CS 279 - Homework 1

Deadline

11:59 pm on **Friday, September 2**

Purpose

To make sure you have read over the course syllabus, to read a bit about free software, to check out a couple of UNIX/Linux manual pages, and to practice writing some more simple `bash` shell scripts.

How to submit

You will complete **Problem 1** on the course Canvas site (syllabus confirmation and reading questions).

For the rest of the problems, you will create several files and then submit those to the course Canvas site.

NOTE: While I list the separate files you need to submit for each problem below, I am going to set up Canvas to *also* accept `.zip` files.

That is,

- you can submit each file to Canvas as you submitted each of your files for the Week 1 Lab Exercise.
- OR, if you prefer, you may compress your files to be submitted into a single `.zip` file and submit that `.zip` file to Canvas.

Problem 1 - 20 points

Problem 1 is correctly answering the "HW 1 - Problem 1 - required syllabus confirmation and reading questions" on the course Canvas site.

Problem 2

(adapted from David Tuttle's Assignment 1, CIS 480 - UNIX/Linux In Depth, Spring 2005)

Note: there is a *slight* possibility that the class' answers for this problem might be collected and posted to the course Canvas site.

Go to the web page:

http://www.gnu.org/philosophy/philosophy.html

The Free Software Foundation created the model for “Free Software” that is most commonly used to distribute Linux software. If you’ve ever heard of the “General Public License” or “copyleft”, this is where they were invented. There are many misconceptions out there about the nature of “freeware” versus “free software” versus “public domain” – this site contains useful insights about the similarities and differences between these distribution paradigms. Explore to find out more.

You don't have to follow all the links -- follow those that look interesting to you until you indeed find something of interest to you, and save the web address of that page.

Then, within a file `hw1-2.txt`:

- Include your name of the first line
- Follow that with something interesting you learned from reading the above.
- **IF** you would like, you may include whether you agree or disagree with what you found, and why. But, that is **optional**.

- End the file with the web address of the page on which you found the interesting tidbit you gave above.
- Submit your resulting file `hw1-2.txt`

Problem 3

You wrote a simple `bash` shell script for the Week 1 Lab Exercise.

Consider the `echo` command -- use:

```
man echo
```

to read about its single option.

What would happen if you used `echo` with this option within a shell script, and then followed it, on the *next* line of that script, with another command?

Write a `bash` shell script named `curr-info` or `curr-info.sh` that meets the following requirements:

- Start this script with the line that is considered good style (and is a CS 279 course requirement), that specifies that this script should be executed using the `bash` shell
- After a blank line, put in one or more **comments** including at least the name of this shell script, your name, and its last modified date
- Use `echo` with the option you read about on its manual page to print a message of your choice, and on the next line of your script call `pwd`.
  - So, `pwd`'s output should appear on the SAME line as your `echo` command's outout!
- Then, on the next line, call the command that lists the *contents* of the present working directory.

You can make your script executable by using the command:

```
chmod 700 curr-info
```

or

```
chmod 700 curr-info.sh
```

...and you can then execute it using:

```
./curr-info
```

or

```
./curr-info.sh
```

Demonstrate your resulting script for me as follows:

- Run: `./curr-info > prob3-demo.txt`

  or `./curr-info.sh > prob3-demo.txt`

Submit your resulting files `curr-info` or `curr-info.sh`, and `prob3-demo.txt`.

Problem 4

Now, consider the `ls` command. Use:

```
man ls
```

to read about some of its MANY options!

Write a `bash` shell script named `ls-play` or `ls-play.sh` that meets the following requirements:

- Start this script with the line that is considered good style (and is a CS 279 course requirement), that specifies that this script should be executed using the `bash` shell
- After a blank line, put in one or more **comments** including at least the name of this shell script, your name, and its last modified date
- Decide on **at least THREE** of the `ls` command's options that you wish to try out. For EACH one you choose:
  - FIRST include an `echo` command describing WHICH `ls` option you are trying,
  - THEN follow that `echo` command with a call to `ls` using your selected option.

You can make your script executable by using the command:

```
chmod 700 ls-play
```

or

```
chmod 700 ls-play.sh
```

...and you can then execute it using:

```
./ls-play
```

or

```
./ls-play.sh
```

Demonstrate your resulting script for me as follows:

- Run: `./ls-play > prob4-demo.txt`

  or `./ls-play.sh > prob4-demo.txt`

Submit your resulting files `ls-play` or `ls-play.sh`, and `prob4-demo.txt`.