

15-745 Advanced Optimizing Compilers: Task 1

Due 2/09/2006 5pm

January 26, 2006

1 Task Description

In this assignment, you will implement several classical compiler optimizations.

2 Task Specifics

Please implement the following optimizations in the L3 compiler of your choice:

- Dead Code Elimination
- Constant Propagation
- Constant Folding
- Common Subexpression Elimination

Additionally, one week before the assignment is due, please turn in 4 test programs. Each test program should be designed to benefit greatly from at least one of the above optimizations. Each benchmark must take between 5 and 15 seconds to run (unoptimized). Once we have received test programs from all groups, we will provide you with an updated L3 test suite.

Use the algorithm descriptions given in class, or in Muchnick. You may work in groups of one or two (we suggest two). Once you have completed the task, please turn in (by email to `mderosa@cs`) the a tarball of your modified source code and the `results.txt` file from a test suite run (using the new tests).