COMP 150C++ Homework 1

In this assignment, as with most of the work in this class, you must use the most current g++ that’s available on the EECS systems. The easiest way to do that is to include the command `source /comp/150C++/etc/dot.login` in your `.login` file.

By experimenting, determine whether and when the g++ compiler will replace a function call with an inline expansion of the function body. In particular, check whether the `inline` keyword has any influence on this, whether the compiler’s optimization level matters, and whether the function’s size or other characteristics matter.

Compile using `g++ -O# -S` to get optimized assembly code you can examine, where # is an optimization level 1, 2, or 3. You may compile for the Intel architecture by logging in to `moon` or for the SPARC architecture by logging in to `sun`.

Turn in a one-page written description of your results. Your description should show (1) the largest, most complex function you found that gets inlined even without the ‘inline’ directive; (2) the smallest, simplest function that is not inlined even in the presence of the ‘inline’ directive; (3) a function where the ‘inline’ directive matters.

Turn in your report in the next class meeting (Wednesday, Jan. 28).