#include <Servo.h>

Servo servo;

#define echoPin 6

#define trigPin 7

long duration;

int distance;

const int sensor\_pin = A1;

void setup()

{

  servo.attach(8);

  servo.write(90);

  pinMode(trigPin, OUTPUT);

  pinMode(echoPin, INPUT);

  Serial.begin(9600);

}

void loop()

{

  digitalWrite(trigPin, LOW);

  delayMicroseconds(2);

  digitalWrite(trigPin, HIGH);

  delayMicroseconds(10);

  digitalWrite(trigPin, LOW);

  duration = pulseIn(echoPin, HIGH);

  distance = duration \* 0.034 / 2;

  Serial.print("distance = ");

    Serial.print(distance);

    Serial.print("cm\n\n");

  if (distance <5){

    delay(1000);

      float moisture\_percentage;

    int sensor\_analog;

    sensor\_analog = analogRead(sensor\_pin);

    moisture\_percentage = ( 100 - ( (sensor\_analog/1023.00) \* 100 ) );

    Serial.print("Moisture Percentage = ");

    Serial.print(moisture\_percentage);

    Serial.print("\n\n");

    if (moisture\_percentage > 5.00){

        servo.write(180);

        delay(3000);

        servo.write(90);

        delay(1000);

    }

    else {

      servo.write(0);

        delay(3000);

        servo.write(90);

        delay(1000);

    }

  }

  delay(500);

}