

```
#sudo pip3 install adafruit-circuitpython-dht
```

```
#sudo apt-get install libgpiod2
```

```
import time
```

```
import board
```

```
import digitalio
```

```
import adafruit_character_lcd.character_lcd as characterlcd
```

```
import adafruit_dht
```

```
import RPi.GPIO as GPIO
```

```
# Initial the dht device, with data pin connected to:
```

```
dhtDevice = adafruit_dht.DHT11(board.D19)
```

```
# Modify this if you have a different sized character LCD
```

```
lcd_columns = 16
```

```
lcd_rows = 2
```

```
# Raspberry Pi Pin Config:
```

```
lcd_rs = digitalio.DigitalInOut(board.D5)
```

```
lcd_en = digitalio.DigitalInOut(board.D6)
```

```
lcd_d4 = digitalio.DigitalInOut(board.D12)
```

```
lcd_d5 = digitalio.DigitalInOut(board.D13)
```

```
lcd_d6 = digitalio.DigitalInOut(board.D16)
```

```
lcd_d7 = digitalio.DigitalInOut(board.D17)
```

```
# Initialise the lcd class
```

```
lcd = characterlcd.Character_LCD_Mono(
```

```
    lcd_rs, lcd_en, lcd_d4, lcd_d5, lcd_d6, lcd_d7, lcd_columns, lcd_rows)
```

```

if __name__ == '__main__':
    while True:
        try:
            # Print the values to the serial port
            temperature_c = dhtDevice.temperature
            temperature_f = temperature_c * (9 / 5) + 32
            humidity = dhtDevice.humidity
            print("Temp: {:.1f} F / {:.1f} C   Humidity: {}% "
                  .format(temperature_f, temperature_c, humidity))
            lcd.clear()
            #lcd_line_1 = "Temperature:" + str(temperature_c) + " C"
            #lcd_line_2 = "\nHumidity:" + str(humidity) + " %"
            #lcd.message = lcd_line_1 + lcd_line_2;
            lcd.message = ("Temper: {:.1f} C " %temperature_c)
            lcd.message = ("\nHumidity: {:.1f} F " %humidity)

            time.sleep(2.0)

        except RuntimeError as error:
            # Errors happen fairly often, DHT's are hard to read, just keep going
            print(error.args[0])
            time.sleep(2.0)
            continue

        except KeyboardInterrupt:
            GPIO.cleanup()
            print ('Exiting Program')
            exit()

```