J: Jelly

Time Limit: 1 second(s)

A local school provides jelly for their pupils every day and the school staff are very careful to see that each child has exactly the same amount.

The jelly is prepared the previous day by pouring the liquid jelly into rectangular sided moulds, one mould per child, and then put in the fridge where it sets. The moulds may differ by the length and width of their sides but are filled to different heights so that they all have the same volume. Length, width, and height are always integer values.

Unfortunately, one of the cleaners loves practical jokes! Whenever he can, before the jelly has set, he tips liquid jelly from one of the moulds into another. He is happy if he succeeds just once and doesn't repeat the joke with other moulds.

Your task is to help the school staff by preparing a report for them. They need to know who has lost jelly and who has gained it so that they can correct matters before the children arrive.

Input

The input consists of one test case. The test case begins with a single integer n, $1 \leq n \leq 100$, representing the number of children for whom jelly was prepared. Following this are n lines, each line representing one child. The data for a child consists of the child's name followed by a single space and three space-separated integers, l, w and h ($1 \leq l, w, h \leq 100$) being the length, width and height of the jelly in that child's mould. A child's name consists of a sequence of 1 up to 10 alphabetic characters (upper and/or lower case). No two children have the same name.

Output

Output consists of one line of text. If the cleaner did not manage to transfer any jelly before it set, output:

`No child has lost jelly.`

If the cleaner did manage to transfer jelly, your output must be in the form:

`ChildA` `has lost jelly to` *`ChildB`*`.`

Sample Input and Output

Sample Input 1	Output for Sample Input
3 Joe 10 10 2 Susan 10 5 4 Bill 5 5 8	No child has lost jelly.

Sample Input 2	Output for Sample Input
4 Zoe 10 2 2 Lee 6 5 2 Alan 5 4 4 Tommy 12 5 1	Zoe has lost jelly to Alan.