

Zoho Corporation - Programming Test

1. For the given number of rows, write a program to print the pattern mentioned in the example without using arrays.

Example:

Input: 5

Output:

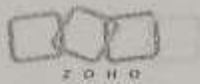
```
  1
 2 3 2
3 4 5 4 3
4 5 6 7 6 5 4
5 6 7 8 9 8 7 6 5
```

2. Write a program to print the element and its count, if the element exists more than once in a given sorted array

Example:

Input: [1, 1, 2, 2, 2, 4, 5, 5, 5, 10, 22]

Output: 1 -> 2, 2 -> 3, 5 -> 3



Explanation: Even numbers in increasing order : 0, 2, 4, 6 Odd numbers in decreasing order : 7, 5, 3, 1. Arrange elements into single list in alternate order

QUESTION 3 :

Print the encrypted message by shifting every alphabet and number by the given positions in forward circular direction. Spaces and special characters in the message should be reproduced as such in the encrypted message.

Sample Input 1:

Zoho

4

Sample Output 1 : dsIs

Sample Input 2:

Wake me early at 5 a.m

3

Sample Output 2 : zdnh ph hduob dw 8 d.p

QUESTION 4:

Given an unsorted array of integers, return the length of the longest consecutive elements sequence.

Input 1:

[100,4,200,1,3,2]

Output 1:

4

Explanation:

The longest consecutive elements sequence is [1, 2, 3, 4]. Therefore, its length is 4.

Input 2: