

# VACUUM WORLD

Shreya S Rudagi  
1BM22CS267

//Code:

```
cost=0

def vacuum(state1, state2, loc):
    global cost
    if state1 == "0" and state2 == "0":
        print("All done")
        return

    if loc == "A":
        if state1 == "1" and state2=="1":
            print("Cleaned A")
            cost= cost+1
            state1 = "0"
            state1 = input("Is A dirty again?: ")
            vacuum(state1,state2,"A")
        elif state1=="1" and state2=="0":
            print("Cleaned A")
            cost= cost+1
            state1 = "0"
            state1 = input("Is A dirty again?: ")
            state2 = input("Is B dirty again?: ")
            vacuum(state1,state2,"A")
        elif state1=="0" and state2=="1":
            print("Moving to B")
            loc="B"
            vacuum(state1,state2,loc)

    elif loc == "B":
        if state1 == "1" and state2=="1":
            print("Cleaned B")
            cost= cost+1
            state2 = "0"
            state2 = input("Is A dirty again?: ")
            vacuum(state1,state2,"B")
        elif state1=="0" and state2=="1":
            print("Cleaned B")
            cost= cost+1
            state1 = "0"
            state1 = input("Is A dirty again?: ")
            state2 = input("Is B dirty again?: ")
            vacuum(state1,state2,"A")
        elif state1=="1" and state2=="0":
            print("Moving to B")
            loc="B"
            vacuum(state1,state2,loc)
```

```
print("Enter both states and location of vacuum")
state1 = input("Enter state 1 (0 or 1): ")
state2 = input("Enter state 2 (0 or 1): ")
loc = input("Enter loc (A or B): ")
vacuum(state1, state2, loc)
print("Total cost " + str(cost))
```

```
print("Shreya S Rudagi")
print("1BM22CS267")
```

//Output:

```
➡ Enter both states and location of vacuum
Enter state 1 (0 or 1): 1
Enter state 2 (0 or 1): 1
Enter loc (A or B): A
Cleaned A
Is A dirty again?: 1
Cleaned A
Is A dirty again?: 0
Moving to B
Cleaned B
Is A dirty again?: 0
Is B dirty again?: 1
Moving to B
Cleaned B
Is A dirty again?: 0
Is B dirty again?: 0
All done
Total cost 4
```