Exp 11 map colouring to csp

Code

neighbors = {

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

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

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

'D': ['B', 'C']

}

colors = ['Red', 'Green', 'Blue']

assignment = {}

def is\_valid(region, color):

for neighbor in neighbors[region]:

if neighbor in assignment and assignment[neighbor] == color:

return False

return True

def color\_map():

if len(assignment) == len(neighbors):

return True

for region in neighbors:

if region not in assignment:

for color in colors:

if is\_valid(region, color):

assignment[region] = color

if color\_map():

return True

del assignment[region]

return False

return False

if color\_map():

print("Color Assignment:")

for region in sorted(assignment):

print(f"{region}: {assignment[region]}")

else:

print("No solution found.")

output

