

# Binary Walkway

Alice has recently transferred to Case Western Reserve University and she was immediately told about our legendary Binary Walkway.

As a PhD Math candidate, Alice is super interested in this construction. Fortunately, Case Western Reserve University has funding to build another binary walkway and is looking for a design idea from the CWRU community. Alice would love to submit her design, but there is a problem: there are some previous designs from other students which are all rejected.

Therefore, in order to be eligible, her design needs to **be different from** those submitted designs. You are a super talented CS major and a close friend of hers. Please help Alice with an eligible idea!

## Input

The first line consists of an integer  $n$  ( $0 \leq n \leq 20$ ).

The next line consists of  $n$  binary strings of exact length  $n$  denoting the rejected designs of binary walkways.

## Output

A binary string of exact length  $n$ . This string should be different from any provided string.

### Sample Input

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```
2
10
01
----
4
0101
0001
0110
0011
```

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### Sample Output

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```
00
----
1100
```

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