

## CS350 - Intermediate Computer Architecture Assignment #3 - Spring 2009

For this exercise you will write a combination of C and MIPS Assembly. Write a main program that defines an array of ints, either by initializing the array within the code or by inputting the values from the keyboard. Your main program should then call a sort routine that you have written in MIPS assembly language. This routine in turn should use the following swap routine, written in C, to perform any array element exchanges required by the sort routine:

```
void swap (int *x, int *y)
{
    int temp;

    temp = *x;
    *x = *y;
    *y = temp;
}
```

Your main program should then print out the sorted array. You will need to compile the C parts using the MIPS gcc cross compiler to get assembly language, then add your assembly routine and edit as necessary to create an assembly source file that is acceptable to SPIM, then test it.

You should checkin your original C and assembly source files, along with the final edited assembly source that you ran on SPIM. Create a tar file containing all of these individual files, and submit it.