Upvote Bots

Filename: `upvote`

Sharon frequently browses a website known as NorseHorses, a forum for rating and ranting about various viking mounts. His ultimate goal is to become the most popular user on that website. To do so, he frequently posts blogs and comments with lame jokes and overused memes in order to get upvotes. In order to get the most upvotes on the website, Sharon came up with his greatest scheme yet.

Sharon has n friends around the world, each having some number of bots at their disposal. If one of his friends is awake at the time Sharon posts a blog, they will use their bots to instantly grant upvotes equal to the number of bots. By doing so, he hopes that the bandwagon effect will kick in and no matter how low quality his post is, readers will continue to upvote it!

In order to be most effective, Sharon would like to know the maximum number of upvotes he can have on his blog post, assuming he posts it at an optimal time.

The Problem:

Given the number of bots owned by each of Sharon's friends, as well as the range of time they are awake, determine the maximum number of upvotes Sharon can get.

The Input:

The first line of the input file begins with a single, positive integer, t, representing the number of blogs Sharon will write. For each blog, input consists of multiple lines. The first of which consists of a single integer, $1 \leq n \leq 500$, the number of friends Sharon has. n lines follow, the ith of which consisting of an integer $1 \leq x \leq 10{,}000$ and two "times", a and b ($a \neq b$), indicating that the ith friend has x bots and is awake between time a and time b, inclusive. A time is formatted as four integers of the form "HH:MM", representing time in a 24-hour digital clock. See examples below.

The Output:

For each test case, output a single line saying "`Blog #i: c`" without the quotes, where `i` is the test case number, and `c` is the maximum number of upvotes Sharon can get.

(Sample Input and Output are on the next page)

Sample Input:

```
3
3
10 00:30 14:59
10 08:15 16:00
10 13:00 23:50
3
2 22:22 14:44
3 13:37 16:00
1 15:00 16:00
1
502 00:00 23:59
```

Sample Output:

```
Blog #1: 30
Blog #2: 5
Blog #3: 502
```

Note:

In the first case, if Sharon posts a blog at 14:00 (2PM), all three of his friends can upvote him.

In the second case, Sharon can post a blog at 13:37. His first and second friends will be awake, but the third friend will not, granting him 5 upvotes.

In the third case it does not matter when Sharon posts his blog because his friend is awake every minute of the day.