Programming languages for Bioinformatics
Spring 2014

Homework 1, week 3

Here is a program converting Fahrenheit temperatures to their Centigrade or Celsius equivalents.

```
//============================================================
        #include <stdio.h>
        /* print Fahrenheit - Celsius table
             for fahr = 0, 20 , ..., 300; */
        main() {
           float fahr, celsius;
           int lower, upper, step;

           lower = 0;
           upper = 300;
           step = 20;
           fahr = lower;
           while(fahr <= upper) {
              celsius = (5.0/9.0)* (fahr - 32.0);
              printf("%3.0f %6.1f\n", fahr, celsius);
              fahr = fahr + step;
           }
    }
//============================================================
```

Here is the to-do list for you.

1. **Use emacs or any one of your favorite text editors to input the source code to your computer and save it as a source code file called "F2C.c";**
2. **Try to understand the source code, including the structure of a C program; the variables, the types; the while loop, and the printf function; compile it and run the complied executable.**
3. **Modify the code to print a heading "Fahrenheit to Centigrade" at the beginning of the output.**
4. **Modify the code to print the corresponding Celsius to Fahrenheit table, and save the new code as C2F.c.**
5. **Modify the code F2C.c to use a "for" loop instead of the "while" loop, and save the new code as F2C_1.c .**
6. **If the temperature is between 15 and 27 centigrade, please print "Comfortable" at the third column of the output. Save the new code as F2C_2.c.**

You need to modify, save, compile, test the code and then report all details including the results at each step.

Turning in your homework

Please hand in a hard copy of your homework report, which includes the source code, how you compile it, how you test your program and the result of the test run of you program. The homework report should be handed in before the class start on March 20st, 2014.

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独立作业承诺：（请选择一个， 并签名）

1. 本人，_____，保证本次作业由自己独立完成。

   签名

   时间　　年　月　日

或者

2. 本人，_____，保证本次作为和_____同学讨论后，由自己独立完成。
   讨论内容包括_____

   签名　　，

   时间　　年　月　日