Central Washington University
College of the Sciences
Department of Computer Science

CS-301 Data Structures Fall 2016

Lab Practice 00

This first lab is a simple practice to familiarize yourself with the lab hardware and software, to review the concept of abstract classes and interfaces, polymorphism, and the use of Java documentation.

Normally you, will find the source and data files in `/home/cs-301/Labs/Lab00`This time it has the files

```
lb00.pdf
HousePet.java
```

The first one is the *.pdf file that you are reading.

As explained in class, your projects will be submitted to a linux server called
`pragma.cs.cwu.edu`
This server is available only from the second floor in CS.

First you need to know that there is two ways to develop and run your Java programs:

1. 1. *Download files* from the server to your lab computer. And then use an IDE, to develop, compile and run your program.

2. 2. *Remote login* to the server. Using an editor to edit your program, compile and run. This requires some knowledge of linux commands.

If you are comfortable using *JGrasp, Eclipse or NetBeans* you may want to use method 1. The second method is more flexible and you should learn it too. In this lab we are going see both methods. In directory `Documents` you will have a list of basic linux commands.

1. Login to your account using `putty`. Change your password using the command passwd . Navigate the directory for the course (`/home/cs-301`) with `cd` and `ls`.

2. Go to the lab directory and check that the files listed above are actually there. To see them (especially the pdf files) you need to transfer the files to your local computer. Use the program *winSCP* . Alternatively, you may use *psftp* to transfer the file (*mput* * to upload to server, *mget* * to download to your local computer). Check the *.pdf in the local computer. *This step is very important as we will do this at every lab.*

3. After login using *putty*(also accessible from *winSCP*), use *nano* or *vim* to edit a very simple “”Hello, world” program. Make sure you save the program with a *.java* suffix. Compile it and run it :

```
javac hello.java
java hello
```

4. The program `HousePet.java` is an abstract class. Create classes:

   ```
   Dog
   Cat
   Chinchilla
   ```

   by extending the `HousePet` class as you deem appropriate. Write a client to test the "existence" of your pets. Compile and run the programs, using both methods. Put your pet classes in the same *compilation unit*.