

SYY has a row of  $N$  coloured blocks. Each block is either Blue (B), Silver (S), or Cyan (C). SYY wants to pick a contiguous segment in the row of blocks, and construct towers out of its blocks.

Each tower may consist of blocks of one color only, and the tower colors have to be distinct (thus, SYY can construct at most three towers). Moreover, the heights of the towers, (the numbers of blocks they consist of), also have to be pairwise unique. We assume that SYY has to utilize all the blocks in his segment of choice.

Help him out by writing a program that determines the longest contiguous segment of the row of blocks that satisfies these requirements.

### Input

First line of standard input is  $1 \leq N \leq 10^6$ , the number of blocks.

Next line contains a string of  $N$  characters, each of which is one of the colours  $B$ ,  $S$ , or  $C$ .

### Output

The first and only line of the standard input should contain a single integer, equal to the number of blocks in the longest segment that satisfies SYY's requirements.

### Example

Input:

9

CBBSSBCSC

Output:

6

### Subtasks

Subtask 1 (0 points): Sample Testcase

Subtask 2 (30 points):  $1 \leq N \leq 2500$

Subtask 3 (70 points):  $1 \leq N \leq 10^6$