Competitive Programming SS23

Submit until end of contest

Problem: skiing (1.0 second timelimit)

You want to go skiing next winter. You want to book early, so you have to decide on a resort today. In each resort there is a number of stations, which are connected by tracks. Tracks always go downhill so there is no possibility of going in a circle by skiing alone.

The resorts you consider are somewhat peculiar in the way they charge you. They charge you for each route you ski. A route is a continuous sequence of tracks – i.e. you can ski from the first track all the way to the last track. To not spend too much on your holiday you decide to ski the same route every day all day. You however still want to enjoy your stay so you decide to choose this route such that it's the longest possible.

To compare many resorts you decide to write a program automating the search for the longest route.

Input   In the first line you get t ($1 \leq t \leq 10^5$), the number of ski resorts you want to compare.

For each ski resort on the first line you get n the number of stations and m the number of tracks ($1 \leq n \leq \sum_j n_j \leq 10^5, 1 \leq m \leq \sum_j m_j \leq 2 \cdot 10^5$). On the next m lines you get three numbers u, v, w ($1 \leq u, v \leq n, 1 \leq w \leq 10^4$) representing a track from station u to station v with length w.

Output   For each resort print the length of the route you would use.
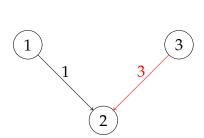
Samples can be found on the next page.

Sample input

```
2
3 2
1 2 1
3 2 3
6 8
1 2 5
1 3 8
2 3 4
2 4 3
3 4 3
3 5 10
4 5 3
6 5 14
```
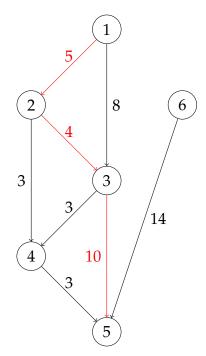
Sample output

```
3
19
```

Route for first resort

Route for second resort