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// Date and time functions using a DS1307 RTC connected via I2C and Wire lib

#include <Wire.h>
#include "RTClib.h"

RTC_DS1307 RTC;

void setup () {
  Serial.begin(57600);
  Wire.begin();
  RTC.begin();

  if (! RTC.isrunning()) {
    Serial.println("RTC is NOT running!");
    // following line sets the RTC to the date & time this sketch was compiled
    RTC.adjust(DateTime(__DATE__, __TIME__));
  }
}

void loop () {
  DateTime now = RTC.now();

  Serial.print(now.year(), DEC);
  Serial.print('/');
  Serial.print(now.month(), DEC);
  Serial.print('/');
  Serial.print(now.day(), DEC);
  Serial.print(' ');
  Serial.print(now.hour(), DEC);
  Serial.print(':');
  Serial.print(now.minute(), DEC);
  Serial.print(':');
  Serial.print(now.second(), DEC);
  Serial.println();

  Serial.print(" since midnight 1/1/1970 = ");
  Serial.print(now.unixtime());
  Serial.print("s = ");
  Serial.print(now.unixtime() / 86400L);
  Serial.println("d");

  // calculate a date which is 7 days and 30 seconds into the future
  DateTime future (now.unixtime() + 7 * 86400L + 30);

  Serial.print(" now + 7d + 30s: ");
  Serial.print(future.year(), DEC);
  Serial.print('/');
  Serial.print(future.month(), DEC);
  Serial.print('/');
  Serial.print(future.day(), DEC);
  Serial.print(' ');
  Serial.print(future.hour(), DEC);
  Serial.print(':');
  Serial.print(future.minute(), DEC);
  Serial.print(':');
  Serial.print(future.second(), DEC);
  Serial.println();

  Serial.println();
  delay(3000);
}

```