

voltage_current_reading

```
1
2 // Include necessary libraries
3 #include <LiquidCrystal.h>
4
5 // Initialize the LCD (using pins 12, 11, 5, 4, 3, 2)
6 LiquidCrystal lcd(12, 11, 5, 4, 3, 2);
7
8 // Define pins for voltage and current sensors
9 const int voltagePin = A0;
10 const int currentPin = A1;
11
12 void setup() {
13     // Start the LCD
14     lcd.begin(16, 2);
15     // Initialize serial communication
16     Serial.begin(9600);
17 }
18
19 void loop() {
20     // Read voltage and current
21     float voltage = analogRead(voltagePin) * (5.0 / 1023.0) * (30.0 / 10.0); // Adjust according to voltage divider
22     float current = (analogRead(currentPin) - 512) * (5.0 / 1023.0) / 0.185; // Adjust according to current sensor
23
24     // Display on LCD
25     lcd.clear();
26     lcd.setCursor(0, 0);
27     lcd.print("Voltage: ");
28     lcd.print(voltage);
29     lcd.setCursor(0, 1);
30     lcd.print("Current: ");
31     lcd.print(current);
32
33     // Send data to serial monitor
34     Serial.print("Voltage: ");
35     Serial.print(voltage);
36     Serial.print(" V, Current: ");
37     Serial.print(current);
38     Serial.println(" A");
39
40     // Wait before next reading
41     delay(1000);
42 }
43
```