CIS 120 Quiz 7

October 29, 2014

Name: ____________________________________________

PennKey: ___________________________ Section: ____________

PennKey means letters, not numbers.

Indicate the section you’re registered for, even if you’re attending a different section.
1. After his Thursday night office hours for OCaml Paint, Tiernan makes a stop at FroGro for some limes and salt. He quickly finds his items and goes to check out, but he has to choose which checkout line to join. Tiernan wants to return to his apartment as fast as possible, so (naturally) he uses a Java function to determine which checkout line will be the fastest.

Consider each checkout line as an array of ints, where each int corresponds to a customer in the line. The value of the int represents the number of items that customer will need to check out. Therefore, a two-dimensional, non-rectangular array of ints can be used to represent the state of all the checkout lines. (The array isn’t rectangular, because each checkout line could have a different number of people in it.)

Write a Java function that takes such a two-dimensional array and a new customer, represented by the number of items he or she has, and adds them to the end of the shortest checkout line in the store. Note that the shortest line isn’t the one with the fewest customers; it’s the one with the smallest total number of items. We’ve given you the function header and the return statement; the function should modify lines in place.

*Hint: Integer.MAX_VALUE is the largest integer value possible in Java.*

```java
public static int[][] getInLine(int[][] lines, int items) {
    return lines;
}
```