

Exercise 3

Feb 5/7, 2008

Given the following example C code,

```
int foo(int a,int b, int k) {
    int d, c,f;
    d = a + b;
    while (1) {
        a = k + 2;
        c = d - b;
        if (c > 100) break;
        f = d - b;
        k = d - 2;
        d = a + b;
    }
    f = e + k;
    return a + b;
}
```

1. (10pts) Build a control flow graph for the body of the given function.
2. (10pts) Compute the set of variables that are alive at the exit of each basic block.
3. (10pts) Compute the set of available expressions at the entry of each basic block.