

CSE 142 - Su 02

Assigned: Wednesday, August 7

Due: Wednesday, August 14, BEFORE MIDNIGHT

**** Homework 6 Graded Problems ****

Each of the following 5 problems is worth 2 points each.

1. All of the grades that you have gotten in the class so far (HW1, HW2, HW3, HW4, and MT) have been entered in the grades database available to you on the web through MyUW. Check those grades and make sure they have all been entered correctly.

Are all the grades showing in the database for you correct as far as you know?

2. Consider the following class, which stores the grades of all of the students in a section.

```
/**
 * This class uses an array of doubles to store the grades of all of the
 * students in a particular section.
 */
public class SectionGradeSet {
    /**
     * Create a new object containing an array of the correct size for
     * this section.
     * @param numStudents the number of students in the section
     */
    public SectionGradeSet(int numStudents) {
        grades = new double[numStudents];
    }
    /**
     * Each entry in the grades[] array represents the grade
     * of one student.
     */
    double grades[];
}
```

a) Write a method for SectionGradeSet called numStudentsOver() which takes a double value as a parameter and returns the number of students in the section with grades higher than that value.

b) Write a method for SectionGradeSet called mean() which returns the average of all the grades in the section.

3. Consult the Java API documentation for the following questions.

a. What method(s) does a BufferedReader provide that an InputStreamReader does not, and what (does it/do they) do?

b. What method(s) does a LineNumberReader provide that the BufferedReader does not, and what (does it/do they) do?

4. ArrayLists and arrays.

a. Write a method that takes an array (not an ArrayList) of Strings and returns an ArrayList that contains the same Strings as those passed in the array, in the same order. Be sure to include proper javadoc comments.

b. Write a method that takes an ArrayList of Objects and returns an array of Objects that contains the same Objects as those passed in the ArrayList, in

the same order. Rather than implementing this using a loop and copying each element of the ArrayList, use a method defined in the ArrayList class. You will need to read the documentation for ArrayList in order to do this. Be sure to include proper javadoc comments.

5. What does the following snippet of code print out? You can find information on the StringWriter class in the Java API documentation (in package java.io).

```
StringWriter writer = new StringWriter();
String s[] = { "foo", "bar", "baz", "quux" };
for (int i = s.size()-1; i >= 0; i--) {
    writer.write(s[i]);
}
System.out.println(writer.toString());
```