Weekly Lab 1 – Arrays

Maximum Points = 10

The purpose of this lab is to review your study of computer programming and algorithms from CS 1.

Design and implement a class that represents a gradebook.
Your program should ask the user for the number of grades (1-100) to enter for the assignment, followed by the grades (0-50). Your program will then display the grades, followed by the average grade for the assignment, and the highest, and lowest grades.

```
/**
 *
 *Gradebook.java
 *
 * Reads a words from the standard input and prints the number of
 * occurrences of each letter in that word.
 *
 * @author (Wayne Summers)
 * @version (january 12, 2011)
 */

import java.util.Scanner;

public class Gradebook
{
   public static void main(String[] args)
   {
      int[] grades = new int[100];
      int nbrGrades;
      int grade;
      Scanner scan = new Scanner(System.in);

      //get number of grades from user
      do
      {
         System.out.println("Enter the number of grades (0-100): ");
         nbrGrades = scan.nextInt();
      }
      while (nbrGrades > 100 || nbrGrades < 0);

      //read in the grades
      for (int i=0; i < nbrGrades; i++)
      {
         do
         {
            System.out.println("Enter the " + (i+1) + "th grade (0-50): ");
            grade = scan.nextInt();
         }
         while (grade > 50 || grade < 0);
         grades[i] = grade;
      }

      /*****************************************************************************
      * COMPUTE THE AVERAGE GRADE, THE LOWEST GRADE, and THE HIGHEST GRADE         *
      *****************************************************************************/

      //print grades
      System.out.println(" The list of grades is:");
      for (int i=0; i < nbrGrades; i++)
         System.out.print(grades[i] + " ");

      /*****************************************************************************
      * PRINT THE AVERAGE GRADE, THE LOWEST GRADE, and THE HIGHEST GRADE           *
      *****************************************************************************/
   }
```

}

(Due before end of the day on Friday, January 14, 2011) Submit your .java files containing your program to the dropbox in WebCT.

Grades are determined using the following scale:

- Runs correctly..……:___/3
- Correct output……..……:___/2
- Design of output..……:___/1
- Design of logic.……:___/2
- Standards……:___/1
- Documentation..……...:___/1

Grading Rubric (Word document)