```
#include <Servo.h>
#include <LiquidCrystal.h>
Servo myservo;
int pos = 0;
const int trigPin1 = 9;
const int echoPin1 = 8;
const int trigPin2 = 7;
const int echoPin2 = 6;
const int led = 13;
int sensorPin = A0;
int sensorValue;
int limit = 950;
const int rs = 12, en = 11, d4 = 5, d5 = 4, d6 = 3, d7 = 2;
LiquidCrystal lcd(rs, en, d4, d5, d6, d7);
float moisture;
bool wet = false, obs2 = false;

void setup()
{
  lcd.begin(16, 2);
  lcd.print("Waste Segregator");
  myservo.attach(10);
  pinMode(trigPin1, OUTPUT);
  pinMode(echoPin1, INPUT);
  pinMode(trigPin2, OUTPUT);
  pinMode(echoPin2, INPUT);
  pinMode(led, OUTPUT);
  myservo.write(pos);
}

// UV Obstacle Sensing Function
bool obstacle(int trigPin, int echoPin, String s1){

  //for(int i=0;i<5;i++){
    //UV code
    long duration, distance;
    digitalWrite(trigPin, HIGH);
    delayMicroseconds(1000);
    digitalWrite(trigPin, LOW);
    duration = pulseIn(echoPin, HIGH);
    distance = (duration/2) / 29.1;
    Serial.print(distance);
    Serial.println("CM"+s1);
    delay(10);

    if(distance<=12) return true;
```

```
    else return false;
  //}

}

// Soil Moisture Sensor Code
bool wetSense(){

  for(int i = 0; i < 8 ; i++) {
        sensorValue = analogRead(sensorPin);
        moisture = (100 - (sensorValue/1023.0)*100);
        Serial.println("Analog Value : ");
        Serial.println(sensorValue);
        Serial.println("Moisture : ");
        Serial.print(moisture);
        Serial.println("%");
        if(sensorValue < limit){
           return true;
        }
        delay(500);
  }
  return false;
}

//LCD Display

void printer(String s){

  lcd.setCursor(0, 1);
  lcd.print(s);
  delay(2000);

}

void loop()
{
  Serial.begin(9600);
  printer(" Monitoring... ");
  if(obstacle(trigPin1, echoPin1,"one") == true){

      delay(11500);
      for(int i = 0 ; i < 5 ; i++ ) {
        obs2 = obstacle(trigPin2, echoPin2,"two");
        delay(200);
        if(obs2 == true) {
          delay(5300);
```

```
        wet = (wetSense());
        break;
      }
    }

    if(obs2==true && wet==true){

      myservo.write(pos+190);
      printer("   Wet  Waste   ");
    }
    else if(obs2==true && wet==false){
      myservo.write(pos);
      printer("   Dry  Waste   ");
      myservo.write(pos);
    }
    else if(obs2==false)
      printer(" Magnetic Waste ");

    delay(2000);
}
delay(1000);
```