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Escape Analysis

We have updated our project since we submitted the proposal. In the proposal, we were planning on extending our compiler with pointers which would allow us to make use of certain data structures like linked lists and binary trees. After receiving feedback which said pointers was too simple, we decided to completely change our project. We are now going to research and implement Escape Analysis, where we attempt to see if a closed-on variable can exceed the lifetime of the defining function (in which case we can allocate the variable on the stack instead of the heap).

So far, we have mainly focused on research. Escape Analysis is a fairly complex topic, so a fair amount of research is required before we can start the actual analysis. We seem to be coming to a point where we've gained enough knowledge to start implementing Escape Analysis, and we plan to begin implementation over Thanksgiving break. This gives us over five weeks for the actual implementation portion of the project, which should be more than enough.