Day 82 coding Statement :

You are given *N* binary strings of length *N* each. You need to find a binary string of length *N* which is different from all of the given strings.

Note:

- A binary string is defined as a string consisting only of '0' and '1'.
- A string is considered different from another string when they have different lengths, or when they differ in at least one position.

Input Format

- The first line will contain *T* - the number of test cases. Then the test cases follow.
- The first line of each test case contains *N* - the number of strings and length of strings.
- Each of the next *N* lines contains a binary string of length *N*.

Output Format

For each test case, print on one line a binary string of length *N*, which is different from all of the given strings. If there are multiple possible answers, print any.
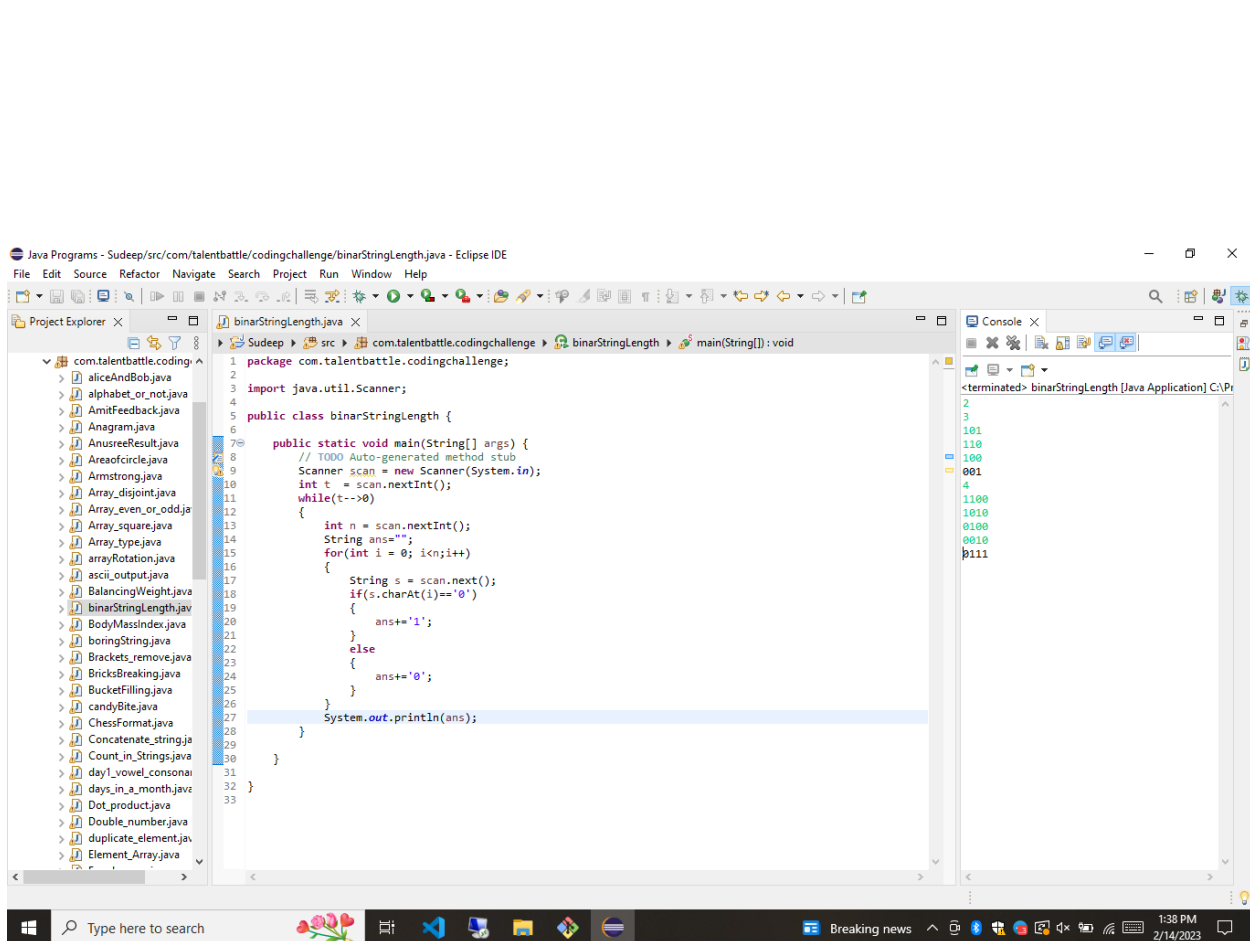
Sample Input

2

3

101

110

100

4

1100

1010

0100

0010

Sample Output

111

1101