

Johnson's Algorithm

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1 Output Examples

The vertex number starts from

1.1 Example 1

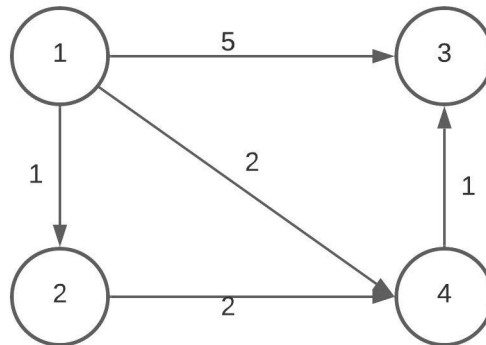


Figure 1: Example 1

```
Enter number of vertices in graph
4
Enter number of edges in graph
5
Note: Vertex number of vertices start from 1

Enter edge 1 properties Source, destination, weight respectively
1 2 1

Enter edge 2 properties Source, destination, weight respectively
1 3 5

Enter edge 3 properties Source, destination, weight respectively
1 4 2

Enter edge 4 properties Source, destination, weight respectively
2 4 2

Enter edge 5 properties Source, destination, weight respectively
4 3 1


Shortest distance from vertex 1 to all vertices
0 1 3 2

Shortest distance from vertex 2 to all vertices
Unreachable 0 3 2

Shortest distance from vertex 3 to all vertices
Unreachable Unreachable 0 Unreachable

Shortest distance from vertex 4 to all vertices
Unreachable Unreachable 1 0
```

Figure 2: Output 1

1.2 Example 2

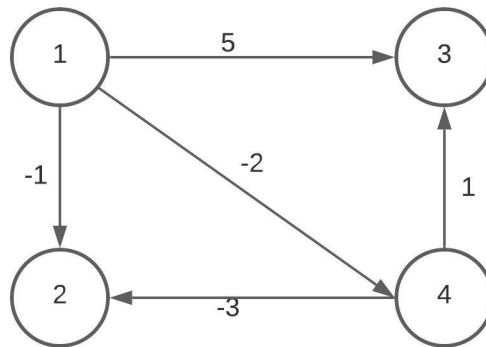


Figure 3: An example with negative weighted cycle

```
Enter number of vertices in graph
4
Enter number of edges in graph
5
Note: Vertex number of vertices start from 1

Enter edge 1 properties Source, destination, weight respectively
1 3 5

Enter edge 2 properties Source, destination, weight respectively
4 3 1

Enter edge 3 properties Source, destination, weight respectively
1 4 -2

Enter edge 4 properties Source, destination, weight respectively
4 2 -3

Enter edge 5 properties Source, destination, weight respectively
1 2 -1
The graph contains negative weight cycle!
```

Figure 4: Output 2