LAB-2

VACCUM CLEANER AGENT

CODE:-

```
def vacuum_cleaner():
    cost = 0



    state_A = int(input("Enter state of A (0 for clean, 1 for dirty): "))
    state_B = int(input("Enter state of B (0 for clean, 1 for dirty): "))
    location = input("Enter location (A or B): ").upper()



    def both_clean():
        return state_A == 0 and state_B == 0

    if both_clean():
        print("Turning vacuum off")
    else:
        if location == 'A':
            if state_A == 1:
                print("Cleaned A.")
                cost += 1
                state_A = 0
            else:
                print("A is clean")
```

```
    if state_B == 1:
        print("Moving vacuum right")
        print("Cleaned B.")
        cost += 1
        state_B = 0
        # Confirm B is clean now
        b_clean = int(input("Is B clean now? (0 if clean, 1 if dirty): "))
        state_B = b_clean

        # Check if A is dirty again
        a_dirty = int(input("Is A dirty? (0 if clean, 1 if dirty): "))
        state_A = a_dirty

        if state_A == 0:
            print("A is clean")
        else:
            print("A is dirty")

        print("Moving vacuum left")

elif location == 'B':
    if state_B == 1:
        print("Cleaned B.")
        cost += 1
        state_B = 0
```

```
        else:
            print("B is clean")

        if state_A == 1:
            print("Moving vacuum left")
            print("Cleaned A.")
            cost += 1
            state_A = 0

            a_clean = int(input("Is A clean now? (0 if clean, 1 if dirty): "))
            state_A = a_clean



            b_dirty = int(input("Is B dirty? (0 if clean, 1 if dirty): "))
            state_B = b_dirty

            if state_B == 0:
                print("B is clean")
            else:
                print("B is dirty")

            print("Moving vacuum right")

print(f"Cost: {cost}")
print({'A': state_A, 'B': state_B})
```

vacuum_cleaner()

OUTPUT:-