def printConfiguration(colorArray):

print("The assigned colors are as follows:")

for i in range(4):

print("Vertex: ",

i, " Color: ", colorArray[i])

def isSafe(graph, colorArray):

for i in range(4):

for j in range(i + 1, 4):

if (graph[i][j] and colorArray[j] == colorArray[i]):

return False

return True

def graphColoringAlgorithm(graph, m, i, colorArray):

if (i == 4):

if (isSafe(graph, colorArray)):

printConfiguration(colorArray)

return True

return False

for j in range(1, m + 1):

colorArray[i] = j

if (graphColoringAlgorithm(graph, m, i + 1, colorArray)):

return True

colorArray[i] = 0

return False

if \_\_name\_\_ == '\_\_main\_\_':

graph = [

[0, 1, 1, 1],

[1, 0, 1, 0],

[1, 1, 0, 1],

[1, 0, 1, 0],

]

m = 3

colorArray = [0 for i in range(4)]

if (graphColoringAlgorithm(graph, m, 0, colorArray)):

print("Coloring is possible!")

else:

print("Coloring is not possible!")

