1 Lab Assignment

1.1 Lab Assignment 1–PART ONE

This part of the lab is just to make sure that your account works.

- Log into the Moodle site and navigate to the Lab 01 section.

  The laboratory computer systems run the Microsoft Windows XP operating system. Because each computer is connected to a server in the College (running Windows Server), you have a login, password, and a "profile" that can follow you around to whatever computer you use within the "engr" domain. Computer labs are located in Swearingen and 300 Main. All the labs have some scheduled times when they are used by classes (like the scheduled use of 1D15 for this class), but except for those times (which should be posted), the labs are available for use by all students in the college. If you do things correctly, any of the seven labs in Swearingen and 300 Main should be usable for this class.

  However, **and this is very important**, you must "do things correctly" in order to have this interoperability. You have been provided by the college with virtual disk space on the **network** drive that is usually referred to as "the `H:` drive". You should always put your work on the `H:` drive, because your individual `H:` drive is stored on the college server and is accessible from any of the Wintel machines in any of the college labs and from your personal computer or laptop in your home. **You should never put your work in the local `C:` drive of the computer or on the Desktop.** Both of these are local to the individual machine and will not be visible if you move to a different machine. Further, if you put your lab work on the local drive, then some other student will be able to pick up that material, and you could be accused of assisting that student in an act of academic dishonesty. (Remember, you are the computer-astute people on campus, so it will be harder for you to plead ignorance than it would be for students in other programs.)

- Login to the computer. Your login name should be the same as you were assigned by USC when you registered. **Change your password.** If you've never logged in before, your password should be your Student ID.

A good password should be made up of a combination of letters, both uppercase and lowercase, and numbers. One way to get a reasonable password is to pick the first letter of each word of some line from a favorite song.

- Note the Desktop (i.e., the appearance of the screen). Everyone's Desktop is identical now, but it's your Desktop. Take an inventory of the things on the Desktop. You can change it as you wish at your convenience.

- What you need for CSCE 146 is primarily a browser, the Java compiler and libraries, the Eclipse Integrated Development Environment (IDE), and the textbook software. These are all free, and you can download and install them on any Wintel, linux, or Mac computer you have available to you. One reason we use these particular tools is that they are very common in the workplace and yet they require no particular licensing.

- You are next going to place an icon on the desktop for `eclipse`. Locate the Eclipse folder by clicking on the `Start` menu, then `Programs`, `CSE Apps`, and `eclipse`. Click on the `eclipse` icon using the **right mouse button**. From the menu that appears, choose `Send To` and then `Desktop (shortcut)`. This will place a shortcut to the Eclipse development environment on your Desktop for ease of use.

- Double click on the `My Computer` icon to see what you have. In particular, there are several drives. The `C:` drive is the usual local drive. In addition, there are a great many USB and other "drive" slots. You will want to use the **Network Drive** that will probably have a label like

  ```
  Z_buell$ on 'Fs' (H:).
  ```

  This is what we refer to as "the `H:` drive".

- Open the `H:` drive by double-clicking on it. Create a new folder on `H:` called `csce146`; open the `csce146` directory by double-clicking on it; now create a `lab01` directory.

- Open eclipse by double-clicking on its icon on the desktop. If the `Welcome` window appears, click on the icon for the `Workbench`; Eclipse will request that you `Select a workspace`. Either type in or browse to the

  ```
  H:\csce146
  ```

  directory and click `OK`.

- Use `File/New/Project` and then choose `Java Project` and click `Next`. In the window that pops up, choose a project name of `lab01` and click `Next` or `Finish`.

- Double click on `lab01`. Now click on Use `File/New/Class`. In the `Name` box, enter `Main`.

- Two-thirds of the way down that dialog box, check that you wish to create the

  ```
  public static void main(String[] args)
  ```

  "method stub" and click `Finish`.

- What you will see in the edit window of Eclipse is the template of a Java program, including the

  ```
  public static void main(String[] args)
  ```

  method stub that you specifically asked to have created for you in the previous step. On the line directly below the

  ```
  Auto-generated method stub
  ```

  line, enter

  ```
  System.out.println("hello, world");
  ```

  exactly as shown here. You now have a complete Java program that reads

```
public class Main {
/**
 * @param args
**/
public static void main(String[] args) {
  // TODO Auto-generated method stub
  System.out.println("hello, world");
  }
}
```

Click on `File/Save`. Then click on `Run/Run As/Java Application`. You should see `hello, world` appear in the console window at the bottom of the Eclipse window. You have just run your first program in this class!

- Once your program is working, you can exit Eclipse and then go to the Moodle site and upload your program. You should be able to verify that your file has been uploaded. If you cannot open the file you think you have uploaded, or if the system says that the number of bytes uploaded is zero, then you have not uploaded the file correctly and you need to try again.

- Congratulations! You've just written and run your first CSCE 146 Java program.

1.2 Lab Assignment 1–PART TWO

You are to download the initial `FlatFile` code from the Moodle web site and to build an Eclipse project with the appropriate classes from that initial code. Run that code using the `zin.before` input file to verify that you get the correct output that is in the file `zlogfile.before`.

NOTE THAT THE PROGRAM WANTS THE INPUT FILE TO BE NAMED `zin`, so you will have to make a copy of the `zin.before` file (or else rename it, which of course is more dangerous) with the proper name or else your program will crash.

The second part of this lab assignment is to add to the `Record` class an instance variable `hours` for the office hours of a faculty member, the appropriate accessor and mutator methods `getHours` and `setHours`, and to

modify the `readRecord` and `toString` methods as needed. Note that the office hours data is at the end of the input line (this is intentional) and that it has blank spaces embedded in it, so you should input that `String` data using the `nextLine` method and not just the `next` method. (Using just the `next` method will cause the data to be read only up to the first blank space as a token separator.

Your modified `toString` method should output the office hours data as a string at the end of the line, so if you use the `zin.zafter` data then you will produce the output in the file `zlogfile.zafter`.

1.3 Lab Assignment 1–CODE SUBMISSION

You are to upload your code to the Moodle dropbox.

Remember: You are responsible for verifying that what you have uploaded is the correct set of files (the dot java files and not the dot class files, for example) and that what you have uploaded is not corrupted.