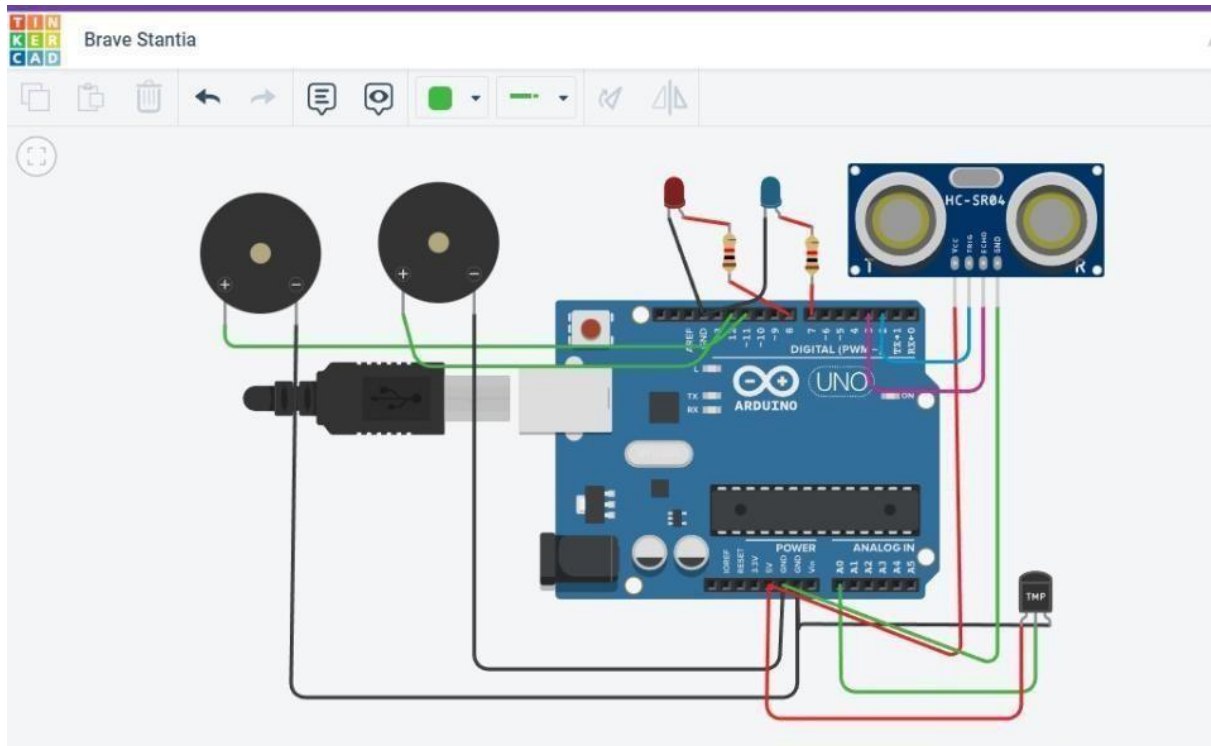


IBM-NALAYATHIRAN
DOMAIN: IoT
ASSIGNMENT 1:SMART HOME

By

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960219106138

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);

```

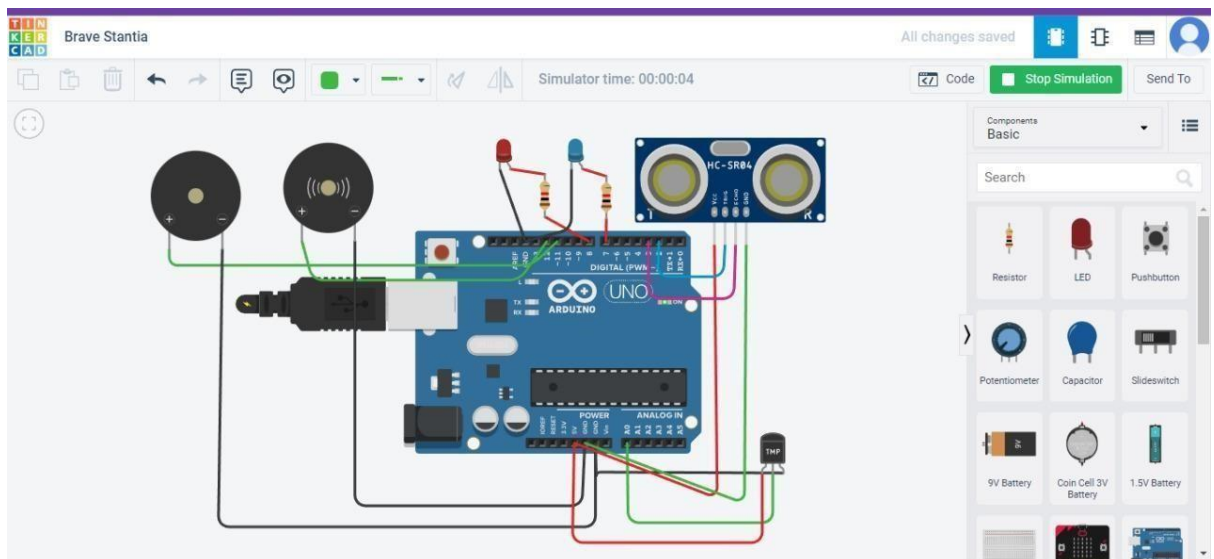
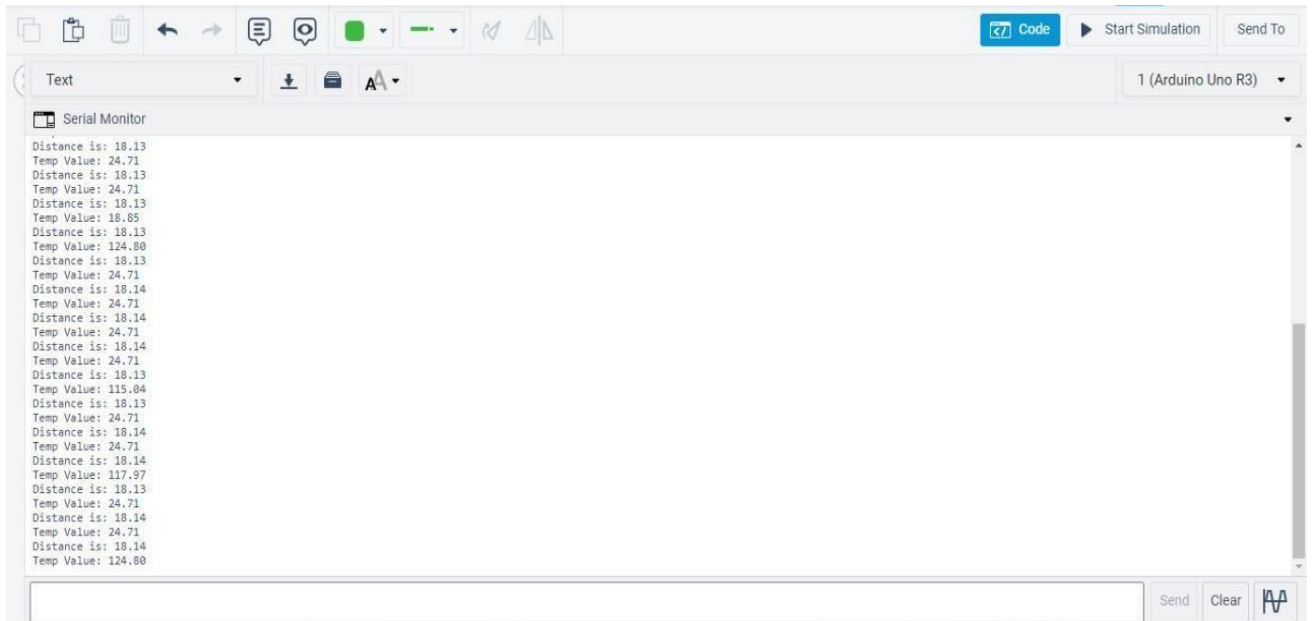
```
//LED ON

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-](https://www.tinkercad.com/things/0hRmwcG3Nm2-brave-stantia/editel?sharecode=m0yCbud_kwXyRuUO8XnLH2b381wqzYCArOAIKKVnnXk)

[stantia/editel?sharecode=m0yCbud_kwXyRuUO8XnLH2b381wqzYCArOAIKKVnnXk](https://www.tinkercad.com/things/0hRmwcG3Nm2-brave-stantia/editel?sharecode=m0yCbud_kwXyRuUO8XnLH2b381wqzYCArOAIKKVnnXk)