

DIJKSTRA ALGORITHM VISUALIZATION TOOL!

IS 362 - MATHEMATICAL MODELING FOR IS
SECTION - 50106

IMPLEMENTED BY

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TOOL'S INTERFACES

Dijkstra Algorithm

Dijkstra Algorithm Visualization Tool!

Enter the nodes starting from the start node to the destination node " in order please "

Lets Start!

Dijkstra Algorithm

Enter the node name or press "ESC" when you are done:

Enter Node

ESC

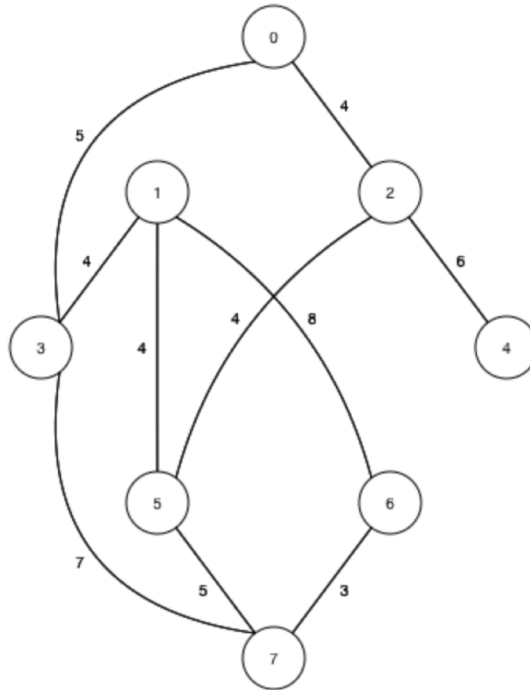
Enter the Arc between two nodes in the form (ArcName,nodeSource,nodeDestination,ArcWeight) or press "Done" when you are done:

Enter Arc

Done

TEST-CASE #1

GRAPH



GRAPH'S OUTPUT

Vertex	Known	Cost	Path
0	T	0	-1
1	T	9	3
2	T	4	0
3	T	5	0
4	T	10	2
5	T	8	2
6	T	15	7
7	T	12	3

0
0 3 1
0 2
0 3
0 2 4
0 2 5
0 3 7 6
0 3 7

TEST-CASE #1

TOOL'S INPUTS

Dijkstra Algorithm

Enter the node name or press "ESC" when you are done:

Enter Node

ESC

You have entered: 0, 1, 2, 3, 4, 5, 6, 7,

Enter the Arc between two nodes in the form (ArcName,nodeSource,nodeDestination,ArcWeight) or press "Done" when you are done:


Enter Arc

Done

You have entered: [02,0,2,4], [03,0,3,5], [13,1,3,4], [15,1,5,4], [16,1,6,8], [24,2,4,6], [25,2,5,4], [37,3,7,7], [57,5,7,5],

TOOL'S OUTPUTS

Message

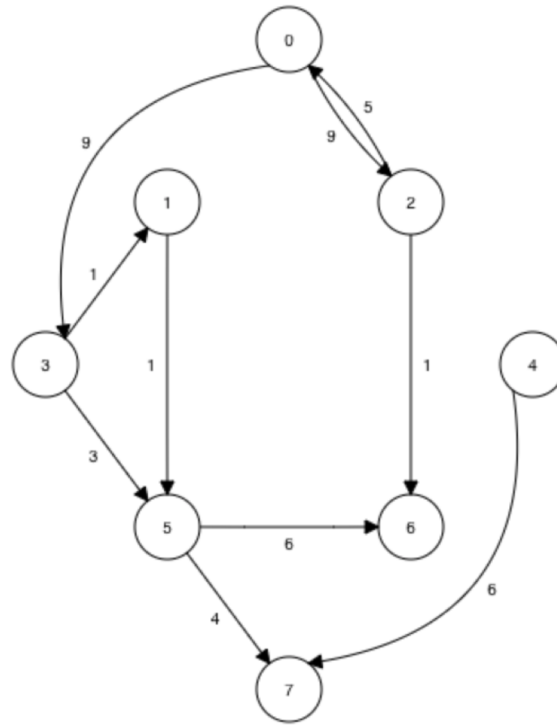


the shortest path is: 0, 3, 7,
the cost from start node to destination is: 12

OK

TEST-CASE #2

GRAPH



GRAPH'S OUTPUT

Vertex	Known	Cost	Path
0	T	0	-1
1	T	10	3
2	T	9	0
3	T	9	0
4	F	INF	-1
5	T	11	1
6	T	10	2
7	T	15	5

0

0 3 1

0 2

0 3

No Path

0 3 1 5

0 2 6

0 3 1 5 7

TEST-CASE #2

TOOL'S INPUTS

Dijkstra Algorithm

Enter the node name or press "ESC" when you are done:


You have entered: 0, 1, 2, 3, 4, 5, 6, 7,

Enter the Arc between two nodes in the form (ArcName,nodeSource,nodeDestination,ArcWeight) or press "Done" when you are done:

You have entered: [02,0,2,9], [20,2,0,5], [03,0,3,9], [31,3,1,1], [15,1,5,1], [35,3,5,5], [56,5,6,6], [57,5,7,4], [47,4,7,6], [26,2,6,1],

TOOL'S OUTPUTS

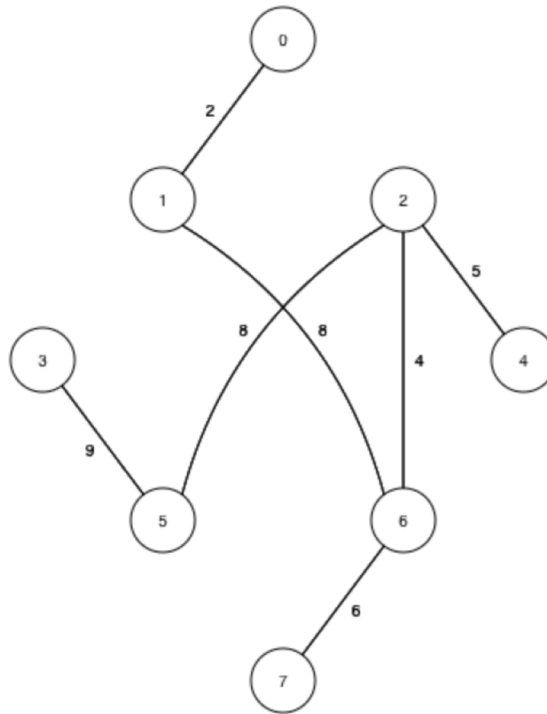
Message



the shortest path is: 0, 3, 1, 5, 7,
the cost from start node to destination is: 15

TEST-CASE #3

GRAPH



GRAPH'S OUTPUT

Vertex	Known	Cost	Path
0	T	0	-1
1	T	2	0
2	T	14	6
3	T	31	5
4	T	19	2
5	T	22	2
6	T	10	1
7	T	16	6

0
0 1
0 1 6 2
0 1 6 2 5 3
0 1 6 2 4
0 1 6 2 5
0 1 6
0 1 6 7

TEST-CASE #3

TOOL'S INPUTS

Dijkstra Algorithm

Enter the node name or press "ESC" when you are done:


You have entered: 0, 1, 2, 3, 4, 5, 6, 7,

Enter the Arc between two nodes in the form (ArcName,nodeSource,nodeDestination,ArcWeight) or press "Done" when you are done:

You have entered: [01,0,1,2], [24,2,4,5], [26,2,6,4], [25,2,5,8], [35,3,5,9], [67,6,7,6], [16,1,6,8],

TOOL'S OUTPUTS

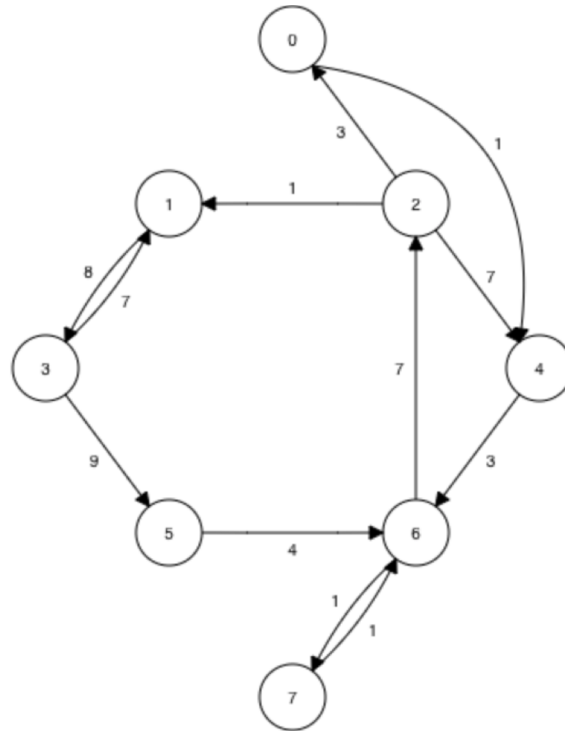
Message



the shortest path is: 0, 1, 6, 7,
the cost from start node to destination is: 16

TEST-CASE #4

GRAPH



GRAPH'S OUTPUT

Vertex	Known	Cost	Path
0	T	0	-1
1	T	12	2
2	T	11	6
3	T	20	1
4	T	1	0
5	T	29	3
6	T	4	4
7	T	5	6

0
0 4 6 2 1
0 4 6 2
0 4 6 2 1 3
0 4
0 4 6 2 1 3 5
0 4 6
0 4 6 7

TEST-CASE #4

TOOL'S INPUTS

Dijkstra Algorithm

Enter the node name or press "ESC" when you are done:

Enter Node

ESC

You have entered: 0, 1, 2, 3, 4, 5, 6, 7,

Enter the Arc between two nodes in the form (ArcName,nodeSource,nodeDestination,ArcWeight) or press "Done" when you are done:


Enter Arc

Done

You have entered: [04,0,4,1], [13,1,3,8], [31,3,1,7], [20,2,0,3], [21,2,1,1], [24,2,4,7], [62,6,2,7], [35,3,5,9], [46,4,6,3], [67,6,7,1], [76,7,6,1], [56,5,6,4],

TOOL'S OUTPUTS

Message



the shortest path is: 0, 4, 6, 7,
the cost from start node to destination is: 5

OK