Automated Plant System

Project Link:

https://www.tinkercad.com/things/ceAi1nKXu0K-automated-plant-monitoring-system/editel?sharecode=rgwVsS1XrUjyFUtUctixGo42I3wfsaxWC43PrMFEEl4

Code:

```
#include <LiquidCrystal.h>

const int buzzer = 8;

int echopin = 10;

int trigpin = 9;


int mesafe;

int sure;


const int LM35 = A0;

const int motor = 13;

const int LedRed = 12;

const int LedGreen = 11;


LiquidCrystal lcd(2, 3, 4, 5, 6, 7);


void setup() {
  Serial.begin(9600);
  lcd.begin(16, 2);
  lcd.print("Automated Plant");
  lcd.setCursor(0,1);
  lcd.print("Monitoring System!");
  pinMode(motor, OUTPUT);
  pinMode(LedRed, OUTPUT);
```

```
  pinMode(LedGreen, OUTPUT);
  delay(2000);
  lcd.clear();
  lcd.print("Temp= ");
  lcd.setCursor(0,1);
  lcd.print("WaterPump= ");
  pinMode(buzzer, OUTPUT);
  pinMode(trigpin, OUTPUT);
  pinMode(echopin, INPUT);
}

void loop() {

  int value = analogRead(LM35);
  float Temperature = value * 500.0 / 1023.0;
  lcd.setCursor(6,0);
  lcd.print(Temperature);
  lcd.setCursor(11,1);


  if (Temperature > 30){
    digitalWrite(motor, HIGH);
    digitalWrite(LedRed, HIGH);
    digitalWrite(LedGreen, LOW);
    lcd.print("ON ");
  }
  else {
    digitalWrite(motor, LOW);
    digitalWrite(LedRed, LOW);
    digitalWrite(LedGreen, HIGH);
    lcd.print("OFF");
```

```
 }
  delay(1000);

digitalWrite(trigpin,LOW);
delayMicroseconds(2);
digitalWrite(trigpin,HIGH);
delayMicroseconds(10);
digitalWrite(trigpin,LOW);
sure = pulseIn(echopin,HIGH);
mesafe = (sure/2)/29.0;

if(mesafe <= 15)
{
 digitalWrite(buzzer,HIGH);
 delay(250);
 digitalWrite(buzzer,LOW);
 delay(125);
}

else if(mesafe <= 20)
{
 digitalWrite(buzzer,HIGH);
 delay(500);
 digitalWrite(buzzer,LOW);
 delay(250);
}
else if(mesafe <= 30)
{
 digitalWrite(buzzer,HIGH);
 delay(1000);
 digitalWrite(buzzer,LOW);
```

```
 delay(1000);
}

else
{
 digitalWrite(buzzer,LOW);
}
 delay(500);
}
```

Circuit: