Run the command `handin --checkout a6` to checkout your assignment. Like the last assignment, you will only have a `manifest` file. Add the name of any file you create for this assignment to this file, one per line, in order to turn your assignment in.

Your task will be to create a C program that builds a hash table using a collision resolution strategy and hash function of your choosing. The only stipulation is that neither one can be a method we covered in class. Research and find a new collision resolution strategy and hash function to use for this assignment. There's always Wikipedia.

Do the following to complete the assignment:

- Read the file `/etc/passwd` (this must be ran on the CS network) and store all usernames that have the form `csXXXXX`, i.e., the class accounts. Store these usernames as keys in the hash table. The values should be structs that have three counting integers (x, y, z) initialized to 0.
- Read the file `/u1/class/cs202/last-data`. Each line of this file contains the name of one of the lab machines and a username separated by a colon. If the machine begins with an x, y, or z, increment that users first, second, or third count, respectively.
- Finally, print a table consisting of four columns. Column one should be the usernames, columns two to four should consist of the x, y, and z machine counts, respectively.

Bonus Opportunity: Allow the ability to pass in one of three command line arguments: `-x`, `-y`, or `-z`. If `-x` is passed, the table should be sorted in order from greatest to least logins on x machines. The same goes for the other two options. You can implement your own sorting algorithm, or you could look into the C function `qsort`.