Proposal Update
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April 16, 2015

Major Changes

There have been no major changes in our goals since the project proposal. We have however realized that the way we divided the optimization into parts - coalescing `map` operations, coalescing `map` and `reduce` operations and coalescing `map` and `filter` operations - was not necessary, and we have modified our plan to account for that.

What you have accomplished so far

We have formalized our implementation plans for this project by clearly defining the grammar for the updated C0 language that we are designing. We have also written up typing rules and have come up with an initial dataflow pass to determine how far to delay executing `map`, `filter` and `reduce` operations - as a first step to being able to then coalesce operations together. We are most of the way to a fully functioning `C1` to C compiler, and will be in a position to start working on the optimizations within half a week.

Meeting your milestone

We have fallen behind on our goal of being able to coaslece consecutive `map` operations. This has been because of two reasons - firstly we restructured our implementation plans and seconldy because we have not been able to put in as much time as we wanted to into this project due to other unexpectedly pressing matters which came up.

Surprises

There have been no major surprises in our tackling of the problem.

Revised Schedule

Work to do	Deadline	Who
Write a pass over the AST to push `map` and `filter` operations as far down the program as possible in the straight-line-code case.	May 22nd	Rokhini
Write a complementary pass, that coalesces adjacent sequence operations into single operations on new functions.	May 25th	Michael
Extend the above code to work for loops and conditionals.	May 29th	Michael and Rokhini
Write the final report	May 2nd	Michael and Rokhini

Resources Needed

We have the resources we need, and don't require any other materials.