



Shopping Time!

It's Halloween soon and Kody likes to make his preparations well in advance! He wants to go shopping for decorations today but, due to being weak at maths, he is not sure if he has enough time. Given his schedule, determine if he will be able to go shopping.

You are provided Kody's schedule which consists of N tasks. Each of these tasks is defined by its starting time and its ending time. Kody will be free to go shopping if he does **not** have any tasks for an interval of **2 or more continuous hours**.

Input Format

The first line contains an integer N - the number of tasks Kody needs to perform today. The next N lines contain two integers each separated by a space - the start time and the ending time of some task.

Output Format

Print "YES" if Kody will be able to go shopping, "NO" otherwise

Notes

- For this problem, a day starts at number 0 and ends at number 24
- Some tasks may have overlapping times
- The times are provided in no specific order
- Accept the input from stdin and output to stdout
- Do not output unnecessary prompts such as "Enter N: ". Output only YES or NO.

Examples

Input
5 9 12 1 6 7 15 15 20 20 23
Output
No

Input
3 8 13 2 7 15 20
Output
Yes

In Sample 1, Kody is free for an hour from 0 to 1, an hour from 6 to 7, and an hour from 23 to 24. But he is not free for 2 or more hours at any point of time and thus, he cannot go shopping.

Note that first and third tasks have overlapping times from 9 to 12.

In Sample 2, Kody is free for two hours from 0 to 2, an hour from 7 to 8, two hours from 13 to 15, and four hours from 20 to 24. Thus he can go shopping between 0 to 2, 13 to 15 or 20 to 24.

Challenge Information

- This challenge can be attempted in **ANY** programming language.
- Use **Github Gist** to share your code.
- Users will be awarded 250 points on successful completion of the challenge.
- Only one submission allowed per user.
- Do not leak the solutions before the challenge is over. If caught doing so in any way, you will be disqualified.
- Using randomizers to output the final answer will result in disqualification.
- For further information or queries, contact Nuffin#0001 on discord.

Challenge Submission

[Click Here](#)

to be clear i can go shopping any time im rich as fuck -- Kody Simpson
cap -- Dark