**graph = {**

**'A' : ['B','C'],**

**'B' : ['D', 'E'],**

**'C' : ['E','F'],**

**'D' : ['G','B'],**

**'E' : ['B','C'],**

**'F' : ['C','H'],**

**'G' : ['I'],**

**'H' :['K'],**

**'I' :['J'],**

**'J' :[],**

**'K' :['L'],**

**'L' :['M'],**

**'M' :['N'],**

**'N' :[],**

**}**

**lable={**

**'A' : [0,0],**

**'B' : [0,3],**

**'C' : [4,0],**

**'D' : [3,0],**

**'E' : [4,3],**

**'F' : [1,3],**

**'G' : [3,3],**

**'H' : [1,0],**

**'I' : [4,2],**

**'J' : [0,2],**

**'K' : [0,1],**

**'L' : [4,1],**

**'M' : [2,3],**

**'N' : [2,0],**

**}**

**goal=['J' , 'N']**

**visited = []**

**queue = []**

**def bfs(visited, graph, node):**

**visited.append(node)**

**queue.append(node)**

**while queue:**

**s = queue.pop(0)**

**print (s, end = " ")**

**print(lable[s] , end =" ")**

**if s in goal:**

**return**

**for neighbour in graph[s]:**

**if neighbour not in visited:**

**visited.append(neighbour)**

**queue.append(neighbour)**

**bfs(visited,graph,'A')**