Weighted Paths on NetworkX X15175_en

Given a directed graph with n vertices and m *weighted* arcs, we wish to know the cost of the minimum-cost directed path between two given vertices, if there is one.

Input

Input starts with n and m. Then follow m 3-tuples u, v, w, with $u \neq v$, indicating an arc from u to v with weight w. The following will be true: there are no repeated arcs, all weights are positive integers, $0 \leq u < n$ and $0 \leq v < n$. Finally, there follows a pair x, y with $0 \leq x < n$ and $0 \leq y < n$.

Output

Write the total cost (sum of arc weights) of the path from x to y of least cost, if one exists; otherwise, write "no path".

Sample input 1

```
8 10
1 4 2
4 6 1
7 2 1
7 5 2
0 3 7
2 5 9
5 2 6
6 3 1
1 0 8
0 1 5
1 3
```

Sample output 1

```
4
```

Sample input 2

```
8 10
1 4 2
4 6 1
7 2 1
7 5 2
0 3 7
2 5 9
5 2 6
6 3 1
1 0 8
0 1 5
7 6
```

Sample output 2

```
no path
```

Observation

We are authorized to employ the NetworkX library.

Problem information

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