Telescope Scheduling

Time limit: *10000 ms*
Memory limit: *256 MB*

Joe and his friends want to observe the stars tonight using a unique telescope. Joe is an astronomy student and has a list of each of the stars that will be visible in the sky. Each star appears inside a certain time window with the possibility of multiple stars to overlap, so the group assigned a value to each star indicating the desirability of observing it.

The input consists on a list L of time intervals in which the stars will be available for observation. Each interval $i \in L$ consists of the following elements:

- a start time S_i after which the star will be available for observation;
- a finish time F_i after which the star will no longer be available;
- a positive integer D_i indicating the desirability to see the i-th star.

In order to satisfy the desirability of seeing the i-th star, the observations must be performed by the telescope for the entire time period from S_i to F_i (inclusive). Thus, two stars, i and j, are not simultaneously observable (i.e. they **conflict**) if the time interval $[S_i, F_i]$ intersects the time interval $[S_j, F_j]$. Given the list L of time intervals of availability of the stars in the sky, the optimization problem is to schedule the observations in a non-conflicting way so as to maximize the total desirability of the observations that are included in the schedule.

Standard input

The first line of the input contains a positive integer N indicating the number of stars.

Each of the following i lines, $1 \leq i \leq N$, indicates the start (S_i) and finish (F_i) times of each star together with the desirability D_i of seeing that star.

Standard output

Print the sum of the desirability of the stars included in the schedule on the first line.

Constraints and notes

- $1 \leq N \leq 10^4$
- $0 \leq S_i, F_i \leq 1\,000$
- $1 \leq D_i \leq 5\,000$

Input	Output	Explanation

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7 2 7 3 6 11 5 4 17 4 13 23 2 9 30 3 24 28 5 0 5 5	17	Star 2 is in conflict with star 1, 3, and 5 and it has a higher desirability (5), so star 1, 3 and 5 are not observed. All the desirability of the other stars adds up to 17 .

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7	17	Star 2 is in conflict with star 1, 3, and 5 and it has a higher desirability (5), so star 1, 3 and 5 are not observed. All the desirability of the other stars adds up to 17 .