#include <SPI.h>

#include <Adafruit\_BMP085.h>

#include <SD.h>

#include <Servo.h>

Servo myservo; // create servo object to control a servo

// twelve servo objects can be created on most boards

unsigned long time;

Adafruit\_BMP085 bmp;

int aux =0;

float dados[] = {};

void setup() {

// put your setup code here, to run once:

// Serial.begin(9600);

// while (!Serial) {

// ; // wait for serial port to connect. Needed for native USB port only

// }

// Serial.print("Initializing SD card and bmp...");

pinMode(7, OUTPUT);

pinMode(6, OUTPUT);

pinMode(7, LOW);

pinMode(6, LOW);

if (!bmp.begin()) {

// Serial.println("bmp nao encontrado.");

digitalWrite(7, HIGH);

while (1) {}

}

else{

// Serial.println("bmp ok");

digitalWrite(7, LOW);

}

if (!SD.begin(4)) {

// Serial.println("initialization failed!");

digitalWrite(6, HIGH);

return;

}

// Serial.println("initialization done.");

digitalWrite(6, LOW);

myservo.attach(9); // attaches the servo on pin 9 to the servo object

}

void loop() {

// put your main code here, to run repeatedly:

// Abre o arquivo arquivo.txt do cartao SD

// Serial.println("inicio");

time = millis();

dados[aux] = bmp.readAltitude();

File dataFile = SD.open("ARQUIVO.txt", FILE\_WRITE);

// Serial.println("abrindo arquivo");

// Grava os dados no arquivo

for(aux = 0; aux <100; aux++){

if (dataFile)

{

dataFile.print(aux);

dataFile.print(" : ");

dataFile.println(dados[aux]); //pegar a altitude

// Serial.println("gravando");

// Serial.println(aux);

delay(100);

if(dados[aux] < dados[aux-1] - 20 || time >= 300000){ //300000 ms = 5min

myservo.write(90);

delay(15);

}

}

}

dataFile.close();

while(1);

}