Assignment-3-Lab-Mid-Term-Exam

Count I

Problem Statement

You will be given an integer array **A** of size **N**. You need to count the number of even elements and the number of odd elements in the array and print them.

Input Format

- First line will contain **N**, the size of the array
- Second line will contain the array **A**.

Constraints

1. 1 <= **N** <= 1000
2. 0 <= **A[i]** <= 100; here 0 <= i < N

Output Format

- Output the number of even elements first, then print the number of odd elements.

Sample Input 0

```
6
73 35 92 0 60 88
```

Sample Output 0

```
4 2
```

Sample Input 1

```
3
7 3 10
```

Sample Output 1

```
1 2
```

Count II

Problem Statement

You will be given a string **S** as input contains only small English alphabets. You need to tell the number of vowels in it. The string will not contain any spaces.
Note: Vowels are a,e,i,o and u

Input Format

- Input will contain a string **S**.

Constraints

1. 1 <= **|S|** <= 1000 ; Here |S| means the length of string S.

Output Format

- Output the number of vowels.

Sample Input 0

```
thefoxisgone
```

Sample Output 0

```
5
```

Sample Input 1

```
ilikeassignments
```

Sample Output 1

```
6
```

Workers

Problem Statement

Suppose there are **M1** workers who can complete a work in **D** days. Unfortunately, some of them became sick before the start of the work, and now there are **M2** workers. Can you tell how many days it will take for them to complete the work?

Note: If the answer is a floating value, print the integer part of the answer.

Input Format

- Input will contain three positive integers **M1**, **M2** and **D**.

Constraints

1. 1 <= **M1** <= 100
2. 1 <= **M2** <= M1
3. 1 <= **D** <= 20

Output Format

- Output how many days it will take for M2 workers.

Sample Input 0

```
10 5 15
```

Sample Output 0

```
30
```

Explanation 0

10 workers needed 15 days to complete the work, and it will take 30 days for 5 workers to complete that work.

Sample Input 1

```
4 1 5
```

Sample Output 1

```
20
```

Small and Capital

Problem Statement

You will be given a string **S**. The string will contain both small and capital English alphabets only. You need to tell how many of them are capital alphabets and how many are small alphabets.

Input Format

- Input will contain only **S**.

Constraints

1. 1 <= **|S|** <= 1000; Here |S| means the length of S.

Output Format

- Output the count of capital alphabets first, then the count of small alphabets

Sample Input 0

```
tHeBRoWnFoX
```

Sample Output 0

```
6 5
```

Sample Input 1

```
MADAM
```

Sample Output 1

```
5 0
```

Sample Input 2

```
hello
```

Sample Output 2

```
0 5
```

Do The Same

Problem Statement

You will be given two positive integer **N** and **K**. You need to print from 1 to N, and you need to do this K times.

Please look at the sample input output.

Input Format

- Input will contain **N** and **K**.

Constraints

1. 1 <= **N,K** <= 100

Output Format

- You need to print fron 1 to N, K times. Don't forget to print new line after printing from 1 to N.

Sample Input 0

```
10 5
```

Sample Output 0

```
1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10
```

Sample Input 1

```
5 2
```

Sample Output 1

```
1 2 3 4 5
1 2 3 4 5
```

Find It

Problem Statement

You will given an integer array **A** and the size **N**. You will also be given an integer value **X**. You need to tell how many times X was appeared in the array.

Input Format

- First line will contain **N**.
- Second line will contain the integer array **A**.
- Third line will contain **X**.

Constraints

1. 1 <= **N** <= 100
2. 0 <= **A[i]** <= 1000; Here 0 <= i < N
3. 0 <= **X** <= 1000

Output Format

- Output the number of times X was appeared in the array.

Sample Input 0

```
6
4 3 5 3 3 5
3
```

Sample Output 0

```
3
```

Sample Input 1

```
6
4 3 5 3 3 5
10
```

Sample Output 1

```
0
```

Sample Input 2

```
10
5 0 7 0 7 6 4 7 7 1
7
```

Sample Output 2

```
4
```

Count III

Problem Statement

You will be given a string **S** as input. The string will contain only English small alphabets and will not contain any spaces. You need to tell how many time each alphabets from a to z appears.

Input Format

- Input will contain only **S**.

Constraints

1. 1 <= **|S|** <= 1000; Here |S| means the length of S.

Output Format

- Ouput in the format show in the sample output.

Sample Input 0

```
thebrownfox
```

Sample Output 0

```
a - 0
b - 1
c - 0
d - 0
e - 1
f - 1
g - 0
h - 1
i - 0
j - 0
k - 0
l - 0
m - 0
n - 1
o - 2
p - 0
q - 0
r - 1
s - 0
t - 1
u - 0
v - 0
w - 1
x - 1
y - 0
z - 0
```

Sample Input 1

```
appleorangezebra
```

Sample Output 1

```
a - 3
b - 1
```

c - 0
d - 0
e - 3
f - 0
g - 1
h - 0
i - 0
j - 0
k - 0
l - 1
m - 0
n - 1
o - 1
p - 2
q - 0
r - 2
s - 0
t - 0
u - 0
v - 0
w - 0
x - 0
y - 0
z - 1