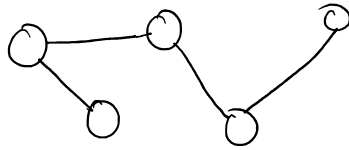
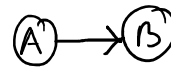


Graph — finite number of vertices/nodes.
Connections betwⁿ nodes.
connections → edges.



① Directed Graph

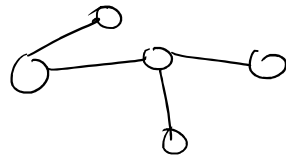


A to B.

② Undirected Graph



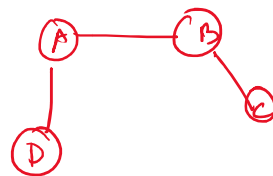
Graph Traversal — Visit every node.



BFS (Breadth First Search)

~~DFS (Depth First Search).~~

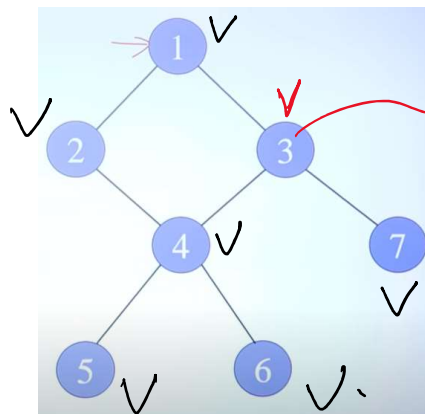
BFS — Node → ^{Visit.} Adjacent Nodes.



A → adjacent nodes

BFS → Queue Data Structure.

BFS example:-



Start from Node 3.

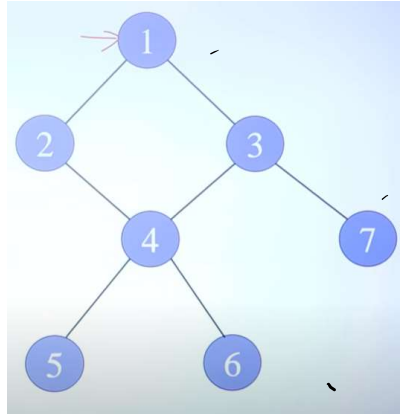


Print:-

3 7 1 4 2 5 6.

Representation of Graph -

① Adjacency Matrix -



$n = \text{no. of nodes in the graph.}$
 Size $n^2 = 7 \times 7 = 49$.

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

0/1 \rightarrow value possible.

② Adjacency List -

List of List.

