

Exercise 1.4: File Handling in Python

Learning Goals

- Use files to store and retrieve data in Python

Reflection Questions

1. Why is file storage important when you're using Python? What would happen if you didn't store local files?
 - a. File storage is important to preserve data the application (and the user) work with. If the data is not saved, it is all lost when the program finishes its execution which makes it very unusable.
2. In this Exercise you learned about the pickling process with the `pickle.dump()` method. What are pickles? In which situations would you choose to use pickles and why?
 - a. Pickles are packaged stream of bytes that contain usually some data from a complex structure, like a dictionary, etc.
 - b. Pickles are useful whenever we want to retain the original data structure to work with the data later in an effective way. Standard files can only hold simple text which isn't useful for complex structures - that would require a lot of parsing and conversion to get it to the expected shape and form. It would also be much slower than using pickles. These can therefore prove useful whenever we want to store objects, work with data in databases, and I assume also when sending data over the network.
3. In Python, what function do you use to find out which directory you're currently in? What if you wanted to change your current working directory?
 - a. First, need to import the os module.
 - b. Then use `os.getcwd()` to find out which directory I'm currently in.
 - c. Use `os.chdir(<path>)` with the path parameter to change directory to the requested path.
4. Imagine you're working on a Python script and are worried there may be an error in a block of code. How would you approach the situation to prevent the entire script from terminating due to an error?
 - a. I'd use the try-except blocks to encapsulate the block of code that may trigger an error into the try section and actions to happen if an error occurs to the except section.
5. You're now more than halfway through Achievement 1! Take a moment to reflect on your learning in the course so far. How is it going? What's something you're proud of so far? Is

there something you're struggling with? What do you need more practice with? Feel free to use these notes to guide your next mentor call.

- a. So far, the work has been going well for me. I feel that writing in Python is quite easy, intuitive and flows even a bit better than writing in JavaScript, at least for me.
- b. I haven't had any major troubles so far. The exercise text is clear to me and I am able to understand the meaning of all actions.
- c. I'll however make sure that I practice different concepts in Python further whether it's regarding data types, functions, loops, or file handling to make sure this knowledge is well instilled and that I am also able to explain the logic behind my code properly.