

322 Compilers Assignment: 1-test Test Cases for the L1→x86-64 compiler

Design (at least) 25 test cases for a compiler that translates L1 expressions to assembly. For each test case, hand in two or three files, one called *file.L1* containing an L1 program, one called *file.res* with the expected output of running the L1 program (note that each call to `print` produces one line of output and nothing else produces any output), and (optionally) one called *file.in* that contains the sequence of bytes to use as the input to the program when using the program as a test case. If the *file.in* file is not present, the input stream will be empty (and thus each call to `read` will produce 1 (encoded 0)). Note that the programs should behave equivalently on all inputs; the *.in* file is merely one example input.

Each test case must produce only valid output from the interpreter (on the course web page).

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-test.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.1-test.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.1-test.tar.gz*.

The file must contain a single directory named *1-test* containing the test cases.

See the lecture notes for the precise description of L1.

The primary goal of this assignment is to familiarize you with L1. That said, I will also run your test cases in all of the L1 compilers (mine and yours) and if the test cases uncover bugs, you will get credit for that (see the course web page for details of how grading works).