Winter Semester 2020-21
CSC3001-Java Programming
DA-II

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Due Date	18-Apr-2021
Marks	10 (9)

Find StringCode

Crazy Zak has designed the below steps which can be applied on any given string (sentence) to produce a number.

STEP1. In each word, find the Sum of the Difference between the first letter and the last letter, second letter and the penultimate letter, and so on till the center of the word.

STEP2. Concatenate the sums of each word to form the result.

<u>For example –</u>

If the given string is "WORLD WIDE WEB"

STEP1. In each word, find the Sum of the Difference between the first letter and the last letter, second letter and the penultimate letter, and so on till the center of the word.

WORLD = [W-D]+[O-L]+[R] = [23-4]+[15-12]+[18] = [19]+[3]+[18] = [40]

WIDE = [W-E]+[I-D] = [23-5]+[9-4] = [18]+[5] = [23]

WEB = [W-B]+[E] = [23-2]+[5] = [21]+[5] = [26]

STEP2. Concatenate the sums of each word to form the result

[40] [23] [26]

[402326]

The answer (output) should be the number 402326.

NOTE1: The value of each letter is its position in the English alphabet system i.e. a=A=1, b=B=2, c=C=3, and so on till z=Z=26.

So, the result will be the same for "WORLD WIDE WEB" or "World Wide Web" or "world wide web" or any other combination of uppercase and lowercase letters.

IMPORTANT Note: In Step1, after subtracting the alphabets, we should use the absolute values for calculating the sum. For instance, in the below example, both [H-O] and [E-L] result in negative number -7, but the positive number 7 (absolute value of -7) is used for calculating the sum of the differences.

Hello = [H-O]+[E-L]+[L] = [8-15]+[5-12]+[12] = [7]+[7]+[12] = [26]

Assumptions: The given string (sentence) will contain only alphabet characters and there will be only one space character between any two consecutive words.

You are expected to help Zak, by writing a function that takes a string (sentence) as input, performs the above mentioned processing on the sentence and returns the result (number).

Example1:
input1 = "World Wide Web"
output1 = 402326

Example2:
input1 = "Hello World"
output1 = 2640
Explanation:
Hello = [H-O]+[E-L]+[L] = [8-15]+[5-12]+[12] = [7]+[7]+[12] = [26]
World = [W-D]+[O-L]+[R] = [23-4]+[15-12]+[18] = [19]+[3]+[18] = [40]
Result = Number formed by concatenating [26] and [40] = 2640

Important Note:

Give the string as "Hello YOUR_NAME". For example "Hello Poornima", for taking the output screenshot.