Princeton University
COS 217: Introduction to Programming Systems
A Unix File Sharing Trick

Scenario: Alice (userid `alice`) and Bob (userid `bob`) are Assignment 5 partners and want to share some files on CourseLab.

(1) Alice issues a `cd` command to make her home directory her working directory. She issues a `ll` command to examine the permissions of the files and directories in her home directory. She repeatedly issues `chmod 600 ` *`fileName`* commands so each non-executable file in her home directory has 600 permissions, and `chmod 700 ` *`fileOrDirName`* commands so each executable file and directory in her home directory has 700 permissions.

(2) Alice issues a `chmod 711  .` command to change the permissions of her home directory such that she has read. write, and execute permissions, and her group and others have only execute permissions. So her group and others can `cd` to her home directory, but cannot `ls` it.

(3) Alice issues a `head -c4 /dev/random | xxd -g4 | cut -b10-17` command to generate a random character sequence. She issues a `mkdir share`*`CRYPTIC`* command (where *`CRYPTIC`* is that random character sequence) to create a directory whose name is `share` followed by that random character sequence.

(4) Alice issues a `chmod 777 share`*`CRYPTIC`* command to change the permissions of the `share`*`CRYPTIC`* directory so it has read, write, and execute permissions for everyone.

(5) Alice issues a `cd share`*`CRYPTIC`* command to make `share`*`CRYPTIC`* her working directory. She creates files in her `share`*`CRYPTIC`* directory, and issues `chmod 666 ` *`filename`* commands so each non-executable file has read and write permissions for everyone, and `chmod 777 ` *`filename`* commands so each executable file has read, write, and execute permissions for everyone.

(6) Alice tells Bob (but nobody else!) the name of her `share`*`CRYPTIC`* directory.

(7) Bob issues a `cd /u/alice/share`*`CRYPTIC`* command to make the `share`*`CRYPTIC`* directory his working directory. (Note that anyone who knows the name of the directory can do that, but only Bob and Alice know that name.) He creates and edits files in the `share`*`CRYPTIC`* directory, and issues `chmod 666 ` *`fileName`* commands so each non-executable file has read and write permissions for everyone, and `chmod 777 ` *`fileName`* commands so each executable file has read, write, and execute permissions for everyone.

IMPORTANT: After completing the assignment...

(8) Bob issues a `cd` command, a `mkdir asgt5` command, a `cd asgt5` command, and a `cp /u/alice/share`*`CRYPTIC`*`/*  .` command to copy all files from the `share`*`CRYPTIC`* directory to his `asgt5` directory. Thereby he has copies of the files for future reference.

(9) Alice issues a `cd` command and a `chmod 700  .` command to change the permissions of her home directory such that she has read, write, and execute permissions, and her group and others have no permissions.