Locker Puzzle and Find Four Write-Up and Pictures

This program was easier than the second one. I figured out that the step for each student was simply the number of the student. For example, student 5 opens locker number 5, then moves down 5 lockers and opens that one until they reach the end. The best way of testing this was simply simulating with different numbers. I realized quickly that for the program to be correct, the number of open lockers would always be equal to the square root rounded down to the nearest whole number. As long as the number matched that rule, it was working.

Text

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The hardest part of the find four program was visualizing the traversal to check for consecutive numbers. To test the program, I made 4 test tables to plug into my program for vertical, horizontal, down right, and up right. To figure out the if statement checks, I made a graph of values substituting x and y for array index values. That helped me out that the starting values could only be in one part of the array, restricting which values I had to check for matches.

Graphical user interface, text

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