

CS 279 - Homework 8

Deadline

11:59 pm on Friday, November 18

Purpose

To practice more with the commands `find`, `tar`, `gzip`, `gunzip`, `sed`, `head`, and `tail`.

How to submit

You will complete **Problem 1** on the course Canvas site.

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,
- 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 - 10 points

Problem 1 is correctly answering the "HW 8 - Problem 1 - Short-answer questions involving `find`" on the course Canvas site.

Problem 2

In a file `hw8-2.txt`, include:

- your name
- the part you are giving an answer for
- a `find` command for each of the following

2 part a

Write a `find` command that will display the pathnames of all files named `a.out` starting from your home directory.

2 part b

Write a `find` command that will display the pathnames of all files whose names end in `.sh` starting from the current working directory.

2 part c

Fun fact: when you use *both* the `-name` option and `-type` option with the `find` command, it searches for files with the specified name that are also of the specified type.

Write a `find` command that will display the pathnames of all directories with the name submitted starting from your home directory.

2 part d

Fun fact: you can specify more than one directory to be searched in a `find` command -- just separate them with a blank.

Write a single `find` command that will give the pathnames of all directories whose names start with 279, starting from your home directory AND starting from my `public_html` directory, `~st10/public_html`

2 part e

Fun fact: if you give `find` the option `-perm` followed by permissions expressed in octal form -- for example, 644 or 700 or 711, etc. -- it will search for files with that specified set of permissions.

Write a `find` command that will display the pathnames of all directories reachable from the current working directory whose permissions are exactly 755 -- that is, `rwx` for the owner, `r-x` for the group, and `r-x` for the world.

2 part f

Write a `find` command piped to an appropriate `wc` command whose result will be the number of regular files starting from your home directory.

2 part g

Write a single `find` command involving piping, an appropriate `tee` command, and an appropriate `wc` command to write to file `files-644.txt` the pathnames of all regular files that have permissions 644 starting from your home directory, but only outputting to the screen the number of such files.

Submit your resulting `hw8-2.txt`.

Problem 3

In a file `hw8-3.txt`, include:

- your name
- the part you are giving an answer for
- an appropriate SINGLE command for each of the following (note that SOME of these involve pipes, and some involve commands from earlier in the semester, not just the period since Homework 7)

3 part a

Fun fact: the `-n` option, used with either the command `head` or the command `tail`, can be used to specify how many lines from the beginning or the end of the specified file(s), respectively, should be shown.

Display only the first five lines of the file `.bash_profile`.

3 part b

Find all the differences between the contents of the files `tweedledee` and `tweedledum`, but only display the resulting lines that include `twins` somewhere within them.

then do a search of those lines for the character string "twins".

3 part c

Change all appearances of the text string `Sonoma` in file `ssu.txt` to the string `Humboldt`, and save the resulting text to a new file named `Humboldt.txt`.

3 part d

Fun fact: if you give `head` or `tail` the name of more than one file, it shows the beginning or ending lines of all of those files, respectively.

Show the last 4 lines of every file in the current directory with the suffix `.txt`.

3 part e

You want to archive the directory `279tools` and all of its contents. Write a command that will do so, resulting in an archive file `279tools.tar`

3 part f

You now want to compress `279tools.tar`. Write a command that will do so, using `gzip`, that will also let you know how much this file was compressed.

3 part g

Your result from 3 part f has been copied or e-mailed to another directory somewhere. Assume the current working directory is this other directory with this copy of 3 part f's result. Give the command to now uncompress it.

3 part h

Now give the command to extract the directory `279tools` and its contents from the result of your command in 3 part g.

3 part i

Now give a command you could use to recursively list all of the contents either of this extracted copy of `279tools` or of `289tools.tar`. (I can think of at least two different commands for doing this, and there are probably more! Choose your favorite or one that you want to practice with.)

3 part j

Write a `sed` command that will add four blanks to the beginning of each line in file `lookity.txt`, putting the result in `shift-look.txt`. (Hint: think of it as substituting 4 blanks for the beginning of each line.)

Submit your resulting `hw8-3.txt`.

Problem 4

If necessary, add some files to your `bin` directory on `nrs-projects` so that it contains at least three Bash shell scripts.

Then:

- Create an archive of the contents of your `bin` directory on `nrs-projects`
- Use `gzip` to create a compressed version of this archive.

Submit your resulting compressed archive.

Submit your resulting files:

- `hw8-2.txt`
- `hw8-3.txt`
- your resulting compressed archive from Problem 4