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/*****************************************************************************
MLX90614_Serial_Demo.ino
Serial output example for the MLX90614 Infrared Thermometer

This example reads from the MLX90614 and prints out ambient and object
temperatures every half-second or so. Open the serial monitor and set the
baud rate to 9600.

Hardware Hookup (if you're not using the eval board):
MLX90614 ------------- Arduino
  VDD ------------------ 3.3V
  VSS ------------------ GND
  SDA ------------------ SDA (A4 on older boards)
  SCL ------------------ SCL (A5 on older boards)

An LED can be attached to pin 8 to monitor for any read errors.

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https://github.com/sparkfun/SparkFun_MLX90614_Arduino_Library

Development environment specifics:
Arduino 1.6.5
SparkFun IR Thermometer Evaluation Board - MLX90614
*****************************************************************************/

#include <Wire.h> // I2C library, required for MLX90614
#include <SparkFunMLX90614.h> // SparkFunMLX90614 Arduino library

IRTherm therm1; // Create an IRTherm object to interact with throughout
IRTherm therm2;
IRTherm therm3;

const byte LED_PIN = 8; // Optional LED attached to pin 8 (active low)

void setup()
{
  Serial.begin(9600); // Initialize Serial to log output
  therm1.begin(0x0A); // Initialize thermal IR sensor
  therm2.begin(0x0B);
  therm3.begin(0x0C);
  therm1.setUnit(TEMP_C); // Set the library's units to Farenheit
  therm2.setUnit(TEMP_C);
  therm3.setUnit(TEMP_C);
  // Alternatively, TEMP_F can be replaced with TEMP_C for Celsius or
  // TEMP_K for Kelvin.
```

```
  pinMode(LED_BUILTIN, OUTPUT); // LED pin as output
  setLED(LOW); // LED OFF
}

void loop()
{
  digitalWrite(LED_BUILTIN, HIGH); //LED on

  // Call therm.read() to read object and ambient temperatures from the sensor.
  if (therm1.read()) // On success, read() will return 1, on fail 0.
  {
    // Use the object() and ambient() functions to grab the object and ambient
  // temperatures.
  // They'll be floats, calculated out to the unit you set with setUnit().
   Serial.print(String(therm1.object(), 2));
    Serial.print(",");
  }
  if(therm2.read()){

   Serial.print(String(therm2.object(), 2));
    Serial.print(",");
  }

  if(therm3.read()){

   Serial.print(String(therm3.object(), 2));
    Serial.print(",");
  }
 Serial.print("\n");
 digitalWrite(LED_BUILTIN, LOW);
 delay(100);
}

void setLED(bool on)
{
  if (on)
    digitalWrite(LED_PIN, LOW);
  else
    digitalWrite(LED_PIN, HIGH);
}
```