

CMPUT 275 - Tangible Computing

Morning Problem: Planning Practice

Description

You love playing music, especially drums! But your neighbours keep complaining that you're too noisy and it sounds terrible. They don't want to listen to you play until you've spent at least t hours mastering your instrument, maybe then you'll sound good. You want to practice enough for them to listen. The only issue is, you can only practice when none of them are around, otherwise they'll get upset.

Thankfully it seems nobody changes their schedule day to day, they all leave and get home at the same time as they did the day before. You've been keeping an eye out for when each of your neighbours leaves and comes home, all that's left to do is find out when no one is home.

Input

The first line of input will contain two space separated integers n , ($1 \leq n \leq 50$), the amount of neighbours you have, and t , ($1 \leq t \leq 100,000$) the amount of time required to master your instrument.

n lines follow, each will contain two space separated integers, s_i , ($0 \leq s \leq 23$), the time neighbour i left their home, and e_i , ($0 \leq e \leq 23$), the time neighbour i returned home. Note, the time between s_i and e_i will never exceed 23 hours.

Output

The only line of output will contain a single integer, the amount of days it took to master your instrument. If your neighbours are always home then print "IMPOSSIBLE", sadly you won't be able to master your instrument.

Sample Input 1

1 10 9 17

Sample Output 1

2

Explanation:

You have a single neighbour and they are gone from 9:00 to 17:00, this is an 8 hour block that you can practice, it will take 2 days of practising 8 hours a day to master your instrument with 10 hours of practice.

Sample Input 2

2 60 20 10 10 20

Sample Output 2

IMPOSSIBLE

Explanation:

Your neighbours are on alternate schedules, one is gone during the day and one is gone during the night, this means that one of them is always home, so you cannot master your instrument.