Starting State Queue: 0 Node 0 1 2 3 4 5 7 8 9 10 11 6 -1 -1 Distance 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 Backedge | NULL NULL NULL NULL NULL NULL NULL NULL **NULL NULL** NULL **NULL** Queue: 2, 11 Visit Node 0: Append 2 and 11 Node 0 1 2 3 4 5 6 7 8 9 10 11 Distance -1 1 -1 -1 -1 -1 -1 -1 -1 -1 1 Backedge | NULL **NULL** NULL NULL NULL NULL **NULL** (0,2)NULL **NULL** NULL (0,11)Queue: 11, 9 Visit Node 2: Append 9, Skip 0 Node 5 10 0 1 2 3 4 6 7 8 9 11 -1 1 -1 2 -1 Distance -1 -1 -1 -1 -1 Backedge | NULL | **NULL** (0,2)NULL NULL NULL NULL NULL **NULL** (2,9)NULL (0,11)Queue: 9, 1, 4 Visit Node 11: Append 1 and 4, Skip 0 Node 0 1 2 3 5 7 9 10 4 6 8 11 Distance 0 2 1 -1 2 -1 -1 -1 -1 2 -1 1 Backedge NULL (11,1)(0,2)NULL (11,4) NULL NULL NULL **NULL** (2,9)NULL (0,11)Visit Node 9: Append 8 and 3, Skip 2 Queue: 1, 4, 8, 3 Node 0 2 7 10 1 3 4 5 6 8 9 11 Distance 0 2 1 3 2 -1 -1 -1 -1 3 2 1 (11,4) NULL Backedge | NULL (0,2)NULL NULL (9,8)NULL (0,11)(11,1)(9,3)(2,9)

V	isit	Node	1: 8	Skip	11

Queue: 4, 8, 3

Node	0	1	2	3	4	5	6	7	8	9	10	11
Distance	0	2	1	3	2	-1	-1	-1	3	2	-1	1
Backedge	NULL	(11,1)	(0,2)	(9,3)	(11,4)	NULL	NULL	NULL	(9,8)	(2,9)	NULL	(0,11)

Visit Node 4: Append 6, Skip 8 and 11										Qu	ieue: 8	, 3, 6
Node	0	1	2	3	4	5	6	7	8	9	10	11
Distance	0	2	1	3	2	-1	3	-1	3	2	-1	1
Backedge	NULL	(11,1)	(0,2)	(9,3)	(11,4)	NULL	(4,6)	NULL	(9,8)	(2,9)	NULL	(0,11)
Visit Node 8: Append 10, Skip 9, 3, 6 and 4 Queue: 3, 6, 10												
Node	0	1	2	3	4	5	6	7	8	9	10	11
Distance	0	2	1	3	2	-1	3	-1	3	2	4	1
Backedge	NULL	(11,1)	(0,2)	(9,3)	(11,4)	NULL	(4,6)	NULL	(9,8)	(2,9)	(8,10)	(0,11)
Visit Node 3: Append 7, Skip 9, and 8 Queue: 6, 10,										10, 7		
Node	0	1	2	3	4	5	6	7	8	9	10	11
Distance	0	2	1	3	2	-1	3	4	3	2	4	1
Backedge	NULL	(11,1)	(0,2)	(9,3)	(11,4)	NULL	(4,6)	(3,7)	(9,8)	(2,9)	(8,10)	(0,11)
Visit Node 6: Append 5, Skip 8, 4 and 7									, 7, 5			
Node	0	1	2	3	4	5	6	7	8	9	10	11
Distance	0	2	1	3	2	4	3	4	3	2	4	1

Visit nodes 10, 7 and 5 – no changes.

(3,7)

(9,8)

(2,9) (8,10) (0,11)

(4,6)

Backedge NULL (11,1) (0,2) (9,3) (11,4) (6,5)