时间限制：C/C++/Rust/Pascal 2秒，其他语言4秒
空间限制：C/C++/Rust/Pascal 512 M，其他语言1024 M
Special Judge, 64bit IO Format: %lld

题目描述

There is a big museum consisting of n rooms and some bidirectional corridors. There are at most 3 doors in each room, and the corridor outgoing from the room is behind the door. All corridors outgoing from a single room lead to different rooms. The whole museum is connected, i.e., it is possible to walk between any two rooms, possibly passing through other rooms along the way.

You are to help in setting labels on doors that will make the tour through the whole museum much easier. The idea is that if a room u has d_u doors leading through corridors to other rooms, these doors are labeled with numbers $1, 2, \ldots, d_u$, then all visitors will follow a simple procedure. If they are in room u at the very beginning of their tour, they will choose the door labeled with 1 and pass through the corresponding corridor. If they are in room u and they entered it from the corridor through the door labeled with i, they will pick the door labeled with the next number (i.e., $i + 1$ if $i < d_u$ and 1 if $i = d_u$) and pass through the corresponding corridor.

You need to find a labeling to ensure that the visitors will pass through each corridor at least once irrespective of the room they start the tour in, assuming they follow the rules, do not get bored easily, and walk long enough.

输入描述:

> The first line contains an integer n ($3 \le n \le 2 \times 10^5$), indicating the number of rooms in the museum.
>
> The next n lines contain a description of all corridors, the u-th of which describes corridors connecting the u-th room with others. It begins with an integer d_u ($1 \le d_u \le 3$), the number of doors in this room. Then d_u integers $v_1, v_2, \ldots, v_{d_u}$ ($1 \le v_i \le n$, $v_i \neq u$, and $v_i \neq v_j$ if $i \neq j$) follow, giving numbers of rooms that those doors lead to.
>
> Note that all corridors are bidirectional, so if there is a door from room u to room v, there is a door from room v to room u as well.

输出描述:

> Output n lines, the i-th of which contains the numbers of rooms directly connected by corridors with room i in the order of their assigned labels.
>
> It can be shown that a valid labeling of doors always exists. If there are multiple valid labelings, you may output any.

示例1