Lazy implementation of Dijkstra's algorithm. Develop an implementation of the lazy version of Dijkstra's algorithm that is described in the text. Run Dijkstra’s algorithm from source vertex 0.

Input:

First Line indicates the number of the Vertices (V).

Second Line indicates the number of the Edges (E).

Next E lines contains v (vertex 1), w (vertex 2) and weight in floating valuewhich are separated by space.

Output:

Print the distance from source vertex to all the vertices if there is path, separated by colon.

Sample Data:

8

15

4 5 0.35

5 4 0.35

4 7 0.37

5 7 0.28

7 5 0.28

5 1 0.32

0 4 0.38

0 2 0.26

7 3 0.39

1 3 0.29

2 7 0.34

6 2 0.40

3 6 0.52

6 0 0.58

6 4 0.93

0 to 0 :0.0

0 to 1 :1.05

0 to 2 :0.26

0 to 3 :0.99

0 to 4 :0.38

0 to 5 :0.73

0 to 6 :1.51

0 to 7 :0.6