

CS 100
Lab 5: file manipulation shell commands

Reminder: find a *new* partner for this lab (50% grade reduction for working with a person ever worked before).

You are allowed to use 1 (one) computer per team (50% grade reduction for using more than 1 computer per team including laptops and tablets).

Grading: 50% 'rm' (15% each of the points, 5% if all of them work), 40% 'mv', 10% attendance.

Complete the following exercises for credit:

1. Create your own basic version of the command '**rm**' (type 'man rm' for more information on the command). Look up the unlink() system call to accomplish the following:
 - Use the command line arguments when calling your program to take in the name of a file to be deleted.
 - Use a command line option to erase every file in the specified directory.
 - Use a command line option to recursively erase all the files in the specified directory and those of its sub-directories. (If you would like to remove directories, look into the rmdir() system call).
2. Create your own implementation of the command '**mv**' (type 'man mv' for more information on the command). Your implementation should accomplish the basic task of the mv command when given the arguments 'mv file1 file2' in order to
 - rename a file;
 - move it from one directory to another.

Look up the link() system call as well.

Demonstrate the proper execution of your implementations with a series of tests which cover both normal and any outlier cases. Extra effort should be spent on these tests this week. **We would like for you to get more in the habit of developing clear and comprehensive tests.**

After demoing your code to the TA, upload it to iLearn in one .tar.gz file.