# Santa’s Security

The number of deletions to make at any index is given by the number of ‘a’on the right of that index + the number of ‘b’on the left of that index. So the variable rightA will keep track of all the ‘a’on the right of the current index(current index not included) and similarly leftB we will keep track of all the ‘b’on the left of the current index(current index included) in the below algorithm and the sum of these 2 values will be the number of deletions to make at that index, so the minimum of sum at every index will be the answer.

Time Complexity: O(n), n is the size of the string

Space Complexity: O(1)

```
#include <bits/stdc++.h>

using namespace std;
int main(int argc, char** argv) {
    string s;
    cin>>s;
    int rightA = 0;
    int leftB = 0;


    for (int i=0; i<s.length(); i++){
        if (s[i] == 'a'){
            rightA += 1;
        }
    }

    int deleteCount = leftB + rightA;

    for (int i=0; i<s.length(); i++){
        if (s[i] == 'a') {
            rightA -= 1;
        } else {
            leftB += 1;
        }

        if (leftB + rightA < deleteCount){
            deleteCount = leftB + rightA;
        }
    }
    cout<<deleteCount;
    return 0;
}
```