cs3157 – Advanced Programming
Fall 2005, lab #10, 2 hours, 6 points
Dec 7, 2005

Follow these step-by-step instructions. This lab must be submitted electronically (see instructions at the end of the lab) by Tuesday Dec 13, 11:59 pm. Feel free to submit early.

1. From your cs3157 directory, create a directory called lab10. cd to your lab10 directory and put all your files in there.
2. Remember if you find yourself getting stuck, ask for help.

Step 1 (1 point)

Write a complete program in C named **step1.c** which reads at most 100 temperatures given in degrees centigrade from an input file passed as an argument and computes the equivalent Fahrenheit temperatures. The program output is to be displayed on the screen as well as written out to a file named **fahrenheit.dat**. Assume all data values are double. For testing, you can use the file
/home/cs3157/public/centigrade.dat
Note that you must check for end-of-file on reading input AND don't read more than 100 temperatures, even if there is more data to read.

The formula for the conversion is given by

$$F^\circ = 32 + \left(\frac{9}{5}\right) C^\circ$$

Compile, link and test your program.

Step 2 (1 point)

Repeat step1, but write the program in C++. Name it **step2.cpp**.

Step 3 (1 point)

Repeat step1, but write the program in PERL. Name it **step3.pl**.

Step 4 (1 point)

Now create a PHP script which asks for the temperature as a number (double) and for a specific type (C/F) and then converts it by calling a function routine to the other temperature. It should only be a single php file and call it **step4.php**.

Hint: Use a if statement to check the global variables (i.e temperature) if it is set, calculate and display, else create a html page with a form in it, so that the user can submit it.
Hint2: Only one file for this step
Hint3: look at the class notes on how to write a function in php.

I have included some sample scripts discussed in class under:
http://www1.cs.columbia.edu/~sh553/teaching/3157f05/extra/

1

Step 5 (1 point)

There are many many websites with lists of free php scripts. Find a really cool php script, and use it in your php file. Call it **step5.php**
Remember to give adequate credit in your readme, and comments in your php file for where you downloaded the script.

Submit your lab.

Submit your lab assignment:
unix$ ~cs3157/bin/submit-lab   10