Assignment -1

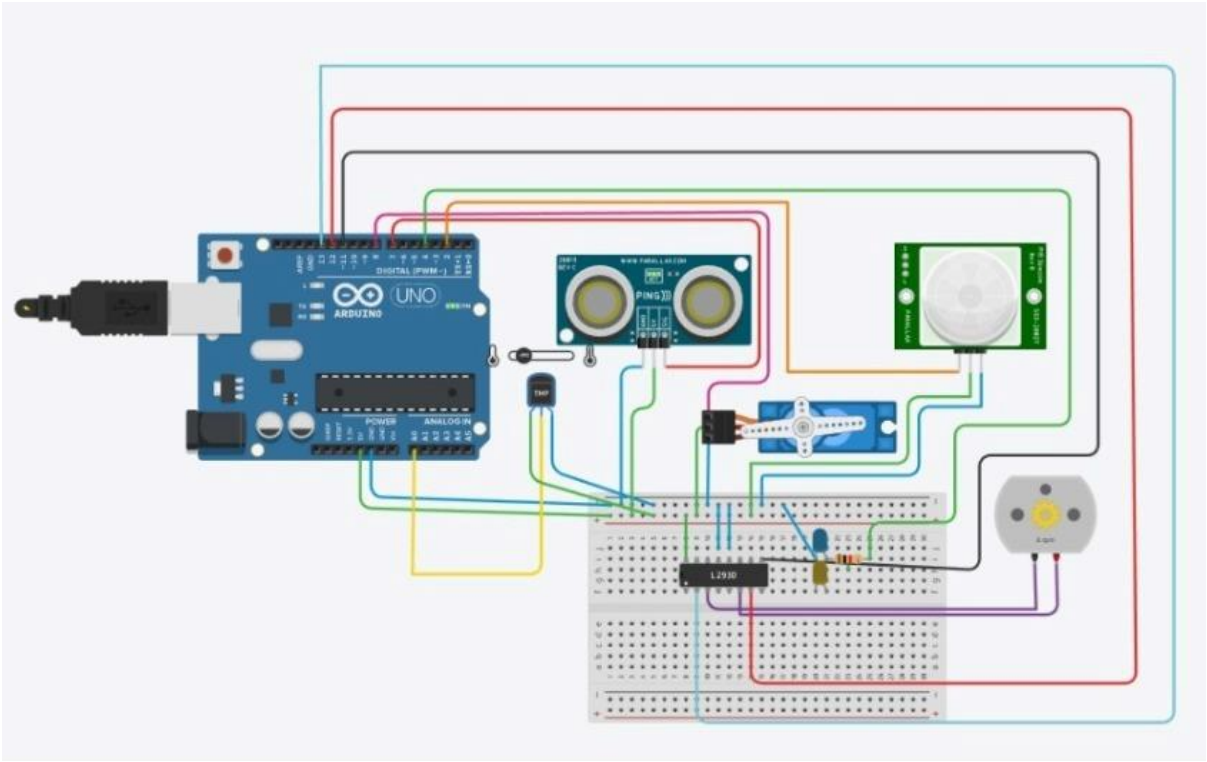
Assignment Date	**22 October 2022**
Student Name	**B.Monika**
Student Roll Number	**953719106901**
Maximum Marks	**2 Marks**

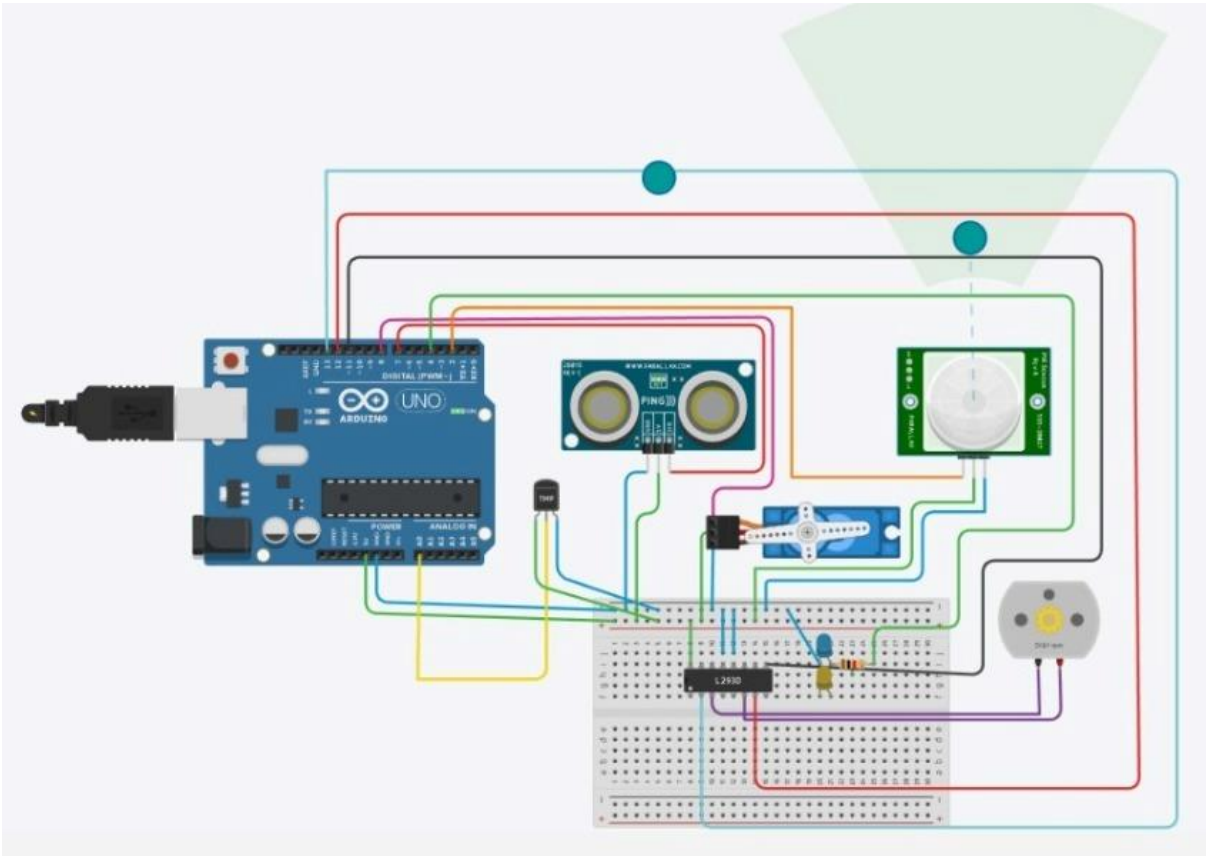
Question-1:

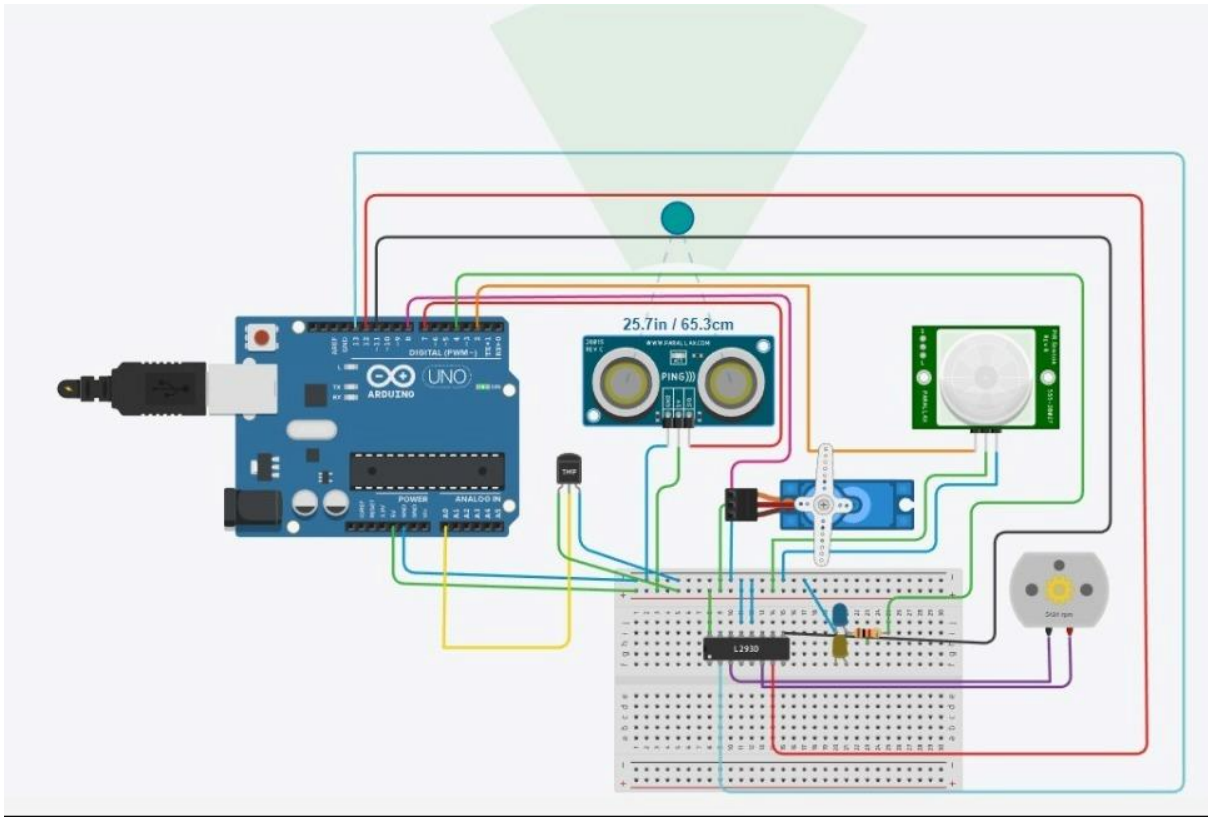
```
#include<Servo.h>
const int pingPin = 7;
int servoPin = 8;
Servo servo1;
void setup() {
 Serial.begin(9600);
 servo1.attach(servoPin);
 pinMode(2,INPUT);
 pinMode(4,OUTPUT);
 pinMode(11,OUTPUT);
 pinMode(12,OUTPUT);
 pinMode(13,OUTPUT);
 pinMode(A0,INPUT);
 digitalWrite(2,LOW);
 digitalWrite(11,HIGH);
 }
void loop() {
 long duration, inches, cm;
 pinMode(pingPin, OUTPUT);
 digitalWrite(pingPin, LOW);
 delayMicroseconds(2);
 digitalWrite(pingPin, HIGH);
 delayMicroseconds(5);
 digitalWrite(pingPin, LOW);
 pinMode(pingPin, INPUT);
 duration = pulseIn(pingPin, HIGH);
 inches = microsecondsToInches(duration);
 cm = microsecondsToCentimeters(duration);
servo1.write(0);

 if(cm < 80)
 {
 servo1.write(90);
 delay(2000);
 }
 else
{
 servo1.write(0);
 }
```

```
int pir = digitalRead(2);

if(pir == HIGH)
{
digitalWrite(4,HIGH);
delay(1000);
}
else if(pir == LOW)
{
digitalWrite(4,LOW);
}

//temp with fan
float value=analogRead(A0);
float voltage=value*5.0;
voltage/=1024;
float temperature=(voltage-0.5)*100;

Serial.println("temperature");
Serial.println(temperature);

if(temperature > 20)
{
digitalWrite(12,HIGH);
digitalWrite(13,LOW);
}
else
{
digitalWrite(12,LOW);
digitalWrite(13,LOW);
}
}
long microsecondsToInches(long microseconds) {
 return microseconds / 74 / 2;
}
long microsecondsToCentimeters(long microseconds) {
return microseconds / 29 / 2;
}
```

Output


UNO
ARDUINO
PING
L293D


UNO
ARDUINO
PING
L293D


25.7in / 65.3cm
UNO
ARDUINO
DIGITAL (PWM~)
POWER
ANALOG IN
PING)))
L293D