**Exp-7 Simulation of A/D output on LCD using mbed**

**Aim:** Write a cpp program for A/D output of temperature sensor on LCD in mbed simulator

**Software used:** mbed Compiler and simulator

**Program**

#include "mbed.h"

#include "C12832.h"

#include "Sht31.h"

C12832 lcd(SPI\_MOSI, SPI\_SCK, SPI\_MISO, p8, p11);

Sht31 sht31(I2C\_SDA, I2C\_SCL);

DigitalOut led(LED1);

int main() {

printf("Set the temperature above 30 degrees to trigger the warning LED\n");

while (1) {

lcd.cls();

float temp = sht31.readTemperature();

float humidity = sht31.readHumidity();

lcd.locate(3, 3);

lcd.printf("Temperature: %.2f C", temp);

lcd.locate(3, 13);

lcd.printf("Humidity: %.2f ", humidity);

// turn on LED if the temperature is above 25 degrees

led = temp > 30.0;

wait(0.5);

}

}

**Interfacing diagram:**

**Results:**