Assignment 1 – Theatre Seating Chart

Maximum Points = 50

The purpose of this lab is to review your study of computer programming and algorithms from CS 1, especially arrays. In this lab you will write a program that might be used by a theatre to keep track of the seats. (http://www.foxtheatre.org/seating.htm).

Design and implement a class that represents a seating chart. The seating chart would include a two dimensional array of ticket prices (at least 10 by 10), e.g.

10 10 10 10 10
10 10 20 10 10
10 20 30 20 10
20 30 30 30 20

Your program will prompt the user to select either a seat or a price. Mark the sold seat by changing the price to 0. When the user specifies a seat, make sure it is available (provide an appropriate response to the user if it is not.) When the user specifies a price, find any seat with that price (or an appropriate message if none are available.)

Do one or more of the following extra features:

a) Keep track of the total number and value of tickets sold
b) Keep track of the number of unsold tickets
c) Use a GUI to interact with the user
d) Read in the two dimensional array of ticket prices from a data file (prices.txt)
e) Build an array of seating charts including the name of the show and the ticket price array for that show
f) Anything else that you think might enhance this assignment (check with me first)

(Due before class on Friday, September 3) Submit your .java files containing your program , a Word document describing your program and your timesheet documenting your time to the dropbox in WebCT..

Grades are determined using the following scale:

- Runs correctly..……:___/10
- Correct output……..……:___/10
- Design of output..……:___/8
- Design of logic.……:___/10
- Standards……:___/7
- Documentation..……...:___/5

Grading Rubric (Word document)