

INTRODUCTION TO COMPUTER SCIENCE I

LAB 3

Methodifying¹

1 Refactoring your leap-year code

As a first foray into the use of methods, you are going to work with code with which you are already familiar. Specifically, you are going to write a new version of your `LeapYear` program; this time, you are going to divide its tasks into methods.

Specifically, your final program should contain three methods:

1. `main()`:² Of course, this one must exist, since it is called as the starting point of the program. Since other methods will handle the tasks that this program must perform, however, `main()` becomes much shorter and simpler. Specifically, you can copy-and-paste the following for this method:

```
public static void main (String[] args) {  
  
    System.out.print("Enter a year: ");  
    int year = getPositiveInt();  
    printLeapYear(year);  
  
} // main ()
```

2. `getPositiveInt()`: Read, via `keyboard.nextInt()`, a value from the user. If that value is not positive, prompt the user to enter a value again. When a positive value is entered, return it.
3. `printLeapYear()`: Given a year, print whether it is a leap-year, and by what rule (just as with Lab-2).

Getting started: Make a new `lab-3` directory. Make a copy of your `LeapYear.java` file from your `lab-2` directory, and place it in `lab-3`. If you are using your own computer, you can use the usual interface for copying and moving files around. If you are doing your work on `remus/romulus`, do the following to achieve all of the above and end up in your `lab-3` directory:

```
$ mkdir lab-3  
$ cp lab-2/LeapYear.java lab-3  
$ cd lab-3
```

¹Not a word. In fact, a horrible use of verbing. Sorry.

²By convention, I will henceforth refer to methods by their name followed by a pair of parentheses, thereby signaling that the given name is, indeed, a method. So, a method named *foo* will be written as `foo()` in these documents.

2 Submitting your work

Submit your new and improved `LeapYear.java` file with the *CS submission system*. If you are using `remus/romulus`, use the `cssubmit` command. If you are working on your own computer, use the web interface at:

`www.cs.amherst.edu/submit`

This assignment is due on Thursday, Feb-28, 11:59 pm.