Assignment 1

Overview

The objectives of this assignment are to get you to

- login to your CS network account,
- make sure that it is enabled and ready to use,
- make sure that you remember your username and password, and
- learn how to submit future assignments.

It also forces you to use the CSci department network. You must complete this assignment before its ***deadline***, which is ***Thursday, February 1, at midnight***, ***(i.e. by 11:59 PM, EST).***

Instructions

1. Login to `eniac` using your given username and password. If you cannot do this, then this is the first problem you have to solve. Everyone in the class has an account on the network and therefore has a username and password. Contact Tom Walter. Find his email address and send him email.

2. If you login successfully, then *ssh* to any `cslab` host. In the remaining instructions below, I assume that you have logged into `cslab8`.

3. Edit your `.bashrc` file, located in your home directory, using any text editor of your choice. If you do not know what this means, then somehow you have made it into a third-level course in C++ programming in our department without ever learning the most basic concept of UNIX, and it is up to you to learn what the `.bashrc` file is and what a home directory is. At the bottom of the file, add the following lines:

```
# Define pathmunge to avoid duplications and put a new path in
# a suitable position in the PATH variable
pathmunge () {
    # usage: pathmunge pathname  [after]
    if ! echo $PATH | /bin/egrep -q "(^|:)$1($|:)" ; then
        if [ "$2" = "after" ] ; then
            PATH=$PATH:$1
        else
            PATH=$1:$PATH
        fi
    fi
}
```

   Lines that start with # are comments. The remaining lines define a `bash` function named `pathmunge`. To *munge* is to transform or mix up data. This function expects a directory pathname as its first argument and the optional word "`after`" as its second argument. `pathmunge()` checks if the directory is already in the `PATH` variable and if it is, it does nothing. If it is not, then it either prepends the directory to `PATH` or appends to `PATH` depending on whether the word "`after`" is supplied.

4. After adding the above text to the file, append the following lines below it:

```
# Modify PATH variable to include path to cs335_sw/bin directory
if [ -d /data/biocs/b/student.accounts/cs335_sw/bin ] ; then
    pathmunge /data/biocs/b/student.accounts/cs335_sw/bin after
    export PATH
fi
```

This uses `pathmunge()` to add the directory `/data/biocs/b/student.accounts/cs335_sw/bin` to your `PATH` variable.

5. Save the `.bashrc` file and then source it using either of the two equivalent commands:

```
. ~/.bashrc
source ~/.bashrc
```

6. Now make sure your `.bashrc` file contains nothing you do not want me to see. I have no idea what that might be, but just in case, make a copy of it and delete the private stuff. There is a command named `submit_cs335_assignment` that I have written and installed on our CS network server so that it can run on all `cslab` hosts. You must use this command to deposit a copy of your `.bashrc` file into the correct directory with the right name and permissions. The command requires two arguments: the number of the assignment (1 in this case) and the pathname of your file. Thus, you will type

```
submit_cs335_assignment 1  .bashrc
```

The program will copy your `.bashrc` file into the `assignment1` subdirectory

```
/data/biocs/b/student.accounts/cs335_sw/assignments/assignment1/
```

and if it is successful, it will display the message, "`File assignment1_username.bashrc. successfully submitted.`"

where *username* is your username. You will not be able to read this file, nor will anyone else except for me. But you can double-check that the command succeeded by typing the command

```
ls -l /data/biocs/b/student.accounts/cs335_sw/assignments/assignment1
```

and making sure you see a non-empty file named `assignment1_username.bashrc.`

Grading Rubric

It is all or nothing for this first assignment. It is worth 1% of your final grade and either you get that 1% or you do not. You will receive full credit if the file you submit has the lines shown in the above instructions and has been submitted by the assignment deadline, which is Thursday, February 1 at 11:59PM, EST.