

CSCI-410 Python Assignment Hints - PY-04

As with most programs, an incremental approach to the implementation is likely the quickest path to the end goal. You basically have three things that eventually have to come together – identifying which files to access, reading data from the input files, and writing data to the output file. You are required to use a class with a specific interface for the last two and you might consider using a similar class with a similar interface for the first one. In this discussion I will assume you are doing this with a class named **fileSet** that has a constructor and methods **hasMoreFiles()** and **NextFile()**.

You can tackle these independently and in any order. One way is to use the interfaces for the classes in order to put together your entire top-level program and then “stub out” the classes so that they work – even if only returning a constant value whenever they are called or whatever it takes. For the **fileSet** class, you might initially stub it out so that it simply assumes a single file exists and then get your other classes so that they work when you just have a single file. Then expand the stub so that it simply assumes you have a fixed set of two (or three) files and then get the other classes so that they work when you have multiple files. Finally, flesh out the **fileSet** class so that it works properly when you give it just a single file name and then so that it works properly when you give it a directory name.

An alternative would be to do the reverse. Stub out the **reader** and **writer** classes so that the **reader** merely prints out the file name and the **writer** does something comparable. Then focus on the **fileSet** to get it working completely.

In working on the **fileSet** (or its functionality if you choose not to use a dedicated class) you will probably want to become familiar with some of the methods in the **os** class. In particular, you may find **os.chdir()**, **os.listdir()**, **os.path.splitext()**, **os.path.isfile()**, and **os.path.isdir()** useful.