ASSIGNMENT – 02

PYTHON IDE PROGRAMMING

ASSIGNMENT NUMBER	02
STUDENT NAME	VIVEK V R
STUDENT ROLL NO	411719106062

BUILD A PYTHON CODE, ASSUME U GET THE TEMPERATURE AND HUMIDITY VALUES (GENERATED WITH RANDOM FUNCTION TO A VARIABLE) AND WRITE THE CONDITION CONTINUOSLY DETECT ALARM IN CASE OF HIGH TEMPERATURE.

PROGRAM

```
from random import randint as ri
from time import sleep as delay
from os import system as cmd

temperatureThresholdRange = range(20,31)
humidityThresholdRange = range(35,75)

def clrscr():
    try:
        cmd("cls")   # for WINDOWS
    except Exception as e:
        cmd("clear") # for LINUX

def getHumidity():
    return(ri(0,100)) # returns moisture in %

def getTemperature():
    return(ri(0,45)) # returns temperature in °C

# Recursion is safer than while(True)
```

```
# Coz python has a built-in exception to stop the execution of code after about a 1000 recursive calls


def myRecursiveLoop():
    clrscr()
    t,h = getTemperature(),getHumidity()


    print(f"\n\nCurrent Temperature : {t} °C\nCurrent Humidity : {h} %\n")
    print(f"{'Dangerous levels of Humidity' if (h not in humidityThresholdRange) else ''}\n{'Dangerous levels of Temperature' if t not in temperatureThresholdRange else ''}\n\n")


    # 1 sec delay before next execution
    delay(1)
    myRecursiveLoop()


try:
    myRecursiveLoop()
except RecursionError:
    print("Python safely terminated after about a 1000 recursive calls")
    exit()
```