Assignment 6

Code Generation Part II

(Due: 01/16/2016)

In programming assignment 5, we have used the parser and the type checker implemented in previous programming assignments as a base to generate real ARMv8 instructions for C-- programs.

Programming assignment 5 covers the basic features of code generation, including load/store instruction generation, activation record management, expression evaluation, and simple control transfer statements. More features (as listed below) are required to add in assignment #6.

* Short-circuit boolean expressions
* Variable initializations
* Procedure and function calls with parameters
* For loops
* Single and multiple dimensional arrays
* Implicit type conversions

PS: For variable initialization, we support only simple constant initializations, such as

Int I=1;

Float a=2.0;

PS: 10-20 extensive test cases will be posted one week before the deadline.

**Submission requirements:**

1) DO NOT change the executable name.

2) Your program should produce the output ARM code to a file called “output.s”.  
3) Compress all the files needed to compile it. Then upload your packaged file to Ceiba.

4) We grade the assignments on the linux1 server. Before summiting your assignment, you should make sure your version can be compiled by using “make” and works correctly on linux1.