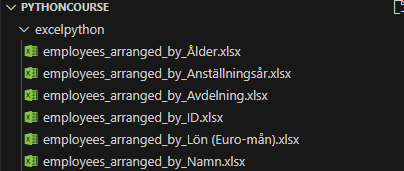
### Assignment 1: Data Management with Python and Excel

* Setup
  + Make sure you have the pandas and openpyxl libraries installed
  + pip install pandas openpyxl
* Download the raw Excel file (excel\_unarranged.xlsx) from your course material
* Read the Raw Data
  + Load the Excel file using pandas.read\_excel()
  + Notice that the employee data is stored in one column, with comma-separated values
* Clean the Data
  + Split the lines into separate columns (ID, Namn, Avdelning, Lön (Euro-mån), Ålder, Anställningsår)
* Save the Data
  + Export the cleaned DataFrame into a new Excel file called excel\_arranged.xlsx
* Run the program
  + Confirm that the new Excel file is created and that the data is neatly arranged in columns

### Assignment 2: Sorting Employee Data in Excel

* Load the Data
  + Read the Excel file excel\_arranged.xlsx from Assignment 1.
* Sort the Data
  + Loop over the following columns and sort the DataFrame by each column separately:
    - ID
    - Namn
    - Avdelning
    - Lön (Euro-mån)
    - Ålder
    - Anställningsår



* For each column, create a new Excel file in the same folder as the input file (6 different excel files)
* Run the script.
* Check that six new Excel files are created, each sorted by a different column

### Assignment 3: Filtering Employee Data in Excel

* Load the Data
  + Read the Excel file excel\_arranged.xlsx.
* Filter the Data
  + Select only the rows where the column Ålder (Age) is greater than 35 and sort by age in ascending order
* Save the Result
  + Export the filtered employees into a new Excel file
* Verify the Result
  + Run your script
  + Open the new file and check that it only contains employees older than 35

### Assignment 4: More Filtering

* Do the same as in assignment 3
* Select only employees who are:
  + Older than 35
  + Hired after 2008
* Sort the Data
  + Sort the filtered employees by Anställningsår in ascending order
* Save the Result
* Export the filtered and sorted data into a new Excel file
* Verify Output
  + Run your script
  + Check that the resulting Excel file only contains employees older than 35, hired after 2008, sorted by year of employment

### **Assignment 5: Even More Filtering**

* Select only employees who satisfy all three conditions:
  + Older than 35
  + Hired after 2008
  + Monthly Salary above 3250
* Sort the Data
  + Sort the filtered employees by Lön (Euro-mån) in ascending order
* Save the Result
* Export the filtered and sorted data to a new Excel file
* Verify the Output
  + Run the script.
  + Open the new file and check that only employees matching the conditions are included and sorted by salary.

### **Assignment 6: Final Filtering**

Filter the Data

* Apply the following conditions simultaneously:
  + Older than 35
  + Hired after 2008
  + Monthly Salary above 3250
  + Works in the IT Department
* Sort the Data
  + Sort the filtered employees by Lön (Euro-mån) in ascending order
* Save the Result
* Export the filtered and sorted data to a new Excel file
* Verify the Output
  + Run your script.
  + Open the new Excel file and confirm that only IT employees who meet all conditions are included.