#include <LowPower.h>

#include <Wire.h>

#include <LiFuelGauge.h>

LiFuelGauge gauge(MAX17043);

float SOC; = gauge.getSOC();

float on, off, weather;

float start = 2.0;

float Time = 60000.00;

void setup()

{

pinMode(13,OUTPUT);

Serial.begin(9600); // Initializes serial port

while ( !Serial ) ;

gauge.reset(); // Resets MAX17043

delay(500); // Waits for the initial measurements to be made

}

void lowTemp()

{

off=60.0\*Time;

on = 5.0\*Time;

}

void medTemp ()

{

if (15<SOC<50){

off = 60.0\*Time;

on = 5.0\*Time;

}

else if (50<SOC<85)

{

off = 30.0\*Time;

on = 5.0\*Time;

}

else if (SOC>85)

{

off = 15.0\*Time;

on = 5.0\*Time;

}

else {

off = 60.0\*Time;

on = 0.0;

}

}

void highTemp (){

if (15<SOC<50){

off = 40.0\*Time;

on = 5.0\*Time;

}

else if (50<SOC<85){

off = 20.0\*Time;

on = 5.0\*Time;

}

else if (SOC>85){

off = 15.0\*Time;

on = 5.0\*Time;

}

else {

off = 60.0\*Time;

on = 0.0;

}

}

void loop() {

if(Serial.available()){

digitalWrite(2,HIGH);

delay(start);

//read weather

//setup

//pinMode(A2, INPUT);

//pinMode(A3, INPUT);

//int a2 = digitalRead(A2);

//int a3 = digitalRead(A2);

//if (all off) -> weather = 0;

//if (a2 HIGH, a3 LOW) -> weather = 1;

//if (a2 LOW, a3 HIGH) -> weather = 2;

SOC = Serial.read();

if(weather==1){

lowTemp();

}

else if(weather==2){

medTemp();

}

else{

highTemp();

}

//write SoC to Pi

digitalWrite(2,LOW);

LowPower.powerDown(SLEEP\_2S, ADC\_OFF, BOD\_OFF);

delay(off);

}

//else {

//Serial.println(SOC); // Gets the battery's state of charge

//delay(30000);

// digitalWrite(13,HIGH);

//}

}