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| CS152 H2 due July 8, 2020 3 pts  Recursion on integers and recursion on arrays |

Write an application with two classes. First class named **Recursion** has the following three recursive methods:

// PRECONDITION n is positive integer. Method sumTerms returns sum of terms that are

// reciprocal values of first n integers, with alternating signs.

// For example, sumTerms(7) returns the following: 1/1 – 1/2 + 1/3 – 1/4 + 1/5 -1/6 + 1/7.

// Terms with an odd denominator have positive sign, and terms with even denominator have

// negative sign.

* double sumTermsRec(int n)

// PRECONDITION n is non-negative integer denoting the number of occupied positions in the

// array words. Method printsWordsRec prints each String element in the array words

// together with its string length in the same order as they appear in the array words

* void printWordsRec (String[] words, int n)

// PRECONDITION n is non-negative integer denoting the number of occupied positions in the

// array words. Method printsWordsReverseRec prints each String element in the array

// words together with its length. Elements are printed in reverse order than they apper in

// the array words.

* void printWordsReverseRec (String[] words, int n)

If array words has first three elements assigned values "Paris", Athens ", "Rome" method printWordsRec should print

Paris 5

Athens 6

Rome 4

and method printWordsReverseRec should print

Rome 4

Athens 6

Paris 5.

Class **Tester** has main method in it. In the main method invoke each of the three methods from class **Recursion**. Program outcome must provide English explanation which method is invoked and what is the result, and/or what method does.