

Goals for May 16

Demo `delete_empty.py` (one of the programs you'll write for Project 6)

Continue introduction to Python's `os` library (functions used to interact with the host operating system)

Introduce `argparse`, another Python library, useful for getting information from the command line (`argv`)

Delete Empty Files

If we use the `-l` (long form) option with `ls` to show the contents of one of the directories in the `sim` folder we'll find a bunch of files with 0 bytes:

```
$ pwd
/Users/conery/Classes/410/units/6_scripts/lectures

$ ls -l sim/uniq
-rw-r--r--    263K Jan  9  2016 unique.1.fasta
-rw-r--r--    51K Jan  9  2016 unique.1.fasta.clstr
-rw-r--r--      0B Jan  9  2016 unique.1.fasta2.clstr
-rw-r--r--    257K Jan  9  2016 unique.2.fasta
-rw-r--r--    51K Jan  9  2016 unique.2.fasta.clstr
-rw-r--r--      0B Jan  9  2016 unique.2.fasta2.clstr
...
```

Our goal is to write a Python program that cleans up the directory:

```
$ python delete_empty.py sim/uniq
removing sim/uniq/unique.1.fasta2.clstr
removing sim/uniq/unique.3.fasta2.clstr
removing sim/uniq/unique.2.fasta2.clstr
```

Design

Here are some things this program needs to do:

- get the directory name from the command line
- call a function that gives us the names of all the files in the directory
- for each of those files, call another function that tells us how big the file is
- if any file has 0 bytes call another function that deletes the file

Three of these operations — get the contents of a directory, get the size of a file, delete a file — are done by library functions...