```arduino
1
2   #include <LiquidCrystal.h>
3
4   // Constants
5   const int voltagePin = A0;
6   const int currentPin = A1;
7   const int pwmPin = 9;
8   const float referenceVoltage = 5.0;
9   const int adcResolution = 1024;
10  const float currentSensorScale = 0.185; // ACS712-05B
11
12  // Variables
13  float panelVoltage = 0;
14  float panelCurrent = 0;
15  float panelPower = 0;
16  int pwmValue = 0;
17  float previousPower = 0;
18  float previousVoltage = 0;
19  float deltaV = 0.1;
20  float perturb = 0.01;
21  int direction = 1;
22
23  // LCD Display pins
24  const int rs = 7, en = 8, d4 = 9, d5 = 10, d6 = 11, d7 = 12;
25  LiquidCrystal lcd(rs, en, d4, d5, d6, d7);
26
27  void setup() {
28    Serial.begin(9600);
29    lcd.begin(16, 2);
30    pinMode(voltagePin, INPUT);
31    pinMode(currentPin, INPUT);
32    pinMode(pwmPin, OUTPUT);
33    analogWrite(pwmPin, pwmValue);
34  }
35
36  void loop() {
37    // Read voltage and current
38    panelVoltage = analogRead(voltagePin) * (referenceVoltage / adcResolution) * (30 + 10) / 10;
39    panelCurrent = (analogRead(currentPin) * (referenceVoltage / adcResolution) - 2.5) / currentSensorScale;
40    panelPower = panelVoltage * panelCurrent;
41
42    // MPPT Algorithm (Perturb and Observe)
43    if (panelPower > previousPower) {
44      previousPower = panelPower;
45      previousVoltage = panelVoltage;
46      pwmValue += direction * 5;
47    } else {
48      direction = -direction;
49      pwmValue += direction * 5;
50    }
51
52    pwmValue = constrain(pwmValue, 0, 255);
53    analogWrite(pwmPin, pwmValue);
54
55    // Display on LCD
56    lcd.clear();
57    lcd.setCursor(0, 0);
58    lcd.print("V: ");
59    lcd.print(panelVoltage);
60    lcd.print("V");
61    lcd.setCursor(0, 1);
62    lcd.print("P: ");
63    lcd.print(panelPower);
64    lcd.print("W");
65
66    delay(1000);
67  }
68
```