**Assignment -2**

Python Programming

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| Assignment Date | 26 September 2022 |
| Student Name | SHALINI S |
| Student Roll Number | 211419106250 |
| Maximum Marks | 2 Marks |

**Question-1:**

Build a python code, Assume u get temperature and humidity values (generated with random function to a variable) and write a condition to continuously detect alarm in case of high temperature.

Solution:

```
import sys
import math
print('Celsius      Fahrenheit      Humidity')
dp=0
c=0
ind=""
def frost_point(c,dpc):
    dpk=273.15 + dpc
    tak=273.15+c
    fpk=dpk - tak + 2671.02 / ((2954.61 / tak)+ 2.193665 * math.log(tak)-13.3448)
    return fpk - 273.15
 def dew_point(c,rh):
    A= 17.27
    B= 273.7
     alpha= ((A*c)/(B+c)) + math.log(rh/100.0)
    dp= (B*alpha)/(A-alpha)
```

```
for c in range(30,71,1):
    f=int((c*1.8) + 32)
    hum= 100*((math.e*((17.625 * dp)/(243.04+dp))) / (math.e*((17.625 * f)/(243.04+f))))
    humidity=100*hum
    if f >= 100:
        ind='!!! Over heated !!!'
        print('Warning : ',ind)
        print('''
        ''')
    else:
        print('')
    print('''
    ''')
    print(c,'           ',f,'          %.2f' %humidity)
```

In [4]:
```
import sys
import math

print('Celsius      Fahrenheit      Humidity')
dp=0
c=0
ind=""
def frost_point(c,dpc):
    dpk=273.15 + dpc
    tak=273.15+c
    fpk=dpk - tak + 2671.02 / ((2954.61 / tak)+ 2.193665 * math.log(tak)-13.3448)
    return fpk - 273.15

def dew_point(c,rh):
    A= 17.27
    B= 273.7

    alpha= ((A*c)/(B+c)) + math.log(rh/100.0)
    dp= (B*alpha)/(A-alpha)

for c in range(30,71,1):
    f=int((c*1.8) + 32)
    hum= 100*((math.e**((17.625 * dp)/(243.04+dp))) / (math.e**((17.625 * f)/(243.04+f))))
    humidity=100*hum
    if f >= 100:
        ind='!!! Over heated !!!'
        print('Warning : ',ind)
        print('''
        ''')
    else:
        print('')
    print('''
    ''')
    print(c,'            ',f,'           %.2f' %humidity)
```

```
Celsius      Fahrenheit      Humidity


30             86            99.86


31             87            96.00


32             89            88.78


33             91            82.18
```

In [ ]: