CS163/164 Programming Quiz 4

Open your quizspace and have a TA check it. For this quiz you are allowed only to look at previous quizzes in quizspace – you may NOT look at previous code submitted through Checkin. Create a project called Q4C and a class called Q4C. Upload the following interface and implement the interface within the class:

http://www.cs.colostate.edu/~cs164/.Fall18/quizzes/Q4C/src/IQ4C.java

public int sumOfSquares (ArrayList<Integer> num)

To solve sumOfSquares, you must use recursion. UNDER NO CIRCUMSTANCES SHOULD YOU USE A LOOP, an instance variable (non-static), or a Class variable (static). We will search for all as part of the grading, any loops or global variables that are found will result in a zero for the entire quiz.

This method takes a non-null ArrayList of integers and returns the sum of the squares of each element of the ArrayList. In addition, these squares of each element are added to the ArrayList after the element. If the ArrayList is empty, a zero is returned and no numbers are added to the ArrayList.

If an ArrayList containing 1, 2, and 3 is passed to the method, the method would return 14 back as an integer. In addition, the ArrayList would now have 6 elements instead of 3 and would contain in order: 1, 1, 2, 4, 3, 9.

Submitting your assignment
When you have completed your code and unit tested it to your satisfaction, you should submit the final version Q4C.java file to the auto-grader for grading. Watch your time carefully – the final version submitted will be the one graded without exception. Be sure to check in intermediate tested versions to maximize your possible points.