

The UNIVERSITY of NORTH CAROLINA at CHAPEL HILL

Comp 411 Computer Organization

Fall 2012

Lab #3: Arithmetic, I/O, Conditionals and Loops in C

Issued Fri, 9/7/12; Due Fri, 9/14/12 (beginning of class)

Your task is to go through the entire Lab 3 assignment posted on the class website and implement the programs for Exercises 1 to 4. In addition, Exercise 0 is a reading/self-teaching exercise. You must finish this lab and submit your work by the beginning of lab on Sep 14 (1pm).

Test Inputs: Sample input and corresponding output are provided under `/home/montek/comp411/samples/lab3`. You should try running your program on the sample input file(s) provided, and make sure the program's output is *identical* to that in the sample output file(s). For example, the sample input files for Exercise 1 are called `ex1in1` and `ex1in2`. Their corresponding outputs are in the files `ex1out1` and `ex1out2`. You can, of course, manually type or cut-and-paste the contents of the input files onto your terminal when running the program. Or, you could feed that sample input to your program using input redirection (`./ex1 < ex1in1`). To verify that your program is working correctly, compare its output to the test output provided. Again, you could do this comparison manually, or you could use a very useful UNIX command called `diff`. The full sequence of steps to run your program and verify its output is as follows. First, copy the sample input and output files to your `lab3` folder. Then do the following:

```
% ./ex1 < ex1in1 > ex1result1
% diff ex1result1 ex1out1
```

The `diff` command prints any differences it finds between your program's output (which you redirected into the file `ex1result1`) and the correct output provided to you (in the file `ex1out1`). If there are no differences, it prints nothing. Watch out for extra spaces at end of lines, etc.!

What to submit: You will submit your work on Exercises 1 to 4 (not Exercise 0). Specifically, only the files `ex1.c`, `ex2.c`, `ex3.c` and `ex4.c` will need to be submitted.

How to submit: Navigate to the folder where `ex1.c` ... `ex4.c` are stored, and run the command for electronically submitting them, as follows:

```
% cd ~/comp411lab/lab3
% /home/montek/comp411/bin/submitlab3
```

In case of any problems, please contact the instructor or the TAs.