

# Module 4 Summary: Working with Data in Python

Congratulations! You have completed this module. At this point, you know that:

- Python uses the `open()` function and allows you to read and write files, providing access to the content within the file for reading. It also allows overwriting it for writing and specifies the file mode (for example, `r` for reading, `w` for writing, `a` for appending).
  - To read a file, Python uses an `open` function along with `r`.
  - Python uses the **`open with`** function to read and process a file attribute, that is, from `open` to `close`.
  - In Python, you use the **`open`** method to edit or overwrite a file.
  - To write a file, Python uses the **`open`** function along with `w`.
  - In Python, "`a`" indicates that the program has appended to the file.
  - In Python, "`\n`" signifies that the code should start on a new line.
  - Python uses various methods to print lines from attributes.
- Pandas is a powerful Python library for data manipulation and analysis, providing data structures and functions to work with structured data like data frames and series.
  - You import the file (`panda`) by using the `import` command followed by the file name.
  - In Python, you use the **`as`** command to provide a shorter name for the file.
  - In Pandas, you use a data frame (`df`) to specify the files to read.
  - DataFrames consist of rows and columns.
  - You can create new DataFrames by using the column or columns of a specific DataFrame.
  - We can work with data in a DataFrames and save the results in different formats. 