graph = {

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

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

'C' : ['F', 'G'],

'D' : [],

'E' : [],

'F' : [],

'G' : []

}

def DLS(start,goal,path,level,maxD):

print('nCurrent level-->',level)

path.append(start)

if start == goal:

print("Goal test successful")

return path

print('Goal node testing failed')

if level==maxD:

return False

print('nExpanding the current node',start)

for child in graph[start]:

if DLS(child,goal,path,level+1,maxD):

return path

path.pop()

return False

start = 'A'

goal = input('Enter the goal node:-')

maxD = int(input("Enter the maximum depth limit:-"))

print()

path = list()

res = DLS(start,goal,path,0,maxD)

if(res):

print("Path to goal node available")

print("Path",path)

else:

print("No path available for the goal node in given depth limit")