22. Vacuum Cleaner Problem

def vacuum\_cleaner(initial\_state):

state = initial\_state.copy()

steps = []

for room in ['A', 'B']:

if state[room] == 'dirty':

steps.append(f"Cleaning {room}")

state[room] = 'clean'

else:

steps.append(f"{room} is already clean.")

return steps, state

# Example: Room A is dirty, B is clean

initial\_state = {'A': 'dirty', 'B': 'clean'}

steps, final\_state = vacuum\_cleaner(initial\_state)

for step in steps:

print(step)

print("Final state:", final\_state)

OUTPUT:

