

GoldSTEM_Lesson_21_LCD_Temperature

tm 4-02-2016

For this experiment uses the same setup as Lesson 19.

And we are going to add the DS3231 High Precision Real Time Clock Module from Lesson 17

The Same connections are made to the DS3231 as in Lesson 17 but the pinnout is a bit different.

Wiring the Circuit

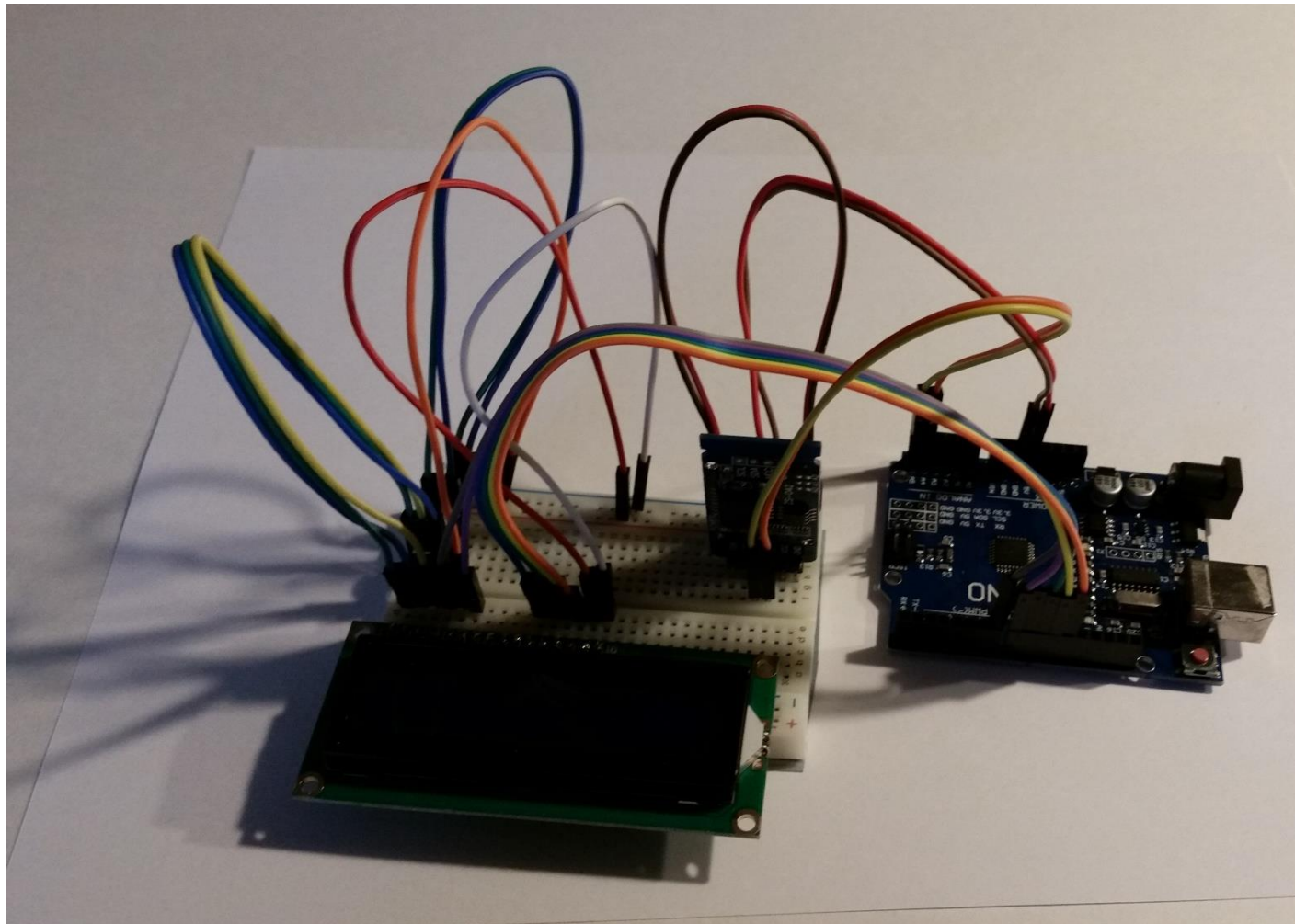
Place the DS3231 in h25 to h30, H 30 being GND

Brown jumper j30 to - Rail

Red jumper to j29 to + Rail

Yellow jumper from f27 to UNO ANALOG A5

Orange jumper from f28 to UNO ANALOG A4





Load the Code

GoldSTEM_Lesson_21_LCD_Temperature

```
//GoldSTEM_Lesson_21_LCD_Temperature tm 04-01-2016
```

```
#include <Wire.h>  
#include "ds3231.h"  
#include <LiquidCrystal.h>
```

```
LiquidCrystal lcd(7,8,9,10,11,12);
```

```
#define BUFF_MAX 128

uint8_t time[8];
char recv[BUFF_MAX];
unsigned int recv_size = 0;
unsigned long prev, interval = 1000;

void setup()
{
  Serial.begin(9600);
  Wire.begin();
  DS3231_init(DS3231_INTCN);
  memset(recv, 0, BUFF_MAX);

  lcd.begin(16, 2);

}

void loop()
{
  char in;
  char tempF[6];
  float temperature;
  char buff[BUFF_MAX];
  unsigned long now = millis();
  struct ts t;

  // LCD Display
  if ((now - prev > interval) && (Serial.available() <= 0)) {
    DS3231_get(&t); //Get time
```

```
temperature = DS3231_get_treg(); //Get temperature  
dtostrf(temperature, 5, 1, tempF);
```

```
lcd.clear();  
lcd.setCursor(0,0);
```

```
lcd.print(tempF);  
lcd.print((char)223);  
lcd.print("C ");  
prev = now;  
}  
}
```

Notes:

The temperature should print on the first line of the LCD

Question:

Where is the line of code that prints the ° Degree on the LCD.

End of Lesson