# Shelve Module

You can save variables in your Python programs to binary shelf files using the shelve module. This way, your program can restore data to variables

from the hard drive. The shelve module will let you add Save and Open

features to your program. For example, if you ran a program and entered some configuration settings, you could save those settings to a shelf file and then have the program load them the next time it is run.

Enter the following into the interactive shell:

>>> import shelve

>>> shelfFile = shelve.open('mydata')

>>> cats = ['Zophie', 'Pooka', 'Simon']

>>> shelfFile['cats'] = cats

>>> shelfFile.close()

After running the previous code on Windows, you will see three new files

in the current working directory: mydata.bak, mydata.dat, and mydata.dir. On

OS X, only a single mydata.db file will be created.

These binary files contain the data you stored in your shelf. The format

of these binary files is not important; you only need to know what the shelve

module does, not how it does it. The module frees you from worrying about

how to store your program’s data to a file.

Your programs can use the shelve module to later reopen and retrieve

the data from these shelf files. Shelf values don’t have to be opened in read

or write mode—they can do both once opened.

Enter the following into the interactive shell:

>>> shelfFile = shelve.open('mydata')

>>> type(shelfFile)

<class 'shelve.DbfilenameShelf'>

>>> shelfFile['cats']

['Zophie', 'Pooka', 'Simon']

>>> shelfFile.close()

Here, we open the shelf files to check that our data was stored correctly.

Entering shelfFile['cats'] returns the same list that we stored earlier, so we know that the list is correctly stored, and we call close().

Just like dictionaries, shelf values have keys() and values() methods that

will return list-like values of the keys and values in the shelf. Since these

methods return list-like values instead of true lists, you should pass them

to the list() function to get them in list form. Enter the following into the

interactive shell:

>>> shelfFile = shelve.open('mydata')

>>> list(shelfFile.keys())

['cats']

>>> list(shelfFile.values())

[['Zophie', 'Pooka', 'Simon']]

>>> shelfFile.close()

If you want to save data from your Python programs, use the shelve module.