GRAPH COLOURING PROBLEM:

CODE:

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

states = ['WA', 'NT', 'SA', 'Q', 'NSW', 'V', 'T']

neighbors = {}

neighbors['WA'] = ['NT', 'SA']

neighbors['NT'] = ['WA', 'SA', 'Q']

neighbors['SA'] = ['WA', 'NT', 'Q', 'NSW', 'V']

neighbors['Q'] = ['NT', 'SA', 'NSW']

neighbors['NSW'] = ['SA', 'Q', 'V']

neighbors['V'] = ['SA', 'NSW']

neighbors['T'] = []

colors\_of\_states = {}

def promising(state, color):

for neighbor in neighbors.get(state):

color\_of\_neighbor = colors\_of\_states.get(neighbor)

if color\_of\_neighbor == color:

return False

return True

def get\_color\_for\_state(state):

for color in colors:

if promising(state, color):

return color

def main():

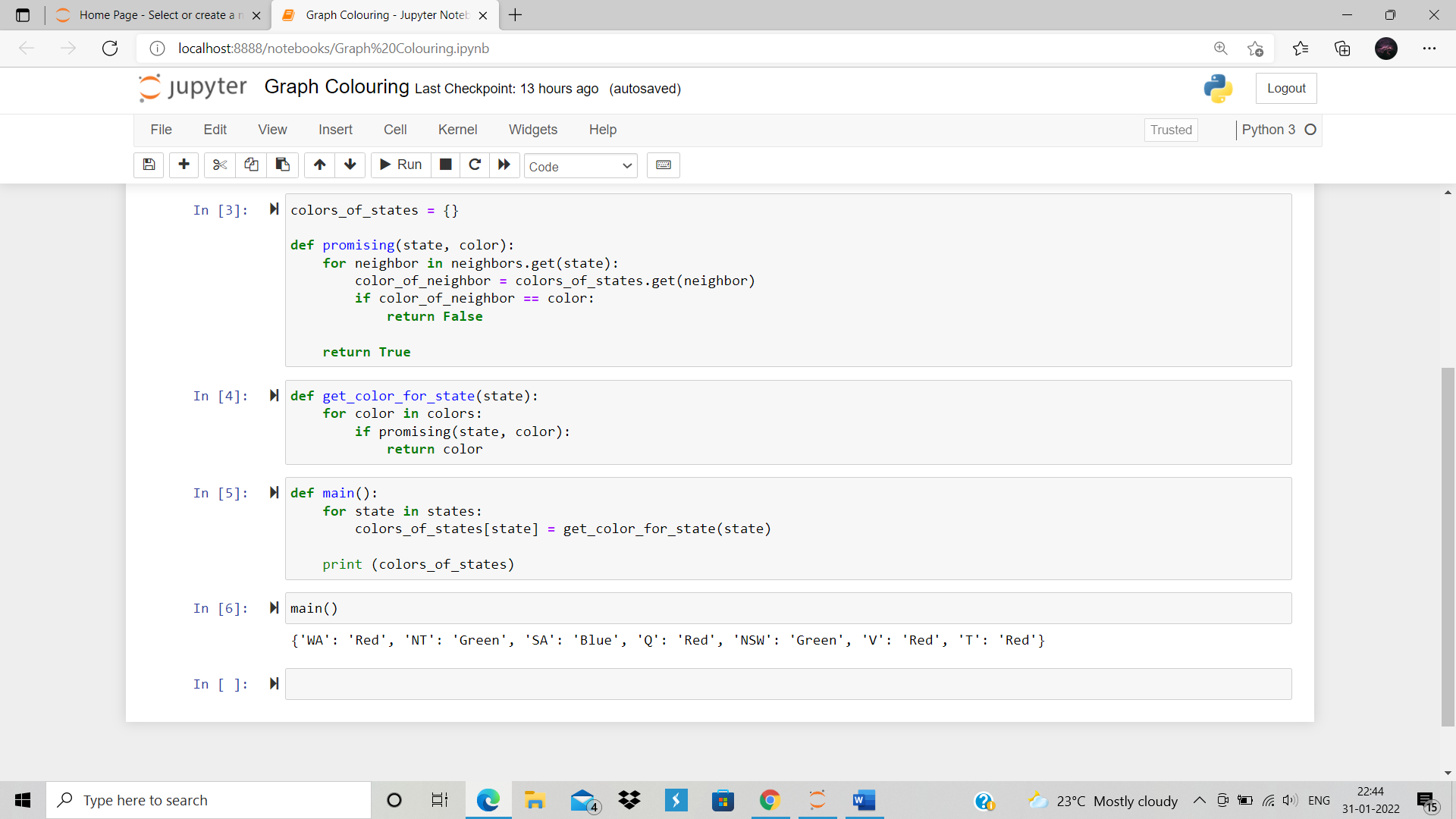
for state in states:

colors\_of\_states[state] = get\_color\_for\_state(state)

print (colors\_of\_states)

main()

OUTPUT:



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