import queue

#define the graph

r = [[0,1,1,1,1,0,0,0,0],[0,0,0,0,1,1,0,0,0],[0,0,0,0,0,1,1,0,0],

[0,0,0,0,0,0,0,1,1],[0,0,0,0,0,0,0,0,0],[0,0,0,0,0,0,0,0,0],

[0,0,0,0,0,0,0,0,0],[0,0,0,0,0,0,0,0,0],[0,0,0,0,0,0,0,0,0]]

#define the frontier queue

frontier = queue.Queue()

#put the starting node as 1

frontier.put(0)

explored=[]

target = 8

while(True):

#pick the first element from the queue

if(frontier.empty()):

print("The target not found")

break

n= frontier.get()

if (n in explored):

continue

explored.append(n)

if (n==target):

break

#now get the child of n

for i in range(0,9):

if(r[n][i] == 1 and i not in explored):

frontier.put(i)

print(explored)