COMP220 - Lab 6

Fall 2015

Abstract

For this lab you'll work with the Grid class (pg 210) and practice doing an important traversal pattern known as a *Stencil Code* in which your examine the neighboring locations in a grid for each spot in that grid. This pattern is used in many imagine processing contexts as well as the famous Conway's Game of Life.

1 Problem and Adaptations

The problem you'll be dealing with is the Minesweeper problem listed in chapter 5 exercise 10. Your solution should:

- Work on any size grid
- Utilize a helper procedure named *getCount* (which you must design and write) that is given the grid*mines* (as discussed in the book) and a *row* and *column* index. It then returns the mine count for the location *mines[row][col]*. Note this helper is the core logic to the whole problem. With it written, *fixCounts* just becomes a simple matter of "visit each spot in *mines*, run *getCounts*, and set the return value to the appropriate location in *counts*".

After you document, declare, stub, and write tests for both procedures. Focus your implementation efforts on the helper. By the end of the day, submit your work as assignment *lab6*. There is no homework, but you're strongly encouraged to finish this assignment up as you can get a lot of mileage from stencil code logic.