Problem E
One Piece

Time limit: 3 seconds
Memory limit: 2048 megabytes

Problem Description

A vast cluster of N sky islands, once linked by M bridges, now faces isolation. A brutal storm swept through yesterday, severing all connections. The government of the sky islands has a repair plan: the i-th bridge will be fixed in V_i days, allowing passage to resume after that time.

Anthony now faces a travel challenge in the sky islands. He wants to travel from island S to island E. Please write a program to determine the minimum number of days Anthony must wait before a path opens from island S to island E.

Input Format

The first line contains two integers N and M, representing the number of sky islands and the number of bridges, respectively. The next M lines each contain three integers u, v, and V_i, indicating that there is a bridge between sky island u and sky island v with bridge fixed in V_i days. The next line contains an integer Q, representing the number of queries. The next Q lines each contain two integers S_i and E_i, representing the starting island number and the ending island number for each query.

Output Format

Output Q lines, each containing a single integer. The i-th line should contain the minimum number of days for that query.

Technical Specification

- $1 \leq N \leq 10^5$
- $1 \leq M \leq \min\left(\frac{N \times N}{2}, 5 \times 10^5\right)$
- $1 \leq V_i \leq 10^5$
- $1 \leq Q \leq 10^5$
- $1 \leq S, E \leq N$
- There is at most one bridge between any pair of sky islands.

Sample Input 1

```
5 5
1 2 3
2 3 7
3 4 8
```

```
2 4 1
4 5 5
3
1 3
3 5
1 5
```

Sample Output 1

```
7
7
5
```