

## P2 :: Sequence This!

You are to write a program that takes as input a string of digits,  $S_0$ , and then calculates the next five terms of the sequence ( $S_1$  through  $S_5$ ) where sequence term  $S_{n+1}$  is derived by “describing” term  $S_n$ .

For example, if  $S_0$  is “10444221” then  $S_0$  is described from left to right as

“one 1, one 0, three 4’s, two 2’s, one 1”

This string is converted into digits from left to right resulting in an  $S_1$  value of “1110342211”.

### ***Input Format***

Your program will read from standard input. You will receive only one line of input which will contain a non-empty sequence of digits (ranging from  $'0' \leq d_i \leq '9'$ ) representing the base term  $S_0$ . The length of the input string  $S_0$  will be no greater than 10.

### ***Output Format***

Your program will write to standard output. Your program will output five lines where each line contains a string of digits (with no spaces) on the line by itself.

### ***Sample Input and Corresponding Sample Output***

Sample Input	Sample Output
26	1216 11121116 31123116 132112132116 11131221121113122116
9	19 1119 3119 132119 1113122119
0	10 1110 3110 132110 1113122110
11111111	81 1811 111821 31181211 132118111221