

322 Compilers Assignment: Lc Speed

Your two jobs:

1) Write a program to run in everyone's compilers. Your compiler should take no more than 5 minutes to compile the program on the tlab machines, and the binary that it produces should take roughly between 1 and 2 minutes (also on the tlab machines) on the input that your supply.

The program should produce a modest amount of input. A few K is okay, multiple megabytes is not okay. And try to write a program that does not spend all of its time allocating and garbage collecting.

Check the times.

2) Clean up, polish up, speed up your compiler.

The compiler should accept a filename on the command-line ending with `.L5` and it should write an `a.out` file containing an x86 binary that runs the L5 program.

The submission file must contain, at the top-level:

- The compiler, a shell script (or executable) named `Lc`,
- a single L5 program named `code.L5`, where the name of the file is your code as used on the website. This program is your contribution to the speed test.
- a single input file named `code.in` that supplies the input to the program to be used during benchmarking.

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.Lc.tar.gz`. The `name` should be your family name in all lowercase letters (except for the names He, Liu, 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.Lc.tar.gz`. If your family name is He, Liu, 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.Lc.tar.gz`.