A palindrome is a word which can be read the same way in either direction. For example, the following
words are palindromes: civic, radar, rotor, and madam.

You have found a note that contains $k$ words. Later you found out that the note contains a clue to
the password for accessing the most secret server where ICPC problems are stored. Unfortunately, the
password is not written as it is. It is the concatenation of two different strings out of the $k$ words, and
it is a palindrome. For example, you can find the palindrome abababa from the five words aaba, ba,
ababa, bbaa, and baaba by concatenating ababa and ba.

Write a program to find the password from $k$ given words.

**Input**

Your program is to read from standard input. The input consists of $T$ test cases. The number of test
cases $T$ is given in the first line of the input. Each test case starts with a line containing one integer $k$
($1 \leq k \leq 100$), where $k$ is the number of words in the note. In the next $k$ lines of each test case, each
line contains a word in ASCII characters between ‘a’ and ‘z’. The sum of lengths of strings for each
case is equal to or smaller than 10,000.

**Output**

Your program is to write to standard output. For each test case, if there is no palindrome obtained by
concatenating two strings, print a single line containing ‘0’. Otherwise, print the palindrome. If there
are two or more palindromes, just print one of them.

The following shows sample input and output for two test cases.

**Sample Input**

2
5
aaba
ba
ababa
ababa
bbaa
baaba
3
abc
bcd
cde

**Sample Output**

abababa
abababa
0