

**Homework 1**  
**Introduction to (or Review of) C and Unix**  
**and more**  
due Thursday, September 12, 2002, 12:01 AM

There are two items to turn in for this assignment. Your answer to item 3 should be submitted as `late.txt` and your answers to questions 4 and up should be submitted as a plain text file `hw01.txt`.

1. Send me mail at *terescoj@cs.williams.edu* with a brief (a couple sentences) indication of your level of experience with the Unix operating system and its variants, plus a list of other operating systems you have used. Also include list programming languages you have used and your proficiency in each, and anything else you'd like me to know about your background coming in. (0 points)
2. Log into and familiarize yourself with your CSLab Unix account. Forward your CSLab electronic mail to an address you read regularly, as I will often use your *@cs.williams.edu* address. Try FreeBSD systems in the lab (*epirus*, *hinterwald*, *toto*, *pester*, *zebu*, *faeroes*, *dulong*, *bearnaise*, *pineywoods*, *basuto*, *baggerbont*, *watusi*) and the Solaris cluster (*bullpen*). Create a directory in your account for work from this class. Change the permissions on the directory so only you have read or write access to it. (0 points)
3. Copy the C program on the online version of this page that computes the late penalties for this course to your CSLab Unix account. Compile and run it, redirecting your output to a file `late.txt`. Submit this file using the `turnin` utility. (1 point)
4. Copy the file on the online version of this page to your CSLab Unix account, either from this link, or from `/home/faculty/terescoj/shared/cs432/hw01/make-example.tar`. It is a "tar file" of a small C program that demonstrates the use of multiple source files and Makefiles. Extract the files (`tar xvf make-example.tar`) and compile the program with `make`. Briefly describe how `make` uses the rules in the `Makefile` to produce the executable `main`. (1 point)
5. What is multiprogramming and why is it useful? (1 point)
6. Tanenbaum Problem 4, page 67. (1 point)
7. Tanenbaum Problem 9, page 68. (1 point)