

CS 5045 – Computation for the Life Sciences

Fall 2003

Homework 01

August 26, 2003

Create your Linux account

Go to <http://www.cslab.vt.edu/>, click on "Account Maintenance", then on "Create Account", and follow the instructions. You will create for yourself an account on the undergraduate CS lab located in 124 McBryde.

The list of machine names available is given at <http://www.cslab.vt.edu/124.shtml> (available from the FAQ). You should be able to ssh to any of those machines from outside the lab.

Using your Linux account

Log into your account. Create a directory Homework, with a subdirectory Hw01. Go to this new directory.

See who you are using *whoami* and the machine name using *hostname*. Make a list of all users currently using the machine using *who*. The command will return the answer on the screen. In order to send the answer to a file you can

```
command > filename
```

For example typing

```
who > users.txt
```

will write the output of *who* into the file *users.txt* Note that the suffix *.txt* tells us this is a text, or ASCII, file. You can view the content of this file on

the screen using *cat*

```
cat users.txt
```

Explore the Linux filesystem using *cd* and *ls*. Type

```
ls /
```

to see the directories under the root. The directories have standard names and their content is briefly explained in the handout.

Copy the content of the file */etc/passwd* to a file *passwordfile.txt* in your directory using

```
cat /etc/passwd > passwordfile.txt
```

This contains information about the accounts (with the passwords being encrypted, of course). Explore the content of this file.

Print out a list of *all* processes running on the machine. Use *man ps* to familiarize yourself with the command line options of *ls*. For example use *ps -ax* and redirect the output to a file *procs.txt*

```
ps -ax > procs.txt
```

The command *printenv* will print all environment variables declared and their values. You can see the values of an individual environment variable using the *echo* command, for example

```
echo $PATH
```

What to submit

In you directory *Homework/Hw01* make the files with the 1) list of users on the machine, 2) list of all processes, 3) list of all environment variables. Submit printouts of these files.