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Name: _____ Period: _____

APCS Problem Set 12: Arrays and ArrayLists

4 FortuneTeller Lab

4.2 Finishing the FortuneTeller Class

3. Finish the `FortuneTeller` class as per the instructions in Litvin §9.3.

Teacher's Initials: _____ (10pts)

6 SCRABBLE[®]

You are to write a class containing a method called `computeScore()`, as described in Litvin Ch. 9, #12.

Teacher's Initials: _____ (10pts)

10 Array Removals and Insertions

10.4 Element Insertion

1. *Easier Problem:* Import `EasyInsert.java` from <http://feromax.com/apcs/problemsets/PS12/downloads/ArrayOps/> into project `PS12-ArrayOps`. Modify the code to insert the value "8" so that the provided array's elements remain in increasing order. You may take advantage of the fact you know the value and index of each element.

Teacher's Initials: _____ (6pts)

2. *Harder Problem:* You have an array of `ints` for which you do not know the contained values. Assume that the array is at full capacity (just as in the last problem) and insert the value "8" in a location so as to maintain the array's ascending order. Import `TrickyInsert.java` from the same URL as the last problem. *Note: Since random values are used to initialize the array each time, you might be required to run the class a few times when demonstrating it to make sure you don't have any subtle bugs!*

Teacher's Initials: _____ (10pts)

11 Book Questions #3

2. Litvin Ch. 9, #23:

...

- You must demonstrate the method running for these values:

- * { 1.0, 2.0, 3.0, 4.0, 5.0 }; is 3.0 the median?
- * { 3.4, -2.9, 0.1, 9.3, 5.8 }; is 4.8 the median?
- * { 3.4, -2.9, 0.1, 9.3, 5.8 }; is 3.4 the median?

Teacher's Initials: _____ (8pts)

13 Chomp Lab

13.4 Complete CharMatrix.java

Your job is to finish implementing `CharMatrix.java`. You might notice that the code you need to write for certain pairs of methods will be almost identical; see if there's a way to take advantage of this fact!

Teacher's Initials: _____ (12pts)

15 Book Questions #4

2. Litvin Ch. 9, #15: Download `Checkerboard.java` from <http://feromax.com/apcs/problemsets/PS12/downloads/> and import into a new project, `PS12-Checkerboard`. Next, implement the `fillCheckerboard()` method. Here are a few important notes to help you:

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Teacher's Initials: _____ (10pts)