2/12/2023

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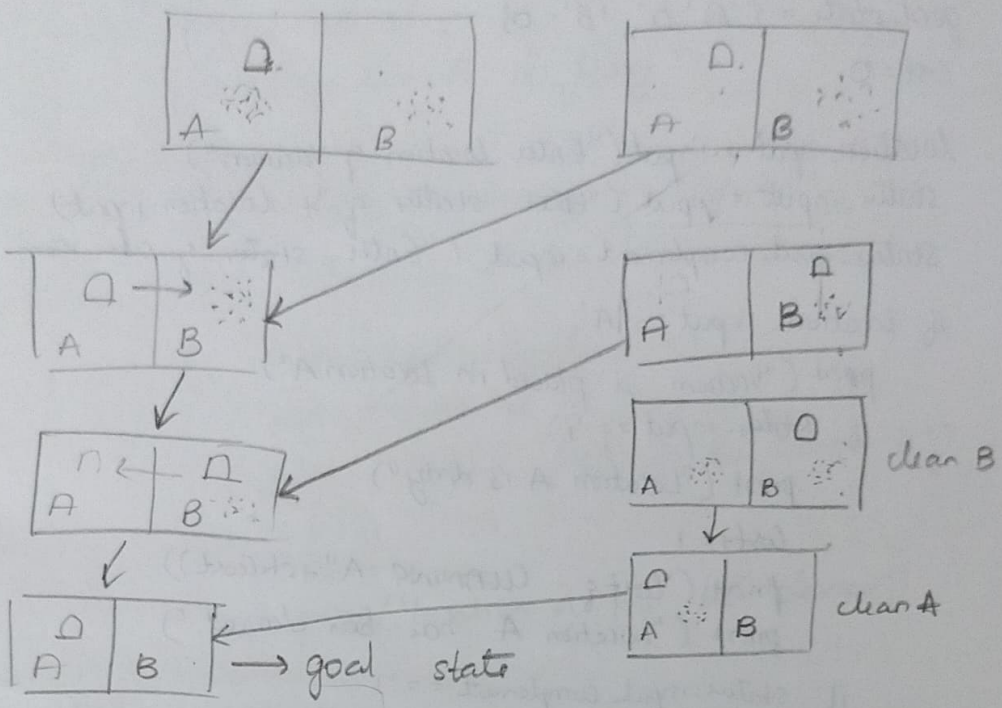
→ Vaccumm cleaner agent



Algorithm

1) Initialize the starting and goal state, the goal is to clean both rooms A and B ~~and Cmax~~

2) If status = Dirty then clean

~~else if location = A then return right~~

~~else if location = B then return left~~

else if location = A and status = clean then return right

else if Location = B and status = clean the return left

else exit

3) If both the locations are clean the vaccumm cleaner is done with it's task

Code:

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

    location_input = input("Enter location of Vacuum")
    status_input = input("Enter status of " + location_input)
    status_input_complement = input("Enter status of other room")

    if location_input == 'A':
        print("Vacuum is placed in location A")
        if status_input == '1':
            print("Location A is dirty")
            cost += 1
            print("Cost for CLEANING A" + str(cost))
            print("Location A has been cleared.")
        if status_input_complement == '1':
            print("Location B is dirty")
            print("Moving right to the location B")
            cost += 1  #RIGHT

            cost += 1  # SUCK
            print("Location B has been cleared.")
        else:
            print("No action" + str(cost))
            print("Location B is already clean")

    if (status_input == '0'):
        print("Location A is already clean")
        if status_input_complement == '1':
            print("Location B is Dirty")
            print("Moving RIGHT to the location B")
            cost += 1
            cost += 1
            print("Location B has been cleared")
        else:
            print("No action" + str(cost))
            print(cost)
            print("Location B is already clean")
```

```
else:
    print("Vacuum is placed in location B")
    if status_input == '1':
        print("Location B is Dirty")
        cost += 1
        print("Cost for cleaning " + str(cost))
        print("Location B has been cleaned.")
        if status_input_complement == '1':
            print("Location A is Dirty")
            print("Moving left to the Location A")
            cost += 1
            cost += 1
            print("Location A has been cleaned")
    else:
        print(cost)
        print("Location B is already clean")
        if status_input_complement == '1':
            print("Location A is Dirty")
            print("Moving LEFT to the Location A")
            cost += 1
            cost += 1
            print("Cost for SUCK" + str(cost))
            print("Location A has been cleaned")
        else:
            print("NO action" + str(cost))
            print("Location A is already clean")
print("GOAL STATE:")
print(goal_state)
print("Performance Measurement" + str(cost))
print("0 indicates clean and 1 indicates dirty")
vacuum_world()
```

→ Output:

Enter Initial Location of Vacuum (A/B) : B

Enter status of each room (1- dirty, 0- clean):

Status of Room

```
0 indicates clean and 1 indicates dirty
Enter Location of Vacuumb
Enter status of b1
Enter status of other room1
Vacuum is placed in location B
Location B is Dirty.
COST for CLEANING 1
Location B has been Cleaned.
Location A is Dirty.
Moving LEFT to the Location A.
COST for moving LEFT2
COST for SUCK 3
Location A has been Cleaned.
GOAL STATE:
{'A': '0', 'B': '0'}
Performance Measurement: 3
```