#include <LiquidCrystal.h>

LiquidCrystal lcd(13, 12, 11, 10, 9, 8);

//////////////////////////////Solar voltage1////////////////

float correctionfactor1 = 0;

int analogInput1 = A0;

float vout1 = 0.0;

float vin1 = 0.0;

// two resistors 30K and 7.5k ohm

float R1\_1 = 30000; //

float R2\_1 = 7500; //

float value1 = 0.0;

///////////////////////////////////////////////////////

////////////////////////battery voltage///////////////////

float correctionfactor2 = 0;

int analogInput2 = A5;

float vout2 = 0.0;

float vin2 = 0.0;

// two resistors 30K and 7.5k ohm

float R1\_2 = 30000; //

float R2\_2 = 7500; //

int value2 = 0;

//////////////////////// voltage///////////////////

float correctionfactor3 = 0;

int analogInput3 = A2;

float vout3 = 0.0;

float vin3 = 0.0;

// two resistors 30K and 7.5k ohm

float R1\_3 = 30000; //

float R2\_3 = 7500; //

int value3 = 0;

/////////////////////

int x,y,z;

int R;

int vin1\_1,vin3\_1;

int s;

void setup()

{

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

Serial.begin(9600);

lcd.begin (16,2);

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

lcd.setCursor(0,0);

lcd.print("LUO Converter");

lcd.setCursor(0,1);

lcd.print("EV Battery Application");

delay(3000);

lcd.clear();

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

pinMode(A0,INPUT); //Solar voltage

pinMode(A5,INPUT); //battery

pinMode(A2,INPUT); // voltage

}

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

void loop()

{

voltage1();

voltage3();

delay(100);

voltage2();

Serial.println("V");

Serial.println(vin1);

delay(100);

Serial.println("P");

Serial.println(vin1\_1);

delay(100);

Serial.println("S");

Serial.println(vin2);

delay(100);

Serial.println("W");

Serial.println(vin3);

delay(100);

}

void voltage1()

{

value1 = analogRead(analogInput1);

vout1 = (value1 \* 5) / 1023.0; // see text

vin1 = vout1 / (R2\_1/(R1\_1+R2\_1));

vin1 = vin1+1 - correctionfactor1;

lcd.setCursor(0,0);

lcd.print("BV:");

lcd.setCursor(3,0);

lcd.print(vin1);

vin1\_1=((vin1/12)\*100);

delay(1000);

lcd.setCursor(0,0);

lcd.print(vin1\_1);

lcd.print("% ");

}

void voltage2()

{

value2 = analogRead(analogInput2);

vout2 = (value2 \* 5) / 1023.0; // see text

vin2 = vout2 / (R2\_2/(R1\_2+R2\_2));

vin2 = vin2 - correctionfactor2;

lcd.setCursor(0,1);

lcd.print("SV:");

lcd.setCursor(3,1);

lcd.print(vin2);

}

void voltage3()

{

value3 = analogRead(analogInput3);

vout3 = (value3 \* 5) / 1023.0; // see text

vin3 = vout3 / (R2\_3/(R1\_3+R2\_3));

vin3 = vin3 - correctionfactor3;

lcd.setCursor(8,1);

lcd.print("EBV:");

lcd.setCursor(12,1);

lcd.print(vin3);

delay(1000);

lcd.setCursor(8,1);

lcd.print(" ");

vin3\_1=((vin3/12)\*100);

lcd.setCursor(12,1);

lcd.print(vin3\_1);

lcd.print("% ");

}