ASCII = "ABCDEFGHIJKLMNOPQRSTUVWXYZ"

INF = 30000

#������ ������� ������� ����� �� �����

def ReadWeightMatrix():

global N, W

Fin = open ( "input\_graphs.dat" )

N = int(Fin.readline())

W = []

for i in range(N):

row = list(map(int, Fin.readline().split()))

W.append(row)

Fin.close()

print ( "������� ������� �����: " )

print ( " ", end="" )

for j in range(N):

print ( "{:4s}".format(ASCII[j]), end="" )

print ( "\n----", "----"\*N, sep="" )

for i in range(N):

print ( "{:2s}|".format(ASCII[i]), end="" )

for j in range(N):

if W[i][j] < 0:

W[i][j] = INF

print ( " .", end="" )

else:

print ( "{:4d}".format(W[i][j]), end="" )

print();

#���������� ������������ ���������� ������ �����

col = [i for i in range(N)]

ostov = []

for k in range(N-1):

# ����� ����� � ����������� �����

minDist = 1e10 # ����� ������� �����

for i in range(N):

for j in range(N):

if col[i] != col[j] and W[i][j] < minDist:

iMin = i

jMin = j

minDist = W[i][j]

# ���������� ����� � ������ ���������

ostov.append ( (iMin, jMin) )

# �������������� ������

c = col[jMin]

for i in range(N):

if col[i] == c:

col[i] = col[iMin]