Problem I. Illegal or Not?

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	512 megabytes

The Schengen Agreement was signed by a number of countries to uniform many visa-related questions and to allow tourists from outside of the Schengen area to enter and freely travel within Schengen member states using only one visa. A multiple-entry visa owner can perform many travels to any Schengen member state using a single visa, but migration laws limit the number of days he is allowed to stay there. For **any** consecutive 180 days a visa owner is only allowed to be inside the Schengen area for no more than 90 days in total.

A tourist has got his 5-year Schengen multiple-entry visa on October 18^{th} 2010, therefore he could travel to and from the Schengen area at any of $5 \cdot 365 + 1$ (2012 was a leap year) $= 1826$ days.

Yesterday (October 17^{th}, 2015) was the last day his visa was valid, and the tourist wants to know whether he has broken the migration laws and may face problems with obtaining a new Schengen visa. You are given the information about all trips to the Schengen member states he did using this visa and are to verify the rule about consecutive days for multiple-entry visa holders. According to the Schengen visa rules the day of arrival and the day of departure are considered to be days spent inside the Schengen area.

Input

The first line of the input contains only number of trips n ($1 \le n \le 1826$).

The i-th of the following n lines describes the i-th trip with two integers a_i and d_i — the day of arrival to Schengen area and the day of departure respectively ($1 \le a_i \le d_i \le 1826$). Days are numbered starting from the day the visa was issued.

It is guaranteed that these trips do not overlap, that is, each of 1826 days is a part of no more than one trip. Trips are given in arbitrary order.

Output

Output "`Yes`" (without quotes) if the tourist has followed the rules and may not worry about a new visa. Print "`No`" (without quotes) if he needs to start to look for an explanation to give to migration officer.

Examples

standard input	standard output
1 2 91	Yes
1 1 91	No
2 3 91 180 200	No
2 181 270 1 90	Yes

Note

In the second sample the tourist was in Schengen area for 91 days in the 180-day window which starts on day 1.

In the third sample the tourist was in Schengen area for 91 days in the 180-day window which started on day 2 (89 days from day 3 to day 91 and 2 days from day 180 to day 181).