Vacuum Cleaner Program (Lab 2)

cost = 0

def helper(status\_A, status\_B, curr\_loc):

global cost

if status\_A == 0 and status\_B == 0:

print("Goal reached")

return

if curr\_loc == 'A':

if status\_A == 1:

print("Room A is dirty, suck operation done")

cost += 1

print(f"Cost is {cost}")

status\_A = int(input("Enter the current status of A (0 for clean, 1 for dirty): "))

else:

print("Room A is already clean")

print("Moving right to Room B")

helper(status\_A, status\_B, 'B')

elif curr\_loc == 'B':

if status\_B == 1:

print("Room B is dirty, suck operation done")

cost += 1

print(f"Cost is {cost}")

status\_B = int(input("Enter the current status of B (0 for clean, 1 for dirty): "))

else:

print("Room B is already clean")

print("Moving left to Room A")

helper(status\_A, status\_B, 'A')

status\_A = int(input("Enter the current status of A (0 for clean, 1 for dirty): "))

status\_B = int(input("Enter the current status of B (0 for clean, 1 for dirty): "))

curr\_loc = input("Enter the current location of the cleaner (A or B): ")

helper(status\_A, status\_B, curr\_loc)

Output:

Enter the current status of A (0 for clean, 1 for dirty): 1

Enter the current status of B (0 for clean, 1 for dirty): 1

Enter the current location of the cleaner (A or B): A

Room A is dirty, suck operation done

Cost is 1

Moving right to Room B

Room B is dirty, suck operation done

Cost is 2

Moving left to Room A

Goal reached