Lab 3 Report

Your name here

Your netid here

To Submit Your Code:

Create a tar file with your source code, a makefile, and a README file that explains how to build your lab and how to run it. Send that tarfile, via email, to `comp412code@rice.edu`

To Submit Your Report:

Answer the questions below. You may edit this document directly and submit via email — rename the file to your netid so that your filename does not clash with the filenames used by other students.

Be sure to write down your name and your netid.

Quantitative Results

For each of the benchmark codes in `~comp506/students/lab3/TestCodes` on the **CLEAR** systems, complete the following chart, where O1 and O2 are the two optimizations that you built.

	Simulated Cycle Counts					
Bench-mark	**Input**	**Original**	**O1**	**O2**	**O1 then O2**	**O2 then O1**
bsort	bsort2.d	42,359				
qsort	qsort2.d	15,505				
fib	20	1,753				
mmult	50	8,425,269				
sumred	sumred1.d	4,272				
algred	50	2,520,408				
oneloop	50	3,510,218				

The code produced by your lab should produce the same answer as the original code— that is, both the original and the optimized code should print the same numbers in the output. (Of course, the simulator report on instructions executed and cycles executed should be different.)

Experience

(1) Briefly discuss your experience building the optimizer. What things were easy to do? What things were hard?

Experience *(continued)*

(2) Which optimizations did you implement?
What problems arose in your implementation?
Did you extend them in any interesting way beyond the basic algorithms?

Experience *(continued)*

(3) If you implemented loop unrolling, how did you decide which loops to unroll?

Experience *(continued)*

(4) What, if anything, would you do differently if you could start over on this project?