Assignment 1

Overview

The objective of this assignment is to make sure that you have modified your `.bashrc file` so that you are able to submit future assignments easily using the `submithwk_cs340` executable.

You must complete this assignment before its **deadline**, which is **Wednesday, September 23, at midnight**, **(i.e. by 11:59 PM, EST)**.

Instructions

1. Login to `eniac` using your Computer Science Department Network 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 our system administrator by sending email to `cstechsp@hunter.cuny.edu` if you cannot login. *Do not send email to any other address*!

2. If you login successfully, **then *ssh* to any `cslab` host. You cannot complete this assignment on `eniac`!**

3. The instructions below arbitrarily assume that you have logged into `cslab12`.

4. Copy the file /data/biocs/b/student.accounts/cs340_sw/bin/bash_code to your home directory:

   ```
   $ cp /data/biocs/b/student.accounts/cs340_sw/bin/bash_code ~
   ```

5. Modify your *.bashrc* file, located in your ***home directory***, by appending the contents of the file you just copied to the end of the file:

   ```
   $ cat bash_code >>  .bashrc
   ```

   The file that you append has lines that define a `bash` function named `pathmunge`. In English, 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. For example, if the current value of PATH is the string "`/bin:/usr/bin:/usr/local/bin:`", and I type

   ```
   pathmunge ~/bin  after
   ```

   then the new value of `PATH` will be the string "`/bin:/usr/bin:/usr/local/bin:~/bin`".

   After the definition of the `pathmunge()` function, it has lines that add a new directory to your `PATH` variable so that any executable in that directory can be run just by typing its name without a leading path.

6. Run the following command to update `bash`:

   ```
   source ~/.bashrc
   ```

7. 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 any private stuff. I have written and installed a command named `submithwk_cs340` on our CS network server (`biocs`) in such a way that it can be run on all `cslab` hosts. It is in the directory /data/biocs/b/student.accounts/cs340_sw/bin. You must use this command to deposit a copy of your `.bashrc` file into the correct directory with the right name and permissions. ***In general you will use this command to submit all assignments given in this class***.

8. To submit a PDF file, the `submithwk_cs340` command requires two arguments: the number of the assignment (1 in this case) and the pathname of your homework file. **To submit a plain text file, which is what your `.bashrc` file is, however, you give it the `-t` option.**

   Thus, to submit this assignment, assuming that your current working directory is your home directory, you will type

   ```
   submithwk_cs340  -t  1  .bashrc
   ```

   The program will copy your `.bashrc` file into the directory

   ```
   /data/biocs/b/student.accounts/cs340_sw/hwks/hwk1/
   ```

   and if it is successful, it will display the message, "`File hwk1_username 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/cs340_sw/hwks/hwk1
   ```

   and making sure you see a non-empty file named `hwk1_username` whose date of last modification is the time at which you ran the command. The size of that file should be **exactly the same** as the size of your `.bashrc` file.

9. To submit an assignment that is a PDF file, you would enter the command

   ```
   submithwk_cs340  1 your_pdf_file
   ```

   without the `-t` option.

Grading Rubric

This assignment is worth 1% of your final grade. You will receive full credit if the file you submit has exactly the lines shown in the above instructions and has been submitted by the assignment deadline, which is, as stated above, Wednesday, September 23 at 11:59PM, EST. If the lines do not match exactly, the script that checks them will fail and you will receive at most half-credit. If it is not submitted by the deadline, you receive no credit.