

# File system and File I/O

1. Have a look at following tutorials:

- a. <https://realpython.com/working-with-files-in-python/>
- b. <https://realpython.com/python-pathlib/>
- c. <https://www.programiz.com/python-programming/directory>
- d. <https://www.programiz.com/python-programming/file-operation>
- e. <https://dbader.org/blog/python-file-io>
- f. <https://realpython.com/python-json/>
- g. <https://realpython.com/python-csv/>

2. Create a Python function which receives a path.

*If the given path is directory then it should return the dict with the following content:*

- a. "files": [list of file names in directory]
- b. "folders": [list of folder names in directory]
- c. "py\_files": [list of python file names in directory]
- d. "a\_containing\_files": [list of all file names, which contain letter "a"]

It should create "tmp" directory in that directory and remove it.

*If the given path is file then it should return the dict with the following content:*

- a. "name": the file name without any directory
- b. "stem": the file name without the suffix (extension)
- c. "extension": the file extension
- d. "file directory": the directory containing the file
- e. "file creation date": file creation date
- f. "file size": file size

3. Given a [txt file](#) that has a list of a bunch of names, count how many of each name there are in the file, and print out the results to the screen. Create a new file with only unique names. Create also a json file file 'name': count structure.
4. Take a txt file from previous example and create a functions, which are doing the following things:
- a. read first n lines of a file (use **islice** from **itertools**)
  - b. read a file line by line and store it into a list
  - c. count the frequency of words in a file
5. Given two txt files that have lists of numbers in them, find the numbers that are overlapping. [The first file](#) has a list of all prime numbers under 1000, and [the second file](#) has a list of happy numbers up to 1000.

You should send me the file with examples, file should be named: "name\_surname\_hw\_9.py".