

# 322 Compilers Assignment: 1

## The L1→x86 compiler

Due Monday, April 7th, noon

**Your job:** Write a compiler that translates L1 to x86 assembly code. See the lecture notes for an explanation of the tricky cases.

**Handin instructions:** Your handin must run on the t-lab machines (under linux).

Hand in your assignment by uploading it to the server at <http://penghu.eecs.northwestern.edu:8123/>. The uploaded file should be a gzipped tar file named `name.1.tar.gz`. The `name` should be your family name in all lowercase letters (except for the names Liu, Zhou, or Wang, see below) unless you are pair programming, in which case it should be both family names in alphabetical order, separated by `+`. If your name has any non-alphabetic characters, remove them first. For example, if Conan O'Brien and Shawn Knowles-Carter were pair programming and handing in this assignment, they'd send in a tarfile named `obrien+kowlescarter.1.tar.gz`. If your family name is Liu, Zhou, or Wang, then include your first name as well, but also without any spaces. For example, if your name is Liu Bolin, then use `bolinliu` as your name. And if Bolin and and Shawn team up, they'd submit `bolinliu+kowlescarter.1.tar.gz`.

The compiler should accept a filename on the command-line and it should write the file `a.out` that, when run from a shell prompt, produces the same output that the interpreter would have produced for that program (if the interpreter crashes, your compiler's output program can do whatever it wants, but your compiler must still produce a binary).

The tar file must contain, at the top-level, an executable file (e.g., a binary or a shell script) named `L1c`. It may also include whatever supplemental files your compiler needs, in whatever directory structure is convenient.