(Adv.) Competitive Programming

Submit until 07.06.2019 13:30, via the judge interface

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Problem: teams (1 second timelimit)

After finishing your studies at HPI, you continue to pursue your CompProg interests by leading a club for members of all ages. You participate in as many contests as you can, and, for the best chance of winning, always send your best team of three. With your years of experience, you can pinpoint someones CompProg skill on a scale of 1 to $10\,000$, which makes this rather easy. Should there still be some ambiguity, you prefer people who have been with the club for longer, which is indicated by a lower member id. However, many contests have started using an age restriction, which you need to consider when choosing teams.

Input The input begins with a line containing n and c ($1 \leq n, c \leq 2 \cdot 10^5$), the number of members and contests. The next n lines contain the club members from id 1 to n. Each member consists of a and s ($10 \leq a \leq 105$, $1 \leq s \leq 10\,000$), their age and skill. After that follow c lines that each contain a contest, consisting of a and b ($10 \leq a \leq b \leq 105$), the minimum and maximum age for participants, both inclusive.

Output For each contest, output the ids of the best team of three, ordered by decreasing skill. If there are ties, you prefer members with lower ids. Should no team exists, output a -1.

Sample input

```
6 4
21 1000
13 500
24 5000
25 1000
75 8000
30 4000
10 105
13 24
10 23
20 30
```

Sample output

```
5 3 6
3 1 2
-1
3 6 1
```