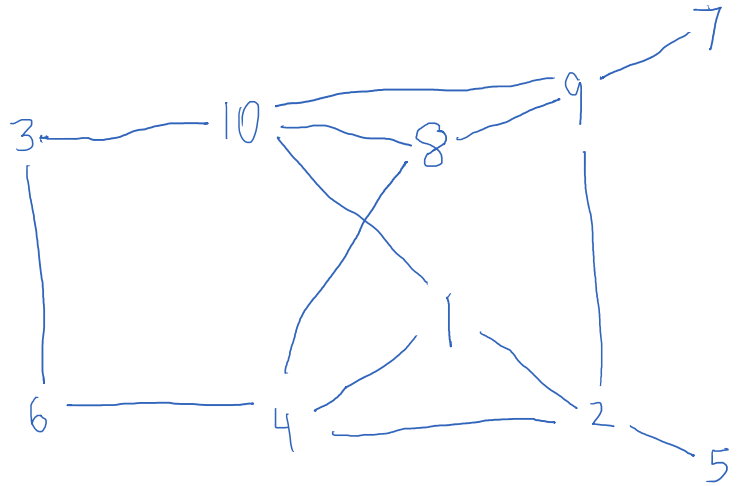
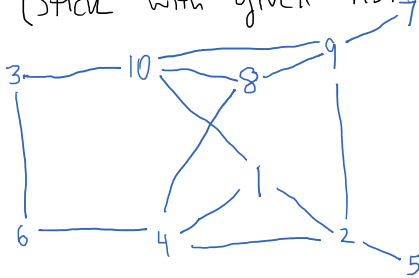


Given the adjacency list,  
draw the graph

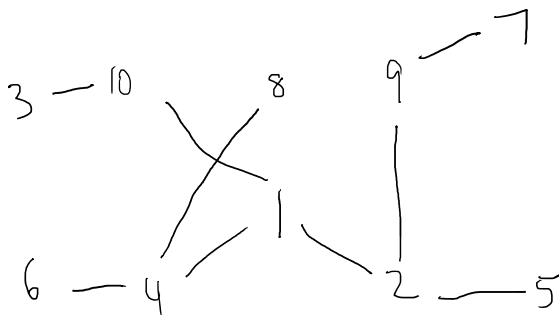
ex: u	is adjacent to
1	2, 4, 10
2	1, 4, 5, 9
3	6, 10
4	1, 2, 6, 8
5	2
6	3, 4
7	9
8	4, 9, 10
9	2, 7, 8, 10
10	1, 3, 8, 9



ex: Breadth-First Search (BFS) starting at node 1  
 (stick with given list order)



Breadth-First Tree:



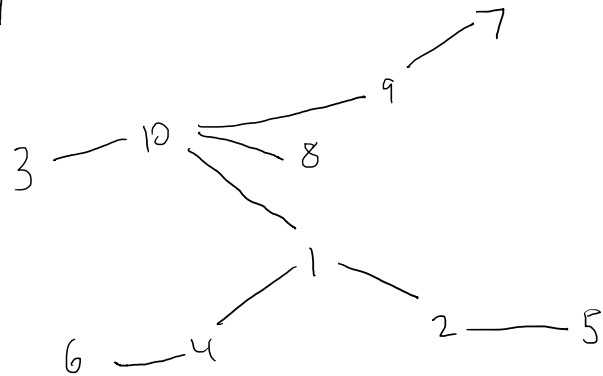
visit	enqueue and add tree edges to
1	2, 4, 10
2	5, 9
4	6, 8
10	3
5	
9	7
6	
8	
3	
7	

ex: What if we change the adjacency list of 1 to [10, 2, 4]. BFS at 1.

u	is adjacent to
1	10, 2, 4
2	1, 4, 5, 9
3	6, 10
4	1, 2, 6, 8
5	2
6	3, 4
7	9
8	4, 9, 10
9	2, 7, 8, 10
10	1, 3, 8, 9

visit	enqueue and add tree edge to
1	10, 2, 4
10	3, 8, 9
2	5
4	6
3	
8	
9	7
5	
6	
7	

Breadth-First Tree:



Therefore, changing order in an adjacency list affects the order of visits and the breadth-first tree.

