CS526 Fall 2019
Homework 10

Due: 12/9

The goal of this assignment is to give students an opportunity to implement a dynamic programming algorithm.

Chapter 13 lecture note describes dynamic programming using the "World Series Championship" problem. You are required to write a program that calculates probabilities to fill all entries in the 7 x 7 matrix (a partially filled matrix is shown in Slide 28). The calculation of probabilities must be done in a bottom-up manner using the dynamic programming approach described in the lecture note.

First, you need to write a pseudocode of your program. Then, you must write a program based on that pseudocode. After calculating all probabilities in the matrix, your program must print (or display) the matrix on the screen as shown below:

```
0.50  0.62  0.68  0.72  0.78  0.84  1
0.35  0.32  0.72  0.81  0.85  0.75  1
0.26  0.46  0.72  0.75  0.77  0.67  1
0.54  0.72  0.36  0.63  0.38  0.75  1
0.76  0.33  0.65  0.43  0.56  0.34  1
0.21  0.35  0.48  0.76  0.65  0.47  1
   0     0     0     0     0     0
```

Note that all entries must be written as a floating point number with 2 digits after the decimal point (as shown in the above example). Also note that the numbers in the above matrix are all fictitious numbers. Do not compare your result with this matrix.

Name your program *WorldSerisDP.java*.

Deliverables

You need to prepare two files. The first file is *WorldSerisDP.java*. The second file is a document file that shows the pseudocode of your program. Name this file *hw10_doc.EXT*, where *EXT* is an appropriate file extension, such as *docx* or *pdf*. Combine the two files, and any other files that are needed by your program, into a single archive file and name it *LastName_FirstName_hw10.EXT*, where *EXT* is a file extension, such as *zip* or *rar*.

You need to include sufficient inline comments in your program.

Grading

Up to 10 points will be deducted if your output is incorrect.
2 points will be deducted if there is no pseudocode.
Up to 4 points will be deducted if there are not sufficient inline comments.