

Milestone #4
CpSc 481/681: Skills for Visual Computing
School of Computing
Clemson University
Scripting with Python
Brian Malloy, PhD
October 21, 2009

To receive full credit, your submission must be submitted using the `handin` command by Friday, Oct 30th, 2009.

The purpose of this milestone is to help you to learn about scripting and file maintenance. Your assignment is to use the Python language to write a script to automate the file and directory maintenance process. However, let me begin with a warning: be careful not to delete any important files accidentally!

Your assignment is to write a Python script to automate one of the following maintenance tasks:

- Write a Python script that begins at the current directory, finds all files that have duplicate file names, print the names of the duplicate files. If any of the duplicate files are empty, delete them! At program termination, print a list of all deleted files.
- Write a Python script that begins at the current directory, finds all files that have a suffix of `[".bak", ".pyc", ...]`, make a list of these files, and delete them.
- Write a specification for a Python script that is similar to the previously mentioned scripts. Send the specification to me. Upon approval, implement the specification.

To help you with this assignment, I've placed several Python programs on my web site that will help you succeed with this assignment. One such program, `generate.py`, will generate directories and files to help you test your program. Another set of programs: `stack.py` and `walk.py` are programs that you must use as a starting point. Thus, you must use Python classes for this fourth milestone.

Your submission should be a directory with all of the files that I need to test your script. You must include a `readme` file that describes you and the milestone, what it does, what it should have done, and what it could do. Please compress your submission directory using either `zip` or `tar`. Also, use the `handin` command to submit this fourth milestone.

The syntax of the `zip` and `tar` commands is:

```
zip -r <dir>.zip <dir>
tar -zcvf <dir>.tar.gz <dir>
```

And the syntax for the `handin` command is:

```
handin.481.1 4 <compressed directory name>
```

Where `handin.481.1` means that you are using the `handin` command for CpSc 481, Section 1. The 4 means that this is the fourth milestone and `<compressed directory name>` is the name of the directory that you compressed using either `zip` or `tar`.