

Part 1 For each scenario listed below, list the UNIX commands you would use to solve the problem. Number each command, starting at one.

1. (2.5 points) Assume you have two directories, `dir1` and `dir2`, in your home directory. Change your current directory to `dir1`. Remove all files and subdirectories within this directory that begin with the letter `a`. Move all files in this directory that begin with the letter `b` into the `dir2` directory.
2. (2.5 points) Create a directory in your home directory called `secret-files`. Copy all files in the directory `/u1/junk/cs202/dir1` that begin with the word `secret` into your newly created `secret-files` directory. Change the permissions of the directory so that only you, the user, have permission to read, write, and search the directory.

Part 2 For each problem below, write a complete C program that produces the desired output. Each program should print to `stdout`. Remember to use proper spacing and indentation. The program should complain if the input is incorrect.

1. (5 points) Read an integer x , such that $100 \leq x \leq 10000$, as a command line argument. Print all prime numbers p , such that $0 < p < x$. *Bonus (1 point)*: Encapsulate the code that checks for prime numbers in its own function.
2. (5 points) Read one character at a time from `stdin`. If the character is a lowercase letter, print the corresponding uppercase letter. If the character is an uppercase letter, print the corresponding lowercase letter. If the character is not a letter, simply print the character. *Bonus (1 point)*: If the character is a digit n , print the n th power of 2.