

A. Autobiography

Bobo has an **undirected** graph with n vertices and m edges. The vertices are numbered by $1, \dots, n$, and the i -th edge is between the a_i -th and the b_i -th vertex. Plus, the i -th vertex is associated with a character c_i .

Find the number of ways to choose four **distinct** vertices (u, v, w, x) such that

- u and v , v and w , w and x are connected by an edge,
- $c_u = \mathbf{b}$, $c_v = \mathbf{o}$, $c_w = \mathbf{b}$, $c_x = \mathbf{o}$.

Input

The input consists of several test cases terminated by end-of-file. For each test case,

The first line contains two integers n and m .

The second line contains n characters $c_1 \dots c_n$.

For the following m lines, the i -th line contains two integers a_i and b_i .

- $4 \leq n \leq 2 \times 10^5$
- $0 \leq m \leq 2 \times 10^5$
- $c_i \in \{\mathbf{b}, \mathbf{o}\}$ for each $1 \leq i \leq n$
- $1 \leq a_i, b_i \leq n$ for each $1 \leq i \leq m$
- $a_i \neq b_i$ for each $1 \leq i \leq m$
- $\{a_i, b_i\} \neq \{a_j, b_j\}$ for each $1 \leq i < j \leq m$
- In each input, the sum of n does not exceed 2×10^5 . The sum of m does not exceed 2×10^5 .

Output

For each test case, output an integer which denotes the number of ways.

Sample Input

```
5 4
bbobo
1 3
2 3
3 4
4 5
4 6
bobo
1 2
1 3
1 4
2 3
2 4
3 4
4 0
bobo
```

Sample Output

```
2
4
0
```

Note

For the first test case, there are 2 quadrangles $(1, 3, 4, 5)$, $(2, 3, 4, 5)$.

For the second test case, there are 4 quadrangles $(1, 2, 3, 4)$, $(1, 4, 3, 2)$, $(3, 2, 1, 4)$, $(3, 4, 1, 2)$.

For the third test case, there are no valid quadrangles.