**Interfacing DHT11 sensor with Raspberry pi and LCD – Code -**

First import the **sys** module, for using the system-specific parameters in our program. Then **I2C\_LCD\_driver** which is the support file for configuring LCD with the raspberry pi board. The **Adafruit\_DHT** module is imported to interface the DHT11 sensor to the raspberry pi. Then the **time** module is imported for including delay in our program.

After importing the necessary libraries, a variable named **mylcd** is created to call all the functions associated with **I2C\_LCD\_driver.** The first command **mylcd.lcd\_clear** clears the LCD screen. Then Group01 INS207701 string will be displayed in the allocated row and column.

Then the **Try** block is followed by the infinite **while** loop. Inside the while loop, the read function acquires the temperature and humidity values 15 times from the sensor. Sometimes the values cannot be read by the pins of raspberry pi or it may read some **none** value. In such cases, the value has to be cleared from the LCD screen and again the values have to be read. This condition is given under the **if** loop because this cannot happen every time.

The **time.sleep(1)** condition makes the device remain inactive for 1 second and again it can extract the value from the sensor. Whenever a keyboard interrupt is given, the LCD will be cleared, and then the string **Thank for watching** will be displayed in the mentioned row and column. The string will be displayed for about 5 seconds then the LCD screen will be cleared.

import sys

import I2C\_LCD\_driver

import Adafruit\_DHT

import time

mylcd = I2C\_LCD\_driver.lcd()

mylcd.lcd\_clear()

mylcd.lcd\_display\_string('Group01',1)

mylcd.lcd\_display\_string(INS207701',2,1)

try:

while True:

humidity, temperature = Adafruit\_DHT.read\_retry(11, 4)

if(temperature != None and humidity != None):

mylcd.lcd\_clear()

mylcd.lcd\_display\_string('Temp:{0:0.1f} C '.format(temperature),1,2)

mylcd.lcd\_display\_string('Humidity:{0:0.1f} %'.format(humidity),2,1)

time.sleep(1)

except KeyboardInterrupt:

mylcd.lcd\_clear()

mylcd.lcd\_display\_string('Thanks',1,5)

mylcd.lcd\_display\_string('For Watching',2,2)

time.sleep(5)

mylcd.lcd\_clear()