In [41]:
```
def fire_alaram_sytem():

    #smoke detectors:  detected = 1 , undetected = 0.
    #temperature sensors:  detected = 1, undetected = 0.

    #goal state = {'0', '0'}

#get input

    smoke = input("Enter the current condition: (smoke detected or not) (1/0) : ")
    temp = input("Enter the value of temperature: (value in centigrade) : ")
    print("\n")

    goal_state = [smoke,temp]

    print("Current condition and temperature value : ",goal_state)

    cost = 0

    if smoke == '' and temp == '':
         print("Invalid input!! input the values agaian!!")

    #if smoke and temperature are both high.
    if smoke == '1' and temp > '45':
        print("==> Smoke and high temperature is detected!! Bringing things to normal.")
        alarm()
        sprinkle()
        cost += 1
        smoke = 0
        temp = 44
        print("Everything's back to normal!!")
    #if only smoke detected.
    elif smoke == '1':
        print("==> Smoke is detected!! Bringing things to normal.")
        alarm()
        sprinkle()
        cost += 1
        smoke = 44
        print("==> Everything's back to normal!!")
    #if only temp detected.

    elif temp > '45':
        print("==> Temperature is detected!! Bringing things to normal.")
        alarm()
        call_fire_department()
        cost += 1
        temp = 44

        print("==> Everything's back to normal!!")
    print("cost is =",cost)




def alarm():
    #activate alaram
    print("=> Alarm!!!!!")

def sprinkle():

    print("=> sprinkle syatem activated!!")

def call_fire_department():

    print("=> fire department called!!!")


fire_alaram_sytem()
```

```
Enter the current condition: (smoke detected or not) (1/0) : 1
Enter the value of temperature: (value in centigrade) : 23


Current condition and temperature value :  ['1', '23']
==> Smoke is detected!! Bringing things to normal.
=> Alarm!!!!!
=> sprinkle syatem activated!!
==> Everything's back to normal!!
cost is = 1
```

In [ ]:

In [42]:
```
#task 2
```

In [43]:
```
class Automatic_watering_system:

    def __init__(self):
        self.moisture_level = input("Enter moisture level in percentage : ")

    def water_it(self):
        print("As the soil is wet,keep watering the soil!")

    def water_system_off(self):
        print("The soil is Moist.Switichiing off the watering system to prevent it from over watering.")

    def deactivate_water_system(self):
        print("The soil is wet.The agent is deactivating the watering system to prevent waterlogging.")

    def checking_level(self):

        if self.moisture_level == '40' or self.moisture_level < '40':
            print("Dry soil!!")
            self.water_it()

        elif self.moisture_level > '40' and self.moisture_level < '60':
            print("Moist soil!")
            self.water_system_off()

        elif self.moisture_level > '60':
            print("Wet soil!")
            self.deactive_water_syatem()



watersytem = Automatic_watering_system()

watersytem.checking_level()
```

```
Enter moisture level in percentage : 45
Moist soil!
The soil is Moist.Switichiing off the watering system to prevent it from over watering.
```

In [ ]:

In [ ]:

In [ ]:

In [ ]: