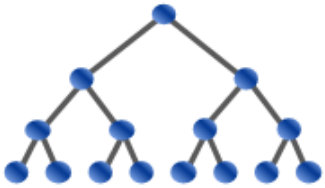

USACO 2023 US Open Contest, Bronze
Problem 1. FEB

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Contest has ended.

Log in to allow submissions in analysis mode

English (en)

Bessie and Elsie are plotting to overthrow Farmer John at last! They plan it out over N ($1 \leq N \leq 2 \cdot 10^5$) text messages. Their conversation can be represented by a string S of length N where S_i is either B or E, meaning the ith message was sent by Bessie or Elsie, respectively.

However, Farmer John hears of the plan and attempts to intercept their conversation. Thus, some letters of S are F, meaning Farmer John obfuscated the message and the sender is unknown.

The *excitement level* of a non-obfuscated conversation is the number of times a cow double-sends - that is, the number of occurrences of substring BB or EE in S. You want to find the excitement level of the original message, but you don't know which of Farmer John's messages were actually Bessie's / Elsie's. Over all possibilities, output all possible excitement levels of S.

INPUT FORMAT (input arrives from the terminal / stdin):

The first line will consist of one integer N.

The next line contains S.

OUTPUT FORMAT (print output to the terminal / stdout):

First output K, the number of distinct excitement levels possible. On the next K lines, output the excitement levels, in increasing order.

SAMPLE INPUT:

```
4
BEEF
```

SAMPLE OUTPUT:

```
2
1
2
```

SAMPLE INPUT:

```
9
FEBFEBFEB
```

SAMPLE OUTPUT:

```
2
2
3
```

SAMPLE INPUT:

```
10
BFFFFFEBFE
```

SAMPLE OUTPUT:

```
3
```

```
2
4
6
```

SCORING:

- Inputs 4-8: $N \leq 10$
- Inputs 9-20: No additional constraints.

Problem credits: William Yue and Claire Zhang

Contest has ended. No further submissions allowed.