Shortest Routes II (CSES)

Time limit: 1.00 s/Memory limit: 512 MB

There are n cities and m roads between them.

Your task is to process q queries where you have to determine the length of the shortest route between two given cities.

● Input

- The first input line has three integers n, m and q: the number of cities, roads, and queries.
- Then, there are m lines describing the roads. Each line has three integers a, b and c : there is a road between cities a and b whose length is c. All roads are two-way roads.
- Finally, there are q lines describing the queries. Each line has two integers a and b: determine the length of the shortest route between cities a and b.

● Output

- Print the length of the shortest route for each query. If there is no route, print -1 instead.

● Constraints

- $1 \le n \le 500$
- $1 \le m \le n^2$
- $1 \le q \le 10^5$
- $1 \le a,b \le n$
- $1 \le c \le 10^9$