ECE 468
Problem Set 6: Dataflow analysis

Consider the following code:

1: READ(x);
2: READ(y);
L1 3: if (x > 9) goto L4
   4: if (y > 3) goto L2
   5: x = 3 + x;
   6: b = y + x;
   7: goto L3
L2 8: y = 3 + x;
   9: b = y + x;
L3 10: y = x + y;
   11: goto L1;
L4 12: WRITE(b)
   13: halt

1. Draw the CFG for this piece of code.

2. Show the results of running a *reaching definitions* analysis on this code. For each line of code, show what definitions reach that line. Assume this is the only code in the program.

3. Show the results of running a *liveness* analysis on this code. For each line of code, show what variables are live *out* for that line (i.e., what variables are live immediately after that line would execute)