# Shortest Distance

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## Problem Statement

You'll be given a graph of $N$ nodes and $E$ edges. For each edge, you'll be given $A$, $B$ and $W$ which means there is an edge from $A$ to $B$ only and which will cost $W$.

Also, you'll be given $Q$ queries, for each query you'll be given $X$ and $Y$, where $X$ is the source and $Y$ is the destination. You need to print the minimum cost from $X$ to $Y$ for each query. If there is no connection between $X$ and $Y$, print $-1$.

**Note:** There can be multiple edges from one node to another. Make sure you handle this one.

## Input Format

- First line will contain $N$ and $E$.

- Next $E$ lines will contain $A$, $B$ and $W$.

- After that you'll get $Q$.

- Next $Q$ queries will contain $X$ and $Y$.

## Constraints

1. $1 \leq N \leq 100$

2. $1 \leq E \leq 10^5$

3. $1 \leq A, B \leq N$

4. $1 \leq W \leq 10^9$

5. $1 \leq Q \leq 10^5$

6. $1 \leq X, Y \leq N$

## Output Format

- Output the minimum cost for each query.

## Sample Input 0

```
4 7
1 2 10
2 3 5
3 4 2
4 2 3
3 1 7
2 1 1
1 4 4
6
1 2
```

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

## Sample Output 0

```
7
4
6
4
5
3
```

## Sample Input 1

```
4 4
1 2 4
2 3 4
3 1 2
1 2 10
6
1 2
2 1
1 3
3 1
2 3
3 2
```

## Sample Output 1

```
4
6
8
2
4
6
```

Submissions: 462
Max Score: 25
Difficulty: Easy

Rate This Challenge:
☆☆☆☆☆

More

C++20

```cpp
1 #include <bits/stdc++.h>
2
3 using namespace std;
4
5
6
7 int main()
8 {
9     // Write your code here
10
11     return 0;
12 }
```

13

Line: 1 Col: 1

Upload Code as File ☐ Test against custom input

Run Code Submit Code