

MAT 4370: Programming Assignment 4

Due: Friday, February 1

Problems

All exercises for this assignment are from the King textbook. Continue to use the naming convention from the previous assignment: problem n from chapter k should be saved in the file named `exk-n.c`. For these problems, you do not need to write your own functions: place all of the necessary logic within `main()`.

- Page 179, #6. This problem is a bit silly, yet it provides useful practice with `char` arrays. Assume no line is longer than 80 characters in length. Functions especially useful for this exercise include `getchar()`, `putchar()`, and one or more character handling functions from the `ctype.h` header file. Refer to section 23.5 and/or the Unix manual page. (From a terminal window, give the command: `man ctype`).
- Pages 179–180, #9. This exercise, involving random walks in a grid, will give you practice with 2-dimensional arrays. Random walks have a rich mathematical history—for the mathematically curious: see http://en.wikipedia.org/wiki/Random_walk for an overview.

Tip for Success

Use `gdb` as a tool to debug your programs. As discussed in class, you have three options:

- “Old school” `gdb` (using only commands in a terminal window)
- `gdb` integrated with Aquamacs/emacs (some commands, some mouse)
- GUI-based front end (Affinic)

What to Submit

When your programs compile cleanly and work to your satisfaction, place them in a folder named `hw04`. (Source code only please; no other files need to be submitted.) Drag this folder onto the SUBMIT icon, found in the Applications folder.