Compilers
Assignment 4: Register Allocation
Deadline: 2012-05-17, 2:30 PM

2012-05-10

1- The Assignment:

For the following intermediate code representation:

```
I1. L1: a := b * 2
I2.     if a <= 10 goto L2
I3.     goto L3
I4. L2: f := d + c
I5.     b : = e / f
I6.     goto L1
I7. L3: f := (d / c) + e
I8.     a := b + f
I9.     return a
```

1. Find the basic blocks and calculate the liveness for each instruction, then try to allocate each of (a, b, c, d, e, f) temporary variables in four registers (K = 4).
2. Assume that **b** is an actual spill, re-write the above code to reduce the register pressure.

2- The Report

The report should be printed from a computer (hand-written reports can be difficult to read), and should include a front page with your name, email address, the name of the course, and the number of the assignment. The assignment can be solved either individually or in groups (up to 2 students/group).

You can leave the report in my room (room number 5, besides Mr. Salar's room, ground floor), or put it in my mail box at the Secretary's room (Nergiz's room).

PLEASE, do NOT send it by email!