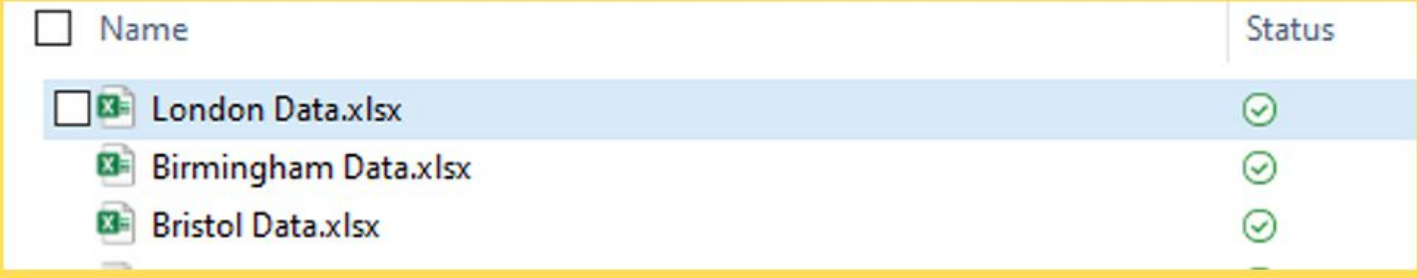
We have several files named after cities, and our goal is to combine the data from these multiple cities into one master file.



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Let's Specify Folder, Files, and Sheet:

Define your folder path and the Excel files within that folder. Also, mention the sheet name you want.

```
folder_path = r"/path/to/your/folder//"  # Replace with your folder path
files = [folder_path + "London Data.xlsx",
         folder_path + "Birmingham Data.xlsx",
         folder_path + "Bristol Data.xlsx"]
sheet_name = "Data"
```

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Merge and Save:

Run the function and save the merged data.

```
#run the merge function for each excel file
master_data = merge_excel_files(files, sheet_name)
#writes output to master excel file
master_data.to_excel("Master Data.xlsx", index=False)
```

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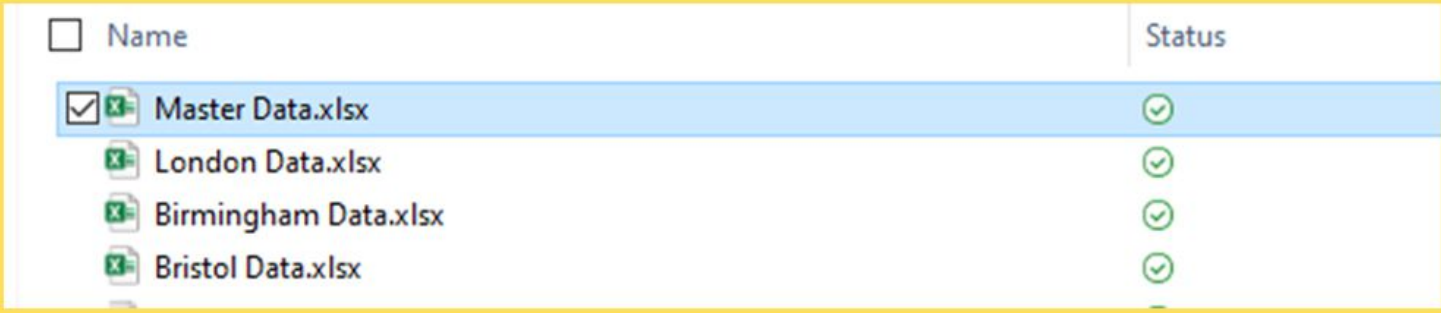
Now, in the folder specified, you'll find a new Excel file named "Master Data.xlsx". This file consolidates the data from "London Data.xlsx", "Birmingham Data.xlsx", and "Bristol Data.xlsx".



	A	B	C	D	E	F	G	H	I
1	Name	Age	City						
2	Alice	23	London						
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7	Mia	27	London						
8	Olivia	18	London						
9	Quinn	26	London						
10	Sam	22	London						
11	Bob	35	Birmingham						
12	Frank	31	Birmingham						
13	Jack	29	Birmingham						
14	Noah	40	Birmingham						
15	Rachel	34	Birmingham						
16	Charlie	28	Bristol						
17	Eve	19	Bristol						
18	Harry	37	Bristol						
19	Leo	33	Bristol						
20	Peter	32	Bristol						
21	Tina	36	Bristol						

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You've efficiently merged multiple Excel files using Python. This is just the tip of the iceberg. As you delve deeper into Python, you'll discover even more ways to optimize your data tasks.

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