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](http://csc.colstate.edu/summers/NOTES/1301/Grading-Rubric-Programs.htm)  ([Word document](http://csc.colstate.edu/summers/NOTES/1301/Grading-Rubric-Programs.doc))