VACUUM CLEANER AGENT

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# Implement Vacuum Cleaner Agent

def vacuum_world():
    goal_state = {'A': '0', 'B': '0'}
    cost = 0

    location_input = input("Enter Location of Vacuum (A or B): ")
    status_input = input("Enter status of " + location_input + " (0 for Clean, 1 for
Dirty): ")
    status_input_complement = input("Enter status of other room (0 for Clean, 1 for
Dirty): ")

    print("Initial Location Condition: " + str(goal_state))

    if location_input == 'A':
        print("Vacuum is placed in Location A")

        if status_input == '1':
            print("Location A is Dirty.")
            goal_state['A'] = '0'
            cost += 1
            print("COST for CLEANING A: " + str(cost))
            print("Location A has been Cleaned.")

        else:
            print("Location A is already clean.")

        if status_input_complement == '1':
            print("Location B is Dirty.")
            print("Moving RIGHT to Location B.")
            cost += 1
            print("COST for moving RIGHT: " + str(cost))
            goal_state['B'] = '0'
            cost += 1
            print("COST for SUCK: " + str(cost))
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            print("Location B has been Cleaned.")
        else:
            print("No action needed; Location B is already clean.")

    else:
        print("Vacuum is placed in Location B")

        if status_input == '1':
            print("Location B is Dirty.")
            goal_state['B'] = '0'
            cost += 1
            print("COST for CLEANING B: " + str(cost))
            print("Location B has been Cleaned.")

        else:
            print("Location B is already clean.")

        if status_input_complement == '1':
            print("Location A is Dirty.")
            print("Moving LEFT to Location A.")
            cost += 1
            print("COST for moving LEFT: " + str(cost))
            goal_state['A'] = '0'
            cost += 1
            print("COST for SUCK: " + str(cost))
            print("Location A has been Cleaned.")
        else:
            print("No action needed; Location A is already clean.")

    print("\nGOAL STATE: ")
    print(goal_state)
    print("Performance Measurement: " + str(cost))
    print("Tanush Prajwal S")
    print("1BM22CS304")

vacuum_world()
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Output

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Enter Location of Vacuum (A or B): A
Enter status of A (0 for Clean, 1 for Dirty): 1
Enter status of other room (0 for Clean, 1 for Dirty): 1
Initial Location Condition: {'A': '0', 'B': '0'}
Vacuum is placed in Location A
Location A is Dirty.
COST for CLEANING A: 1
Location A has been Cleaned.
Location B is Dirty.
Moving RIGHT to Location B.
COST for moving RIGHT: 2
COST for SUCK: 3
Location B has been Cleaned.

GOAL STATE:
{'A': '0', 'B': '0'}
Performance Measurement: 3
Tanush Prajwal S
1BM22CS304

=== Code Execution Successful ===
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