IBM-NALAYATHIRAN

DOMAIN: IoT

ASSIGNMENT 1:SMART HOME

By

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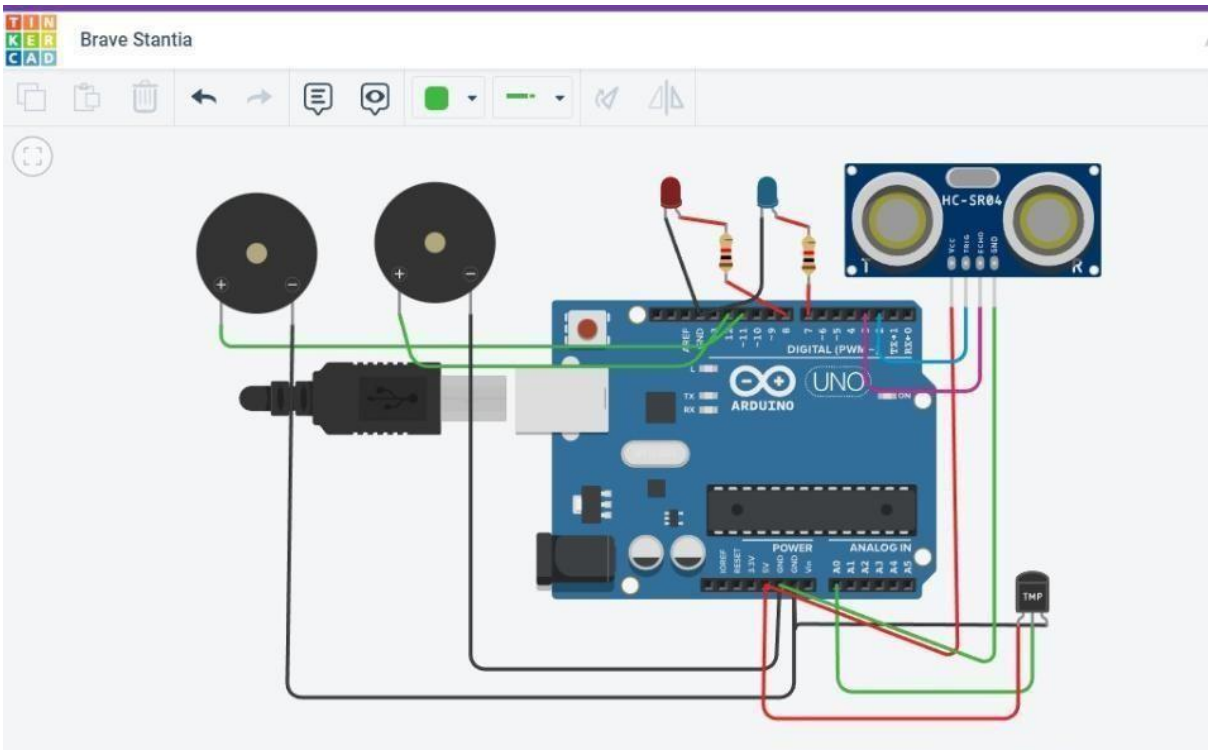
Circuit Diagram:



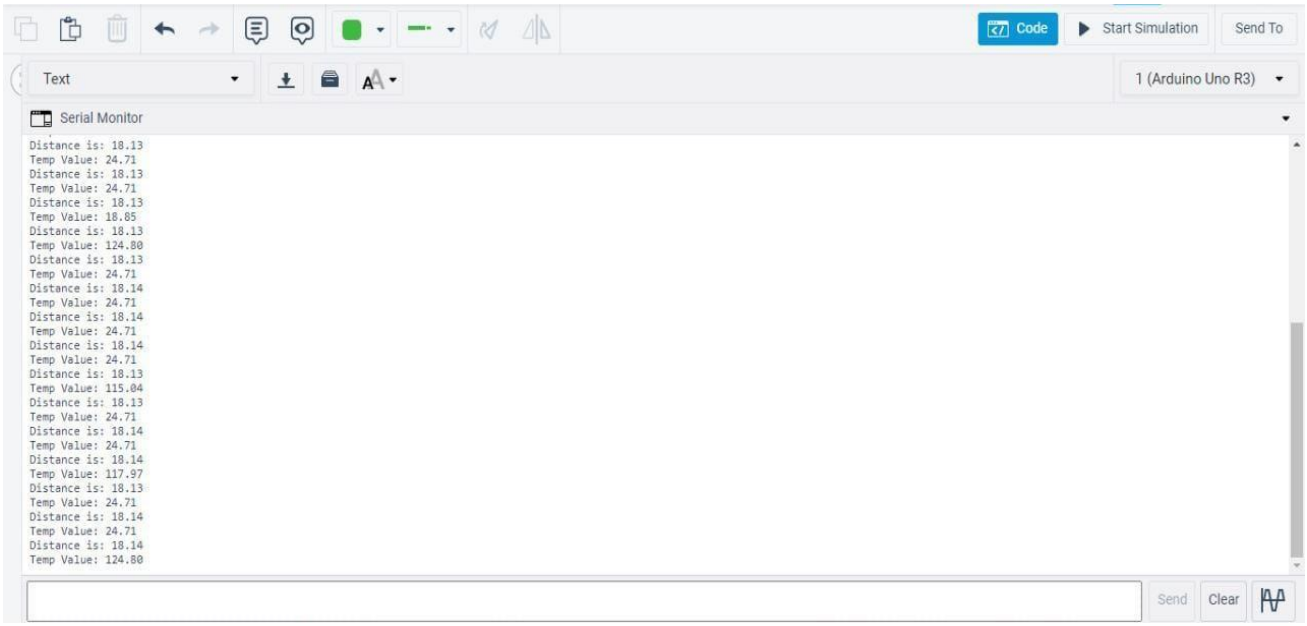
Code:

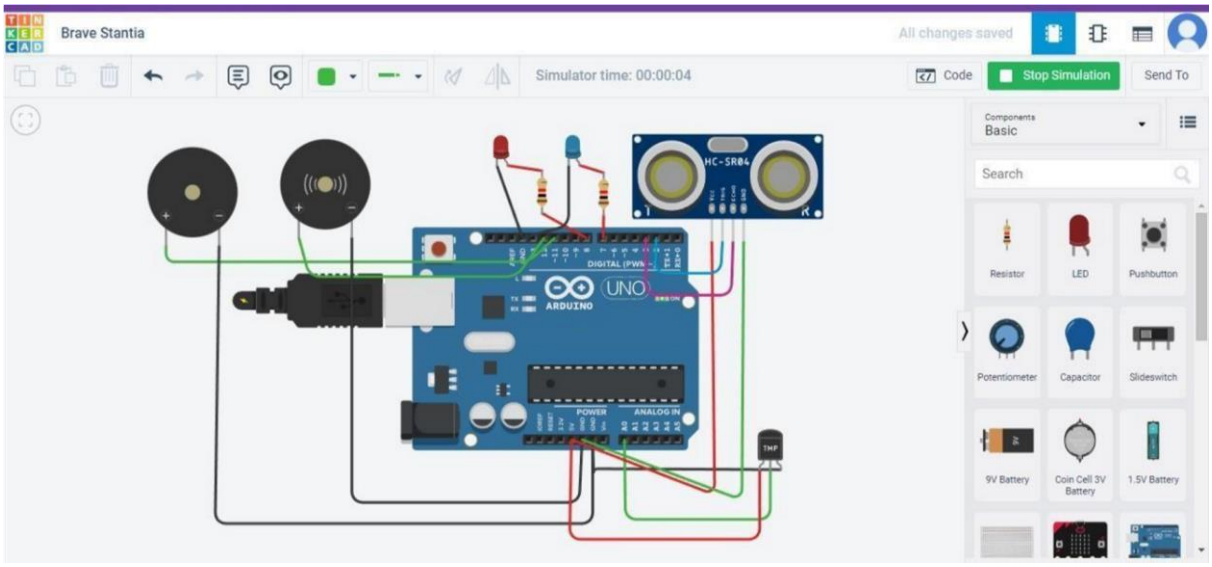
```
int t=2;
int e=3;

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)
//(in terms of centimeter)
 {
 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)//(in terms of celsius)
```

```
 {
 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:





TINKERCAD LINK:

https://www.tinkercad.com/things/0hRmwcG3Nm2-brave-stantia/editel?sharecode=m0yCbud_kwXyRuUO8XnLH2b381wqzYCArOAiKKVnnXk