#include <stdio.h>

#include <string.h>

//This program is used to code the cell voltages with arduino program. The 3.4 V is divided into 3 dummy cells (C1,C2 and C3) with voltage divider.

//The measured voltage from arduino program is exactly same as with the multimeter.

void setup() {

   Serial.begin(115200);

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

}

void loop() {

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

float Read\_input1 = analogRead(A0); //reading the Analog input cell voltage value

float Read\_input2 = analogRead(A1);

float Read\_input3 = analogRead(A2);

Serial.println("The analog to digital conversion value is");

Serial.println(Read\_input1);//ADC value input 1 i.e. A0

 Serial.println(Read\_input2); //ADC value input 2 i.e. A1

 Serial.println(Read\_input3); //ADC value input 3 i.e. A2

float Valvoltage1 = (Read\_input1\*5)/1024; // as we are using 8 bit ADC and the maximum voltage at pin is 5V

float Valvoltage2 = (Read\_input2\*5)/1024; //cell2 voltage W.R.T to ground

float Valvoltage3 = (Read\_input3\*5)/1024; // cell3 voltage W.R.T to ground

float cell2\_volt= (Valvoltage2-Valvoltage1);//subtracting cell 1 voltage from the the cell2 wrt ground value

float cell3\_volt= (Valvoltage3-Valvoltage2);

Serial.println("inputcell1 voltage = "); Serial.println (Valvoltage1);

Serial.println("inputcell2 voltage = "); Serial.println (cell2\_volt);

  Serial.println("inputcell3voltage = "); Serial.println (cell3\_volt);

}

A screenshot of a computer

Description automatically generated

A screenshot of a calculator

Description automatically generated

A piece of paper with writing on it

Description automatically generated