

Single source bfs: running bfs from only a single node.

Multi source bfs: running bfs from multiple nodes.

BFS can even calculate the shortest path in a 0--1 weighted graph.

Two types of BFS traversal;

1.

```
while(!q.empty())
{
    node=q.front();
    q.pop();
    for(auto child:node)
    {
        q.push(child);
    }
}
```

2. When we want to track where the level changes:

```
while(!q.empty())
{
    int n=q.size();
    for(int i=1;i<=n;i++)
    {
        node=q.front();
        q.pop();
        for(auto child:node)
        {
            q.push(child);
        }
    }
}
```

When you have to find answer using recursion (i.e. considering many possible ways) in least depth of recursion tree, use BFS instead of DFS i.e. backtracking.