// Defining pins

const int pumpPin = 9;

const int potPin = A0;

const int sensorPin = A1;

const int sensorPower = 8;

// Defining variables

int sensor;

const int delayTime = 8000; //adjust

int wet = 800; //adjust

int dry = 500; //adjust

int pot;

int speed;

unsigned long startTime;

void setup() {

// Setting pin modes

pinMode(sensorPower, OUTPUT);

pinMode(pumpPin, OUTPUT);

Serial.begin(9600);

}

void loop() {

// Read the potentiometer and set the speed

pot = analogRead(potPin);

speed = map(pot, 0, 1023, 0, 255);

analogWrite(pumpPin, speed);

delay(3000); //adjust

// Read the soil moisture sensor

digitalWrite(sensorPower, HIGH);

sensor = analogRead(sensorPin);

digitalWrite(sensorPower, LOW);

// Print the sensor value to the serial monitor

Serial.println(sensor);

// Turn the pump on or off based on the sensor reading

if (sensor > wet) {

digitalWrite(pumpPin, LOW);

} else if (sensor < dry) {

digitalWrite(pumpPin, HIGH);

} else {

digitalWrite(pumpPin, LOW);

}

// Turn the pump off after a certain amount of time

if (millis() - startTime >= 4000) { //adjust

digitalWrite(pumpPin, LOW);

}

// Wait for the specified delay time

delay(delayTime);

}