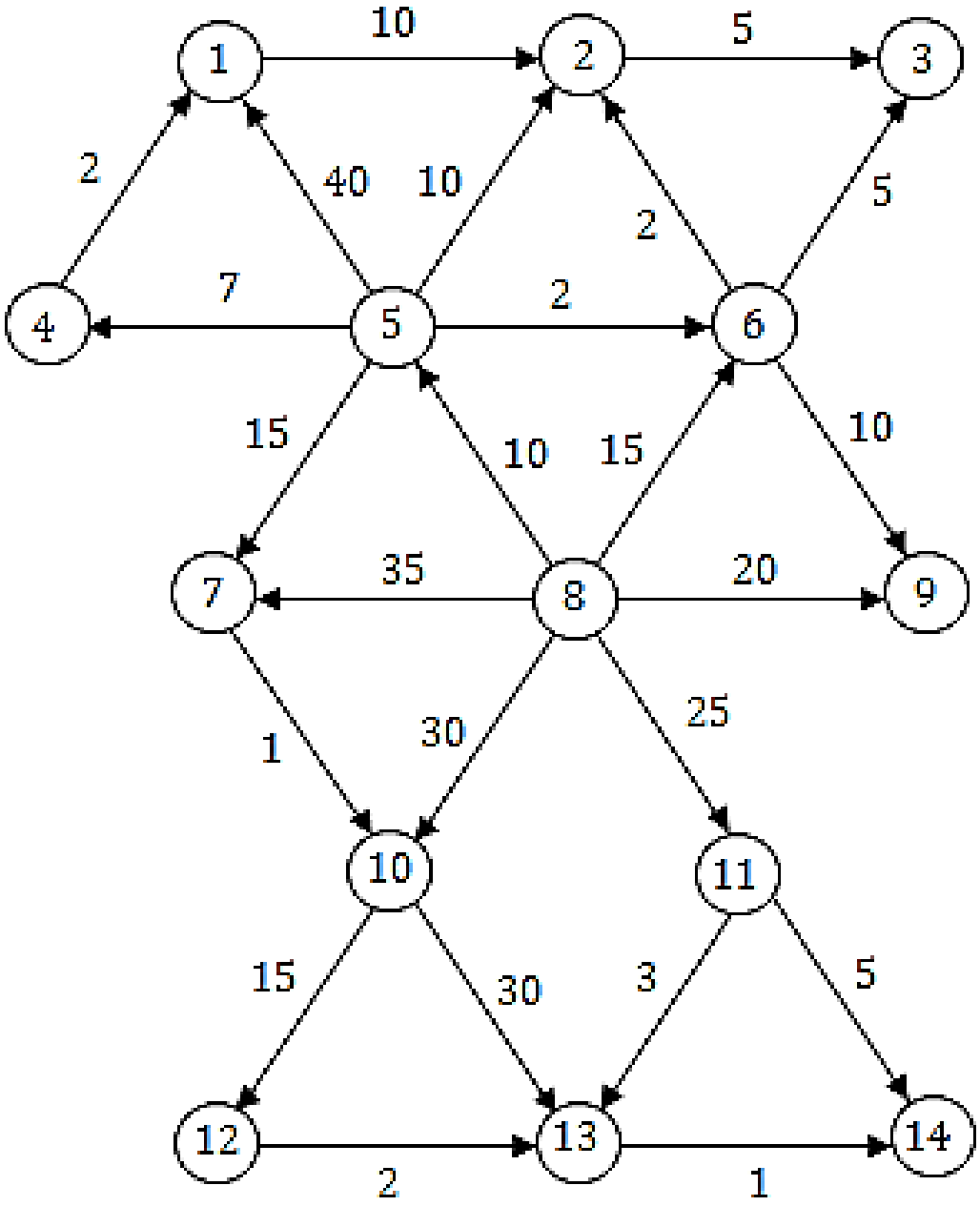
Example 1


1
2
3
4
5
6
7
8
9
10
11
12
13
14
10
5
2
40
10
2
5
7
2
15
10
15
10
35
20
1
30
25
15
30
3
5
2
1

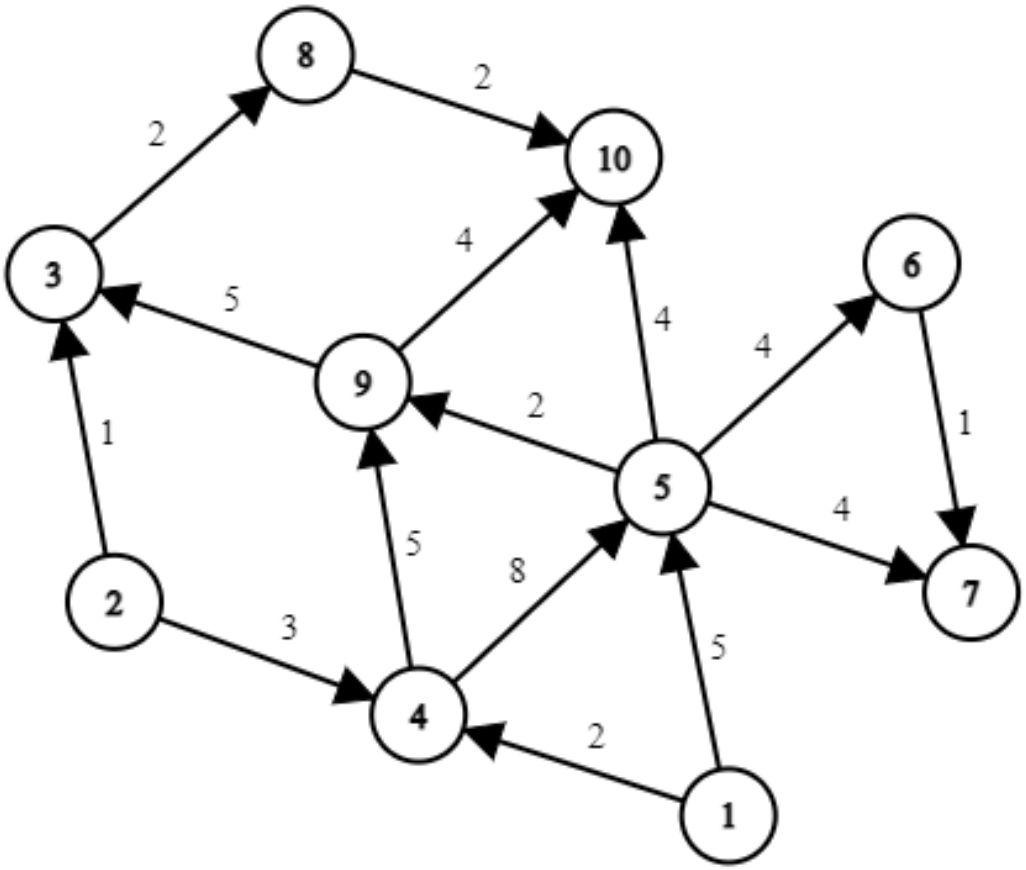
Task 1

```
Enter the source node: 8
Distance to node 1=19
Distance to node 2=14
Distance to node 3=17
Distance to node 4=17
Distance to node 5=10
Distance to node 6=12
Distance to node 7=25
Distance to node 8=0
Distance to node 9=20
Distance to node 10=26
Distance to node 11=25
Distance to node 12=41
Distance to node 13=28
Distance to node 14=29
Computation time is = 20 microseconds
```

Task 2

```
Enter u v for [u->v]: 13 14
Enter the weight of edge from 13->14: 1
Enter the source node: 8
Distance to node 1=19
Distance to node 2=14
Distance to node 3=17
Distance to node 4=17
Distance to node 5=10
Distance to node 6=12
Distance to node 7=25
Distance to node 8=0
Distance to node 9=20
Distance to node 10=26
Distance to node 11=25
Distance to node 12=41
Distance to node 13=28
Distance to node 14=29
Computation time is = 15 microseconds
```

Example 2:



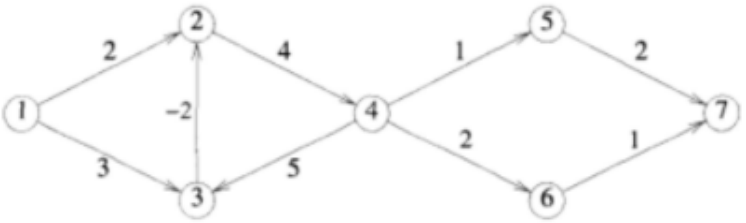
Task 1

```
Enter u v for [u->v]: 5 9
Enter the weight of edge from 5->9: 2
Enter the source node: 1
Distance to node 1=0
Distance to node 2=Non reachable
Distance to node 3=12
Distance to node 4=2
Distance to node 5=5
Distance to node 6=9
Distance to node 7=9
Distance to node 8=14
Distance to node 9=7
Distance to node 10=9
Computation time is = 27 microseconds
milan0027@DESKTOP-NJ24PNU:/mnt/c/users/milan/semester 4/algo lab$ ./a.out
```

Task 2

```
Enter the weight of edge from 5->9: 2
Enter the source node: 1
Distance to node 1=0
Distance to node 2=Non reachable
Distance to node 3=12
Distance to node 4=2
Distance to node 5=5
Distance to node 6=9
Distance to node 7=9
Distance to node 8=14
Distance to node 9=7
Distance to node 10=9
Computation time is = 11 microseconds
milan0027@DESKTOP-NJ24PNU:/mnt/c/users/milan/semester 4/algo lab$ ./a.out
```

Example 3:



Task 1:

```
Enter the weight of edge from 6->7: 1
Enter the source node: 1
Distance to node 1=0
Distance to node 2=1
Distance to node 3=3
Distance to node 4=5
Distance to node 5=6
Distance to node 6=7
Distance to node 7=8
Computation time is = 24 microseconds
milan0027@DESKTOP-NJ24PNU:/mnt/c/users/milan/semester 4/algo lab$ ./a.out
```

Task 2:

```
Enter u v for [u->v]: 6 7
Enter the weight of edge from 6->7: 1
Enter the source node: 1
Distance to node 1=0
Distance to node 2=1
Distance to node 3=3
Distance to node 4=5
Distance to node 5=6
Distance to node 6=7
Distance to node 7=8
Computation time is = 14 microseconds
milan0027@DESKTOP-NJ24PNU:/mnt/c/users/milan/semester 4/algo lab$ ./a.out
```

There is no error with this algorithm for negative weight from 3 to 2 as does not decrease further distance in cycle. Hencel dijkstra works fine here.