

Assignment -1

Assignment Date	22 October 2022
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Student Roll Number	953719106038
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



