

Social Nerds

This years field trip for the computer science students is a hiking trip. There are far too many students to hike with one big group, so the students decide to form several smaller groups. This is where the problem emerges, every student has a different idea of what number is a perfect group size. Fortunately, the students are very understanding and willing to compromise, so every student $i \in n$ gives an interval $[a_i, b_i]$ of group sizes they could join.

For a given set of students (and their individual intervals), is it possible to form hiking groups such that the size of each group lies within the interval of each of the groups members and no student is left behind?

Input: The number of students n followed by n lines with the upper and lower bound of the interval a_i and b_i . You can assume that $a_i \leq b_i \leq n$.

Output: If it is possible to partition the students into groups (S_1, S_2, \dots, S_k) such that $|S_j| \in [a_i, b_i]$ for all $i \in S_j$, output **possible**, otherwise, output **impossible**.

Sample Input:

```
5
2 2
3 4
2 4
3 5
2 5
```

Sample Output:

```
possible
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