



时间限制：C/C++/Rust/Pascal 2秒，其他语言4秒

空间限制：C/C++/Rust/Pascal 1024 M，其他语言2048 M

Special Judge, 64bit IO Format: %lld

① C++ (clang++18)

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ACM模
请通过
入输出
出描述

题目描述

Define a "die" as any shape with at least one face such that each face shows a positive integer. When a die is rolled, one of its faces is selected uniformly at random. When two dice roll against each other, the die whose selected face shows a higher number earns 1 point; if both numbers are equal, each die earns $1/2$ points. For dice D and D_0 , define $\text{score}(D, D_0)$ as the expected number of points D earns from a single roll against D_0 .

Given a tournament of N vertices, please construct N dice D_1, D_2, \dots, D_N such that

- For every directed edge $i \rightarrow j$, $\text{score}(D_i, D_j) > 1/2$.

Report if it is impossible to achieve the goal.

输入描述:

The first line of the input contains a single integer N ($2 \leq N \leq 100$), denoting the number of vertices in the tournament.

Then, N lines follow. The i -th line contains a binary string s_i .

It is guaranteed that exactly one of $s_{i,j}$ and $s_{j,i}$ equals to '1' for any $1 \leq i < j \leq N$ and $s_{i,i} = '0'$ for all $1 \leq i \leq N$.

输出描述:

If there exists no solution, output -1 in one line.

Otherwise, output N lines. The i -th line describes the i -th die:

- The first integer k denotes the faces of the i -th "die";
- Then k integers v_1, v_2, \dots, v_k ($1 \leq v_i \leq 10^9$) follow, denoting the integers in each face.

The total number of faces over all dice should be bounded by 10^5 .

示例1

输入

复制

运行结果

自测