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CSC 431

Due 6/15/14

Compiler Report

Although we were unable to finish the compiler, we did put in many hours of work this quarter, and felt compelled to tell you what we were able to complete.

* TypeCheck.g, control flow graph, ILOC generation, assembly generation, register coloring and Spills.
* For the Assembly: Mathematical functions, function calls and returns, prints, reads, global variables, new, delete, logical operations, branching, and loops.
* We were not able to get structs fully working. Although our testing did not produce segmentation faults, storing into and loading from a struct variable did not always return the correct value.

Despite this, the first benchmark (WasteofCycles.mini) passes and runs as quickly as the gcc version.

Most of the past few weeks this quarter have been dedicated to debugging our code. We knew that if we didn’t fix it then, more bugs would come up later. Even when it became apparent we were not going to finish on time, we kept trying to improve our code to run as many benchmarks as possible.

Your warnings earlier in the quarter were prescient, and if we were able to start over again we would adopt a different approach. Nevertheless we learned a lot this quarter.

We considered describing our implementation in some detail, but in the end decided that you would likely be uninterested in reading about “broken code.” Our code and a README is attached.