Problem D: Rent your airplane and make money

``ABEAS Corp.'' is a very small company that owns a single airplane. The customers of ABEAS Corp are large airline companies which rent the airplane to accommodate occasional overcapacity.

Custommers send renting orders that consist of a time interval and a price that the custommer is ready to pay for renting the airplane during the given time period.

Orders of all the custommers are known in advance. Of course, not all orders can be acomodated and some orders have to be declined. Eugene LAWLER, the Chief Scientific Officer of ABEAS Corp would like to maximize the profit of the company.

You are requested to compute an optimal solution.

1 Small Example

Consider for instance the case where the company has 4 orders AF514 (start time 0, duration 5, price 10), CO5 (start time 3, duration 7, price 14), AF515 (start time 5, duration 9, price 7) and BA01 (start time 6, duration 9, price 8). The optimal solution consists in declining CO5 and AF515 and the gain is 10 + 8 = 18. Note that the solution made of AF514 and AF515 is feasible (the airplane is rented with no interruption from time 0 to time 14) but non-optimal.

2 Input Data

Each test case is described by one `input` file that contains all the relevant data: The first line contains the number n of orders ($n \leq 3000$). This line is followed by n lines. Each of which describes an order and contains the name identifier of the order (less than 80 characters, with no white space) followed by three integer values: the start time of the order, the duration of the order and the price the custommer is ready to pay for this order (white spaces are used as separators). We assume that orders have a strictly positive duration.

3 Sample Input

```
4
AF514 0 5 10
CO5 3 7 14
AF515 5 9 7
BA01 6 9 8
```

4 Output

You are required to compute an optimal solution for each input file. Your program has to write the total price paid by airlines.

5 Sample Output

The output corresponding to the input file is:

```
18
```

This document was translated from L^AT_EX by H^EV^EA.