

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 $1\rightarrow 0, 1\rightarrow 0, 1\rightarrow 0 \rightarrow 0111111$.

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

2

0

2

