**IBM ASSIGNMENT- 1**

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**Source code:**

int var1=2;

int var2=3;

void setup() {

Serial.begin(9600);

pinMode(var1,OUTPUT);

pinMode(var2,INPUT);

pinMode(12,OUTPUT);

} void loop() {

digitalWrite(var1,LOW);

digitalWrite(var1,HIGH);

delayMicroseconds(10);

digitalWrite(var1,LOW);

float din=pulseIn(var2,HIGH);

float grad=(din\*0.0343)/2;

Serial.print("Distance is: ");

Serial.println(grad);

if(grad>=100) {

digitalWrite(8,HIGH);

digitalWrite(7,HIGH);

}

if(grad>=100)

{

for(int i=0; i<=30000; i=i+10)

{

tone(12,i);

delay(1000);

noTone(12);

delay(1000);

}

}

double a= analogRead(A0);

double t=(((a/1024)\*5)-0.5)\*100;

Serial.print("Temp Value: "); S

Serial.println(t);

delay(1000);

if(t>=100) {

digitalWrite(8,HIGH);

digitalWrite(7,HIGH);

}

if(t>=100)

{

for(int i=0; i<=30000; i=i+10)

{

tone(12,i);

delay(1000);

noTone(12);

delay(1000);

}

}

if(t<100)

{

digitalWrite(8,LOW);

digitalWrite(7,LOW);

}

}

**CIRCUIT DIAGRAM**:

