

Mikasa's Week of Anime

Problem Description

Mikasa is an avid anime fan. Each week she studies TV schedules with the tactical focus of a seasoned warrior: multiple channels, many shows, and *so little time*. Every episode is assigned a personal *enjoyment value* by Mikasa (how much joy she expects it to bring). Sadly, episodes on different channels often overlap.

Episodes are given with a start minute s and finish minute f within the week (minutes 1 through 10079), and enjoyment e . Episodes are treated as half-open intervals $[s, f)$: if one ends at minute f and another starts at minute f , Mikasa can watch both.

Your task is to help Mikasa choose a subset of *non-overlapping* episodes that maximizes her total enjoyment. Formally, given n triples (s_i, f_i, e_i) , select a set of indices $I = \{i_1 < \dots < i_k\}$ such that the intervals $[s_{i_j}, f_{i_j})$ are pairwise non-overlapping and $\sum_{j=1}^k e_{i_j}$ is maximized.

You can assume that the maximum enjoyment solution is unique.

Input

The input consists of several test cases. Each test case begins with a single integer n ($1 \leq n \leq 1000$) on its own line. It is followed by n lines; the i -th such line contains three space-separated integers **s f e** describing one episode, where

$$1 \leq s < 10080, \quad s \leq f < 10080, \quad 1 \leq e \leq 1,000,000.$$

Intervals are half-open $[s, f)$, so an episode ending at minute f and another starting at minute f do not overlap.

A line containing **-1** in place of n marks the end of input and should not be processed.

Output

For each test case, output one line in the format

$$E : i_1 < i_2 < \dots < i_k$$

where E is the maximum total enjoyment and i_1, \dots, i_k are the chosen episode indices (0-based, as they appear in the input). If multiple optimal sequences exist, apply the tie-breaking rule described above.

Samples

Sample Input 1	Sample Output 1
5 60 120 5 100 180 6 180 240 4 240 300 7 120 180 5 -1	21: 0 2 3 4

Sample Input 2

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3
1 10 3
10 20 4
5 15 10
-1
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Sample Output 2

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10: 2
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