**Assignment -1**

Creating a Circuit using Sensors,Buzzer & LED’s

|  |  |
| --- | --- |
| Assignment Date | 9th September 2022 |
| Student Name | Sudhan S |
| Student Roll Number | 737819ITR096 |
| Maximum Marks | 10 Marks |

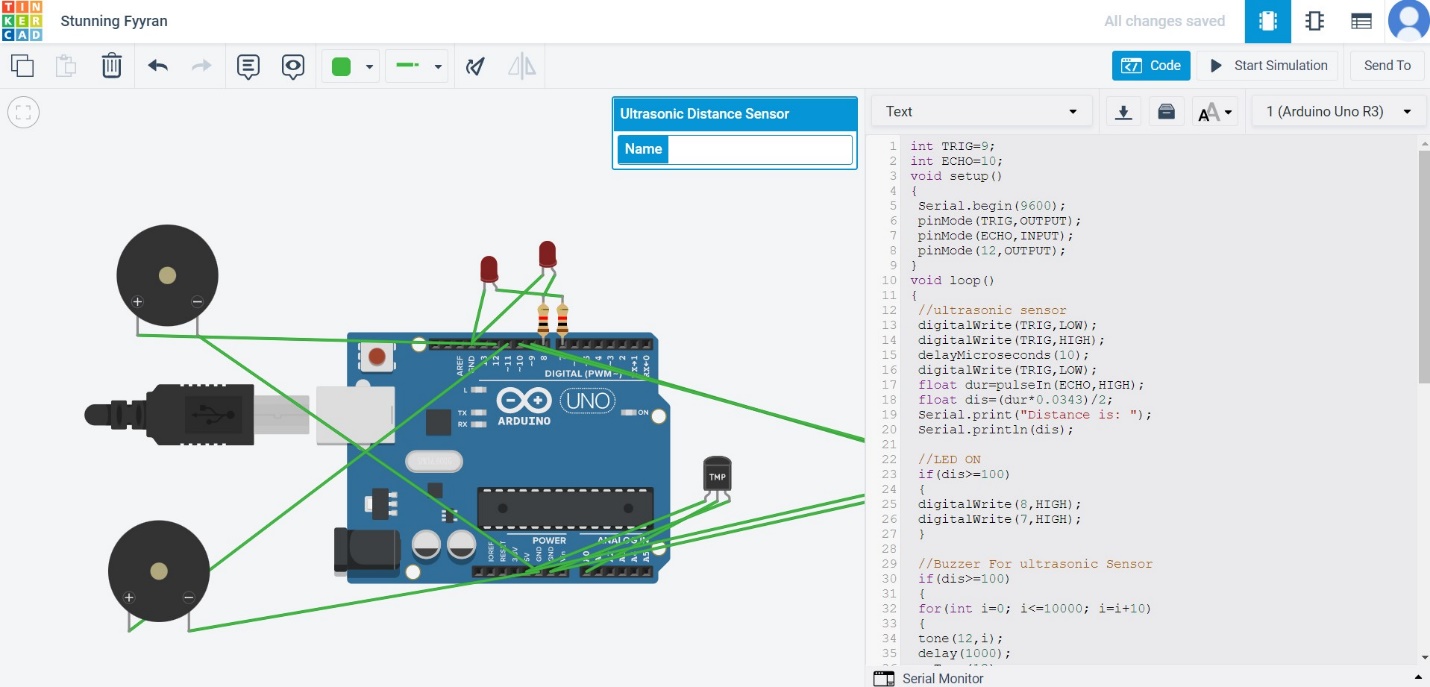
**Question-1:**

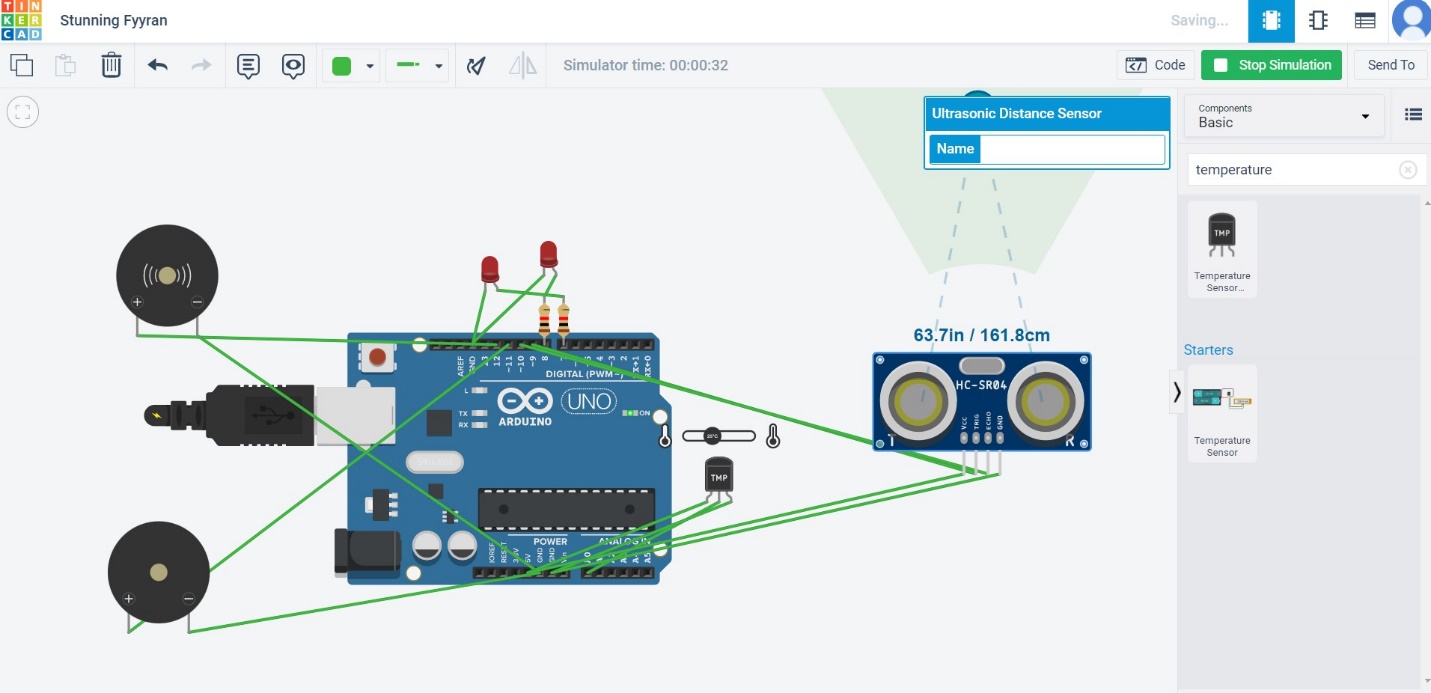
Create a Circuit using Arduino, 2 Sensors , Buzzers and LED’s

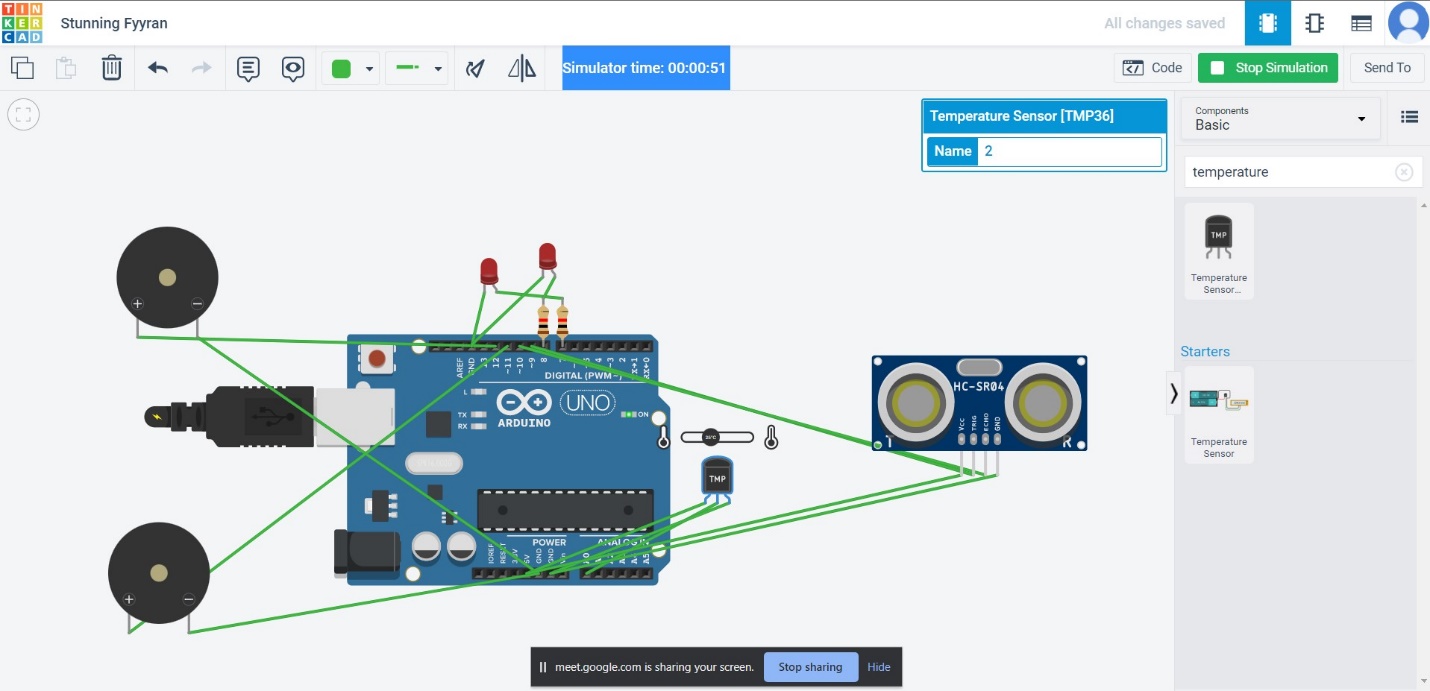
**Solution:**

int t=2;  
int e=3;  
  
void setup()  
{  
  Serial.begin(9600);  
  pinMode(t,OUTPUT);  
  pinMode(e,INPUT);  
  pinMode(12,OUTPUT);  
}  
  
void loop()  
{  
  //ultrasonic sensor  
  digitalWrite(t,LOW);  
  digitalWrite(t,HIGH);  
  delayMicroseconds(10);  
  digitalWrite(t,LOW);  
  float dur=pulseIn(e,HIGH);  
  float dis=(dur\*0.0343)/2;  
  Serial.print("Distance is: ");  
  Serial.println(dis);  
  
    //LED ON  
  if(dis>=100)  
  {  
    digitalWrite(8,HIGH);  
    digitalWrite(7,HIGH);  
  }  
  
  //Buzzer For ultrasonic Sensor  
  if(dis>=100)  
  {  
  for(int i=0; i<=30000; i=i+10)  
  {  
  tone(12,i);  
  delay(1000);  
  noTone(12);  
  delay(1000);  
  }  
  }  
  
  
  
  
    //Temperate Sensor  
  double a= analogRead(A0);  
  double t=(((a/1024)\*5)-0.5)\*100;  
  Serial.print("Temp Value: ");  
  Serial.println(t);  
  delay(1000);  
  
  
  //LED ON  
  if(t>=100)  
  {  
    digitalWrite(8,HIGH);  
    digitalWrite(7,HIGH);  
  }  
  
  //Buzzer for Temperature Sensor  
  if(t>=100)  
  {  
  for(int i=0; i<=30000; i=i+10)  
  {  
  tone(12,i);  
  delay(1000);  
  noTone(12);  
  delay(1000);  
  }  
  }  
  
   //LED OFF  
  if(t<100)  
  {  
    digitalWrite(8,LOW);  
    digitalWrite(7,LOW);  
  }  
}

**OUTPUT:**

****

****

****