

# Homework 1, Bash scripting, intro to Python

In this assignment gives you will learn to write a simple bash script

This is **due by midnight on Sunday, 4 September.**

## To do before 30 August (class 3)

1. Work through book, chapter 3, except pages 58—66 and 72—74

## To do before 1 September (class 4)

### *Readings*

1. Work through book, appendix, pages 394—405
2. Work through <https://docs.python.org/3.5/tutorial/interpreter.html>, chapters 1–3

### *Set up for the class*

1. Create an executable bash script named *make-homework-directories* in `~/CompSkills_F16/Homework/HW1/<yourname>` that
  - 1.1. creates directories named `~/CompSkills_F16/Homework/HWXX/<yourname>` for XX varying from 2 to 12. (that is, executing this script should leave you with directories named `~/CompSkills_F16/Homework/HW2/<yourname>`, `~/CompSkills_F16/Homework/HW4/<yourname>`, ..., `~/CompSkills_F16/Homework/HW12/<yourname>`)
  - 1.2. tests to see if these directories already exist, and gives a warning message if they do
  - 1.3. tell the user when a directory has been created
2. Add appropriate README.md files to each of the above directories
3. Configure the TextWrangler to convert each tab character to 4 spaces

### *Practice Unix Commands and bash scripting*

Note that all these steps can be done with a single command from the command line

1. Write a bash script named `~/CompSkills_F16/Homework/HW1/<yourname>/about-sequences` that does the following:
  - 1.1. output the text “<yourname>, summary of about-sequences”
  - 1.2. output the full file information (from `ls -l`) about `~/CompSkills_F16/Homework/Resources`
  - 1.3. output the text “Number of sequences: “
  - 1.4. Uses *grep* and *wc* to output the number of fasta records in `~/CompSkills_F16/Homework/Resources/HW1-sequences.fsa`

- 1.5. output the last six lines of `~/CompSkills_F16/Homework/Resources/HW1-sequences.fsa`
2. Make this script executable, and run it, redirecting the output into the file `~/CompSkills_F16/Homework/<yourname>/HW1/script-output.txt`

*Turn in homework*

1. Make git ignore `.ipynb_checkpoints`
2. Commit and sync with the remote master when you are done (that is how we will turn in homework!)