CS308 Homework Assignment 8

Due date: ___________________

General info: Turn in all problems by paper and by email (to dbahr@regis.edu with “CS308 Homework” in the subject line).

NOTE: Be very careful with “=” and arrays. If I declare two arrays “a” and “b”, and then set them equal to each other with “a = b”, they are now the exact same array. Why? They both point to the same place in memory. As a consequence, if I set “a[10] = 34”, then b[10] will also immediately get that value of 34 like some kind of spooky interaction. If a = b, then they can never have different values. They are joined at the hip! Instead, when you want to set one array equal to another, you should just use a “for loop” to copy the values from one array into the values for the other array.

For example, if “a” and “b” already exist, and if they are the same size, then the following code copies the contents of “a” into “b”.

```java
for(int i=0; i<a.length; i++)
{
    a[i] = b[i];
}
```

Problem #1 (40 points): Game show contestants score points for successfully setting rat traps while wearing boxing gloves. The contestant’s score is the number of traps they set. The referee keeps track of their scores with the following program.

The referee enters a set of contestant names (there could be any number of contestants). The program asks the referee for the score for each contestant during round 1. The program prints out the largest and smallest score along with the name of the winner and worst loser.

Then the referee is going to enter a second set of scores for round 2. The program prints out the names and scores of the winner and worst loser in round 2.
The program continues asking for the scores for rounds 3 to 5, printing the names and scores of the big winner and loser each time.

Finally, each contestant is assigned a total score that is the sum of his or her scores in each round. Then the program prints out the largest and smallest total score along with the overall winner’s name and the worst loser’s name.

**Extra Credit (5 points):** Same as Problem #1 but use multi-dimensional arrays instead of normal arrays.