

In this assignment, you will be dealing with loops and bit-wise operations.

In this assignment, you will program in assembly, a program that will match the following pseudocode (**use the NIOS II simulator, NOT THE DE0-CV board**):

```
main() {
    // have these live on main's stack frame
    // allocate space for these three on stack
    // compute addresses, so that you can pass to getxy()
    // don't worry about used registers in main()
    // yes, worry about passing parameters on stack
    // yes, worry about the return address
    int x; y, hDist;
    getxy(0x10000040, &x, &y) // get x and y from SW's
    hDist = hamming(&x, &y) // calc hamming dist

    print hDist // just do from main, no function call
}

void getxy(int* addrSW, int* a, int*b) {
    // do prolog, deal with used registers, etc
    // pull pass parameters
    // get 10-bit value from switches, put into r4
    *a = r4 >> 4;
    *b = r4&0xF;
    return;
}

int hamming(int* a, int*b) {
    // do prolog, deal with used registers, etc
    // pull passed parameters

    // use code from prior hamming example, but put into
    // function here, rather than having in main()
}
```

Submission: (no late work accepted, under any circumstances)

Also, prior to the due date and time (see the date specified on Moodle), **upload the single NIOS II assembly program**. It will be named userid-210-HWB.s, where userid is your userid. **Make sure you check two things afterwards:**

1. That the file was actually uploaded correctly to Moodle.

2. **That when you download your submission from Moodle, that you can save it in a temporary location on your laptop and make sure that it will run in the NIOS II simulator that we're using in class.**