HUSTack

Problem: Week 6 - All pair shortest paths

Description

Given a directed graph G = (V, E) in which V = {1, 2, ..., n} is the set of nodes, and w(u,v) is the weight (length) of the arc(u,v). Compute d(u,v) - the length of the shortest path from u to v in G, for all u,v in V.

Input

- Line 1: contains 2 positive integers n and m (1 <= n,m <= 10000)
- Line i+1 (i = 1, 2, ..., m): contains 3 positive integers u, v, w in which w is the weight of the arc (u,v) (1 <= w <= 1000)

Output

- Line i (i = 1, 2, ..., n): wirte the ith row of the matrix d (if there is not any path from node i to node j, then d(i,j) = -1)

Example

Input

4 9

1 2 9

1 3 7

1 4 2

2 1 1

2 4 5

3 4 6

3 2 2

```
4 1 5

4 2 8
```

Output

```
0 9 7 2

1 0 8 3

3 2 0 5

5 8 12 0
```

Sample TestCase

C 17

```
1  Write your Source code here
```

Source code

C 17

```c
//C
#include <stdio.h>

int main()
{

}
```

SUBMIT CODE

Currently, this contest problem is not open for submissions

Or

C 17

Select file

SUBMIT

Tìm kiếm

ID	Bài tập	Trạng thá
db4552	ALL_PAIR_SHORTEST_PATH	Accept
0f6545	ALL_PAIR_SHORTEST_PATH	Failed

5 hàng

1-2 của 2