Vaccum Cleaner Agent

Step 1: Consider the two location A & B
Step 2: Start the vaccum cleaner agent
Step 3: check the status (clean or dirt) in the location A, record the direction, else off the vaccum cleaner.
Step 4: Ask the user to: 'A'
   * to clean the room
   * to stay in the room
   * to move to next location
Step 5: If the user select
   1, clean the location
   2, then stay in the room
   3, or move to next location.
Step 6: For the location B, start from or Repeat from step 3.
Step 7: Stop the vaccum cleaner agent

Cost Calculation:

$$O(b^d)$$

$$b = 4$$
$$d = 2$$

$$O(4)^2 = O(16)$$

Output:
Enter state of A (0 for clean, 1 for dirty):
Enter state of B (0 for clean, 1 for dirty):
Enter location (A or B): A
Cleaned A
Moving vaccum right
Cleaned B
Cost = 2
{'A': 0, 'B': 0}

Enter state of A (0 for clean, 1 for dirty):1
Enter state of B(0 for clean, 1 for dirty):0
Enter location (A or B) :A
Cleaned A
Moving vacum right
B is clean
Cost: 1
{'A': 0, 'B': 0}

OUTPUT

Enter state of A (0 for clean, 1 for dirty): 1
Enter state of B (0 for clean, 1 for dirty): 1
Enter location (A or B): A
Cleaned A.
Moving vacuum right
Cleaned B.
Cost: 2
{'A': 0, 'B': 0}
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Enter state of A (0 for clean, 1 for dirty): 0
Enter state of B (0 for clean, 1 for dirty): 0
Enter location (A or B): B
Turning vacuum off
Cost: 0
{'A': 0, 'B': 0}

Enter state of A (0 for clean, 1 for dirty): 1
Enter state of B (0 for clean, 1 for dirty): 0
Enter location (A or B): A
Cleaned A.
Moving vacuum right
B is clean
Cost: 1
{'A': 0, 'B': 0}

Enter state of A (0 for clean, 1 for dirty): 0
Enter state of B (0 for clean, 1 for dirty): 1
Enter location (A or B): B
Cleaned B.
Moving vacuum left
A is clean
Cost: 1
{'A': 0, 'B': 0}

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