

## Day 79 coding Statement :

You are given a binary string  $S$  of length  $N$ . You can perform the following operation on  $S$ :

- Pick any set of indices such that no two picked indices are adjacent.
- Flip the values at the picked indices (i.e. change 0 to 1 and 1 to 0).

For example, consider the string  $S=1101101$ .

If we pick the indices  $\{1,3,6\}$ , then after flipping the values at picked indices, we will get  $1?10?110?1 \rightarrow 0111111$ .

Note that we cannot pick the set  $\{2,3,5\}$  since 2 and 3 are adjacent indices.

Find the **minimum** number of operations required to convert **all** the characters of  $S$  to 0.

### Input Format

- The first line contains a single integer  $T$  - the number of test cases. Then the test cases follow.
- The first line of each test case contains an integer  $N$  - the length of the binary string  $S$ .
- The second line of each test case contains a binary string  $S$  of length  $N$ .

### Output Format

For each test case, output the **minimum** number of operations required to convert all the characters of  $S$  to 0.

### Sample Input

```
3
6
101001
5
00000
3
111
```

### Sample Output

```
1
0
2
```

```
import java.util.Scanner;

public class RatanPrajapati_day79 {
    public static void main(String[] args) throws java.lang.Exception {

        Scanner sc = new Scanner(System.in);
        int T = sc.nextInt();
        while (T-- > 0) {
            int size = sc.nextInt();
            String st = sc.next();
            int count = 0, t = 0;
            for (int i = 0; i < size - 1; i++) {
                if (st.charAt(i) == '1') {
                    count++;
                    if (st.charAt(i) == st.charAt(i + 1)) {
                        t++;
                    }
                }
            }
            if (st.charAt(size - 1) == '1' && count == 0) {
                System.out.println('1');
                continue;
            }
            if (count == 0) {
                System.out.println(count);
            } else {
                if (t == 0) {
                    System.out.println('1');
                } else {
                    System.out.println('2');
                }
            }
        }
    }
}
```