Decoding Three Strings

For the given encoded three strings and the expected original string lengths, the method is expected to find the original strings. Here the encoding techniques are given below.

- ✓ ***Step One:*** Given any three strings, break each string into 3 parts each

  For Example – If the three strings are as below

  input1 = "John"

  input2 = "Johny"

  input3 = "Janardhan"

  - "John" should be split into "J", "oh", "n" as the FRONT, MIDDLE and END parts respectively.
  - "Johny" should be split into "Jo", "h", "ny" as the FRONT, MIDDLE and END parts respectively.
  - "Janardhan" should be split into "Jan", "ard, "han" as the FRONT, MIDDLE and END parts respectively.

    - ❖ i.e. if the number of characters in the string are in multiples of 3, then each split-part will contain equal number of characters, as seen in the example of "Janardhan"
    - ❖ if the number of characters in the string are in multiples of 3, and if there is one character more than multiple of 3, then the MIDDLE part will get the extra character, as seen in the example of "John"
    - ❖ if the number of characters in the string are in multiples of 3, and if there are two characters more than multiple of 3, then FRONT and END parts will get one extra character each, as seen in the example of "Johny"

- ✓ ***Step Two:*** Concatenate (join) the FRONT, MIDDLE and END parts of the strings as per the below specified concatenation rule to form three output strings

  output1 = FRONT part of input1 + MIDDLE part of input2 + END part of input3

  output2 = MIDDLE part of input1 + END part of input2 + FRONT part of input3

  output3 = END part of input1 + FRONT part of input2 + MIDDLE part of input3

  For Example – for the above specified example input strings,

  output1 = "J" + "h" + "han" = "Jhhan"

  output2 = "oh" + "ny" + "Jan" = "ohnyJan"

  output3 = "n" + "Jo" + "ard" = "nJoard"

- ✓ ***Step Three:*** Process the resulting output strings based on the output-processing rule
  - After the above two steps, we will now have three output strings. Further processing is required only for the third output string as per below rule
    - ❖ "Toggle the case of each character in the string", i.e. in the third output string, all lower-case characters and vice versa
    - ❖ For example. For the above example strings, output3 is "nJoard", so after applying the toggle rule, output3 should become "NjOARD"

- ✓ ***Final Result:*** The three output strings after applying the above three steps is the final result. i.e. for the above example,

  output1 = "Jhhan"

  output2 = "ohnyJan"

  output3 = "NjOARD"

Note: The given inputs are Encoded strings, have to find original strings.

Test Cases

Test Case No.	Input		Expected Output
1	inStr1 = KlErINg inStr 2 = sEgeEnGi inStr 3 = rcOLnEE	inStrLen1 = 3 inStrLen2 = 10 inStrLen3 = 11	output1 = KsR output2 = CollEEge output3 = EnGiNeerINg
2	inStr 1 = EnceStrgsProblem inStr2 = odingsEncodingT inStr3 = INGtHREHREEsTRIN	inStrLen1 = 8 inStrLen2 = 12 inStrLen3 = 26	output1 = Encoding output2 = ThreeStrings output3 = ncodingThreeStringsProblem
3	inStr1 = wiproTrainampus# inStr2 = echnoningTrainn inStr3 = LOGIESprptING@c	inStrLen1 = 17 inStrLen2 = 12 inStrLen3 = 17	output1 = wiproTechnologies output2 = PRPTrainning output3 = Trainning@Campus#
4	inStr1 = TestProble3456 inStr2 = Casem@withNumb inStr3 = 4fORsTRINGERS12	inStrLen1 = 12 inStrLen2 = 18 inStrLen3 = 13	output1 = TestCase4For output2 = StringProblem@with output3 = Numbers123456

Program Structure to be used

```
Class DecodingThreeStrings {

        public static String output1;
        public static String output2;
        public static String output3;

        public static void main(String [] args) {

                decodeThreeStrings("Jhhan", 4, "ohnyJan", 5, "NjOARD", 9);
                //check your test cases here

        }

        public static void encodeThreeStrings(String inStr1, int inStrLen1,
                        String inStr2, int inStrLen2, String inStr3, int inStrLen3,) {

                // Code here
                output1= // assign the output1 value at the end
                output2 = // assign the output2 value at the end
                output3 = // assign the output3 value at the end

        }
}
```