LAB TASK #02

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TASK-1

```python
def fire_alaram_system():


    smoke = 0
    temp  = 0

    #Checking the Smoke detection
    smoke =  int(input("Press 1 for smoke detection and Press 2 for No Smoke detection: "))


    #Checking the Temp
    temp =   int(input("Enter the Temperature: "))

    if((type(temp) != int) or (type(smoke) != int )):
        print("Problem in sensor")
        return


    if(temp > 50):

        if(smoke == 1):
            print("Temperature is High but no smoke is detected")


            alaram()
            fire_department()
            return

        if(smoke == 2):
            print("Temperature is High and also smoke is detected")
```

```python
            alaram()
            fire_department()
            sprinkler_system()
            return


    elif temp in range(0, 40):
        if(smoke == 1):
            print("Temperature is low also no smoke is detected")
            print("Don't worry Everything is Normal :) ")
            return


        if(smoke == 2):
            print("Temperature is low and  smoke is detected")
            alaram()
            fire_department()
            return

def alaram():
    print("Alaram is Ringing")
    return


def sprinkler_system():
    print("sprinkler system is Activated")
    return

def fire_department():
    print("Fire Department is called")
```

OUTPUT

```
In [37]: fire_alaram_system()

         Press 1 for smoke detection and Press 2 for No Smoke detection: 1
         Enter the Temperature: 23
         Temperature is low also no smoke is detected
         Don't worry Everything is Normal :)
```

```
In [38]: fire_alaram_system()

         Press 1 for smoke detection and Press 2 for No Smoke detection: 2
         Enter the Temperature: 23
         Temperature is low and  smoke is detected
         Alaram is Ringing
         Fire Department is called
```

```
In [40]: fire_alaram_system()

         Press 1 for smoke detection and Press 2 for No Smoke detection: 2
         Enter the Temperature: 77
         Temperature is High and also smoke is detected
         Alaram is Ringing
         Fire Department is called
         sprinkler system is Activated
```

```
In [40]: fire_alaram_system()

         Press 1 for smoke detection and Press 2 for No Smoke detection: 2
         Enter the Temperature: 77
         Temperature is High and also smoke is detected
         Alaram is Ringing
         Fire Department is called
         sprinkler system is Activated
```

TASK-2

import logging

class Watering_system:

```python
    def __init__(self):
        try:
            self.dry_soil  =  0
            self.moist_soil =  0
            self.wet_soil   =  0
            self.dry_soil = int(input("Moisture level of Dry soil is
Disabled. Press 1 to Enable it or to disable press 0."))
            self.moist_soil = int(input("Moisture level of moist soil is
Disabled. Press 1 for Enable it or to disable press 0.  "))
            self.wet_soil = int(input("Moisture level of wet soil is
Disabled. Press 1 for Enable it or to disable press 0.  "))

            if(self.dry_soil == 1):
                logging.info("watering System is ON ")
                print("Moisture Level is Dry.So the Watering System is
ON")


            if(self.moist_soil == 1):
                logging.info("watering System is OFF ")
                print("Moisture Level is Moist Soil. So, to avoid over
watering the watering system is off")

            if(self.wet_soil == 1):
                logging.info("Deactivating the watering system. ")
                print("Moisture Level is wet Soil. So, to prevent
watering logging the watering system is Deactivated")

        except ValueError as e:
            print("An error occurred: {}".format(e))


w = Watering_system()
```

```
Moisture level of Dry soil is Disabled. Press 1 to Enable it or press 0 to disable:  1
Moisture level of moist soil is Disabled. Press 1 for Enable it or press 0 to disable:  0
Moisture level of wet soil is Disabled. Press 1 for Enable it or press 0 to disable:  0
Moisture Level is Dry.So the Watering System is ON
```

```
Moisture level of Dry soil is Disabled. Press 1 to Enable it or press 0 to disable:  0
Moisture level of moist soil is Disabled. Press 1 for Enable it or press 0 to disable:  1
Moisture level of wet soil is Disabled. Press 1 for Enable it or press 0 to disable:  0
Moisture Level is Moist Soil. So, to avoid over watering the watering system is off
```

```
Moisture level of Dry soil is Disabled. Press 1 to Enable it or press 0 to disable:  0
Moisture level of moist soil is Disabled. Press 1 for Enable it or press 0 to disable:  0
Moisture level of wet soil is Disabled. Press 1 for Enable it or press 0 to disable:  1
Moisture Level is wet Soil. So, to prevent watering logging the watering system is Deactivated
```