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Examples for Breadth-First Search and for Dijkstra's algorithm

Example 40 ctd.
The following tables illustrate BFS on the graph given in Example 40, for $s = 3$.

vertex	initially			after step 1			after step 2		
	dequeued	distance	previous	dequeued	distance	previous	dequeued	distance	previous
1		∞	–		1	3	yes	1	3
2		∞	–		∞	–		2	1
3		0	–	yes	0	–	yes	0	–
4		∞	–		∞	–		2	1
5		∞	–		∞	–		∞	–
6		∞	–		1	3		1	3
7		∞	–		∞	–		∞	–
queue:	3			1,6			6,2,4		

vertex	after step 3			after step 4			after step 5		
	dequeued	distance	previous	dequeued	distance	previous	dequeued	distance	previous
1	yes	1	3	yes	1	3	yes	1	3
2		2	1	yes	2	1	yes	2	1
3	yes	0	–	yes	0	–	yes	0	–
4		2	1		2	1	yes	2	1
5		∞	–		3	2		3	2
6	yes	1	3	yes	1	3	yes	1	3
7		∞	–		∞	–		3	4
queue:	2,4			4,5			5,7		

vertex	after step 6			after step 7		
	dequeued	distance	previous	dequeued	distance	previous
1	yes	1	3	yes	1	3
2	yes	2	1	yes	2	1
3	yes	0	–	yes	0	–
4	yes	2	1	yes	2	1
5	yes	3	2	yes	3	2
6	yes	1	3	yes	1	3
7		3	4	yes	3	4
queue:	7			empty		

Example 41 ctd.
The following tables illustrate Dijkstra's algorithm on the graph given in Example 41, for $s = 1$.

vertex	initially			after step 1			after step 2		
	known	distance	previous	known	distance	previous	known	distance	previous
1		0	–	true	0	–	true	0	–
2		∞	–		2	1		2	1
3		∞	–		∞	–		3	4
4		∞	–		1	1	true	1	1
5		∞	–		∞	–		3	4
6		∞	–		∞	–		9	4
7		∞	–		∞	–		5	4

vertex	after step 3			after step 4/5			after step 6		
	known	distance	previous	known	distance	previous	known	distance	previous
1	true	0	–	true	0	–	true	0	–
2	true	2	1	true	2	1	true	2	1
3		3	4	true	3	4	true	3	4
4	true	1	1	true	1	1	true	1	1
5		3	4	true	3	4	true	3	4
6		9	4		8	3		6	7
7		5	4		5	4	true	5	4

vertex	after step 7		
	known	distance	previous
1	true	0	–
2	true	2	1
3	true	3	4
4	true	1	1
5	true	3	4
6	true	6	7
7	true	5	4