Problem Statement –1

A chocolate factory is packing chocolates into the packets. The chocolate packets here represent an array of N number of integer values. The task is to find the empty packets(0) of chocolate and push it to the end of the conveyor belt(array).

Example 1 :

N=8 and arr = [4,5,0,1,9,0,5,0].

There are 3 empty packets in the given set. These 3 empty packets represented as O should be pushed towards the end of the array

Input :

8 – Value of N

[4,5,0,1,9,0,5,0] – Element of arr[O] to arr[N-1],While input each element is separated by newline

Output:

4 5 1 9 5 0 0 0

Example 2:

Input:

6 — Value of N.

[6,0,1,8,0,2] – Element of arr[0] to arr[N-1], While input each element is separated by newline

Output:

6 1 8 2 0 0

Program:

```java
import java.util.*;

public class Main{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

int[] arr=new int[n];

for(int i=0;i<n;i++) {

arr[i]=sc.nextInt();}

int in=0;

for(int i=0;i<n;i++) {

if(arr[i]!=0) {

 arr[in++]=arr[i];

}}

if(in<n) {

for(int i=in;i<n;i++) {

arr[i]=0;

}}

for(int i=0;i<n;i++) {

System.out.print(arr[i]+" ");}}}
```

Problem Statement – 2

Lilah has a string, s, of lowercase English letters that she repeated infinitely many times.

She wants to find out how many times the letter 'a' occurs in the **first** n characters of the infinite string.

📥 Input Format:

- A single string s. ● An integer n.

📋 Constraints:

- 1 <= |s| <= 100
- 1 <= n <= 10^12
- s contains only lowercase letters (a-z) **Input** aba

10

Output

7

Program:

```java
import java.util.Scanner;
public class Main{
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String s = sc.next();
        long n = sc.nextLong();
        long count = 0;
        for (int i = 0; i < s.length(); i++) {
            if (s.charAt(i) == 'a') {
                count++;
            }
```

```
    }
    long total = (n / s.length()) * count;
    for (int i = 0; i < n % s.length(); i++) {
        if (s.charAt(i) == 'a') {
            total++;
        }
    }
    System.out.println(total);
    }
}
```