Problem 4: Job Schedules

Source filename:	`sched.(cpp|java)`
Input filename:	`sched.in`
Output filename:	`sched.out`

The Baber Wood Shop has a backlog of orders for its world famous rocking chair (1 chair per order). There are several steps involved in making a handmade Baber Rocking chair (eg. cutting wood pieces, assembly, sanding, applying a stain, and applying varnish). The total time required to make a chair is 1 week. However, since the chairs are sold in different regions and various markets, the amount of profit for each order may differ. In addition, there is a deadline associated with each order. The company will only earn a profit if they meet the deadline; otherwise, the profit is 0.

Write a program that will determine an optimal schedule for the orders that will maximize profit. The input file will contain one or more test cases. The first line in a test case will contain an integer, n ($0 \leq n \leq 1000$), that represents the number of orders that are pending. A value of 0 for n indicates the end of the input file.

The next n lines contain 3 positive integers each. The first integer, i, is an order number. All order numbers for a given test case are unique. The second integer represents the number of weeks from now until the deadline for i^{th} order. The third integer represents the amount of profit that the company will earn if the deadline is met for the i^{th} order.

For each test case in the input file, the output file should output a line that reports the amount of profit that results from completing the orders in an optimal order.

Example Input File (`sched.in`)

```
7
1 3 40
2 1 35
3 1 30
4 3 25
5 1 20
6 3 15
7 2 10
4
3054 2 30
4099 1 35
3059 2 25
2098 1 40
0
```

Example Output File (`sched.out`)

```
100
70
```