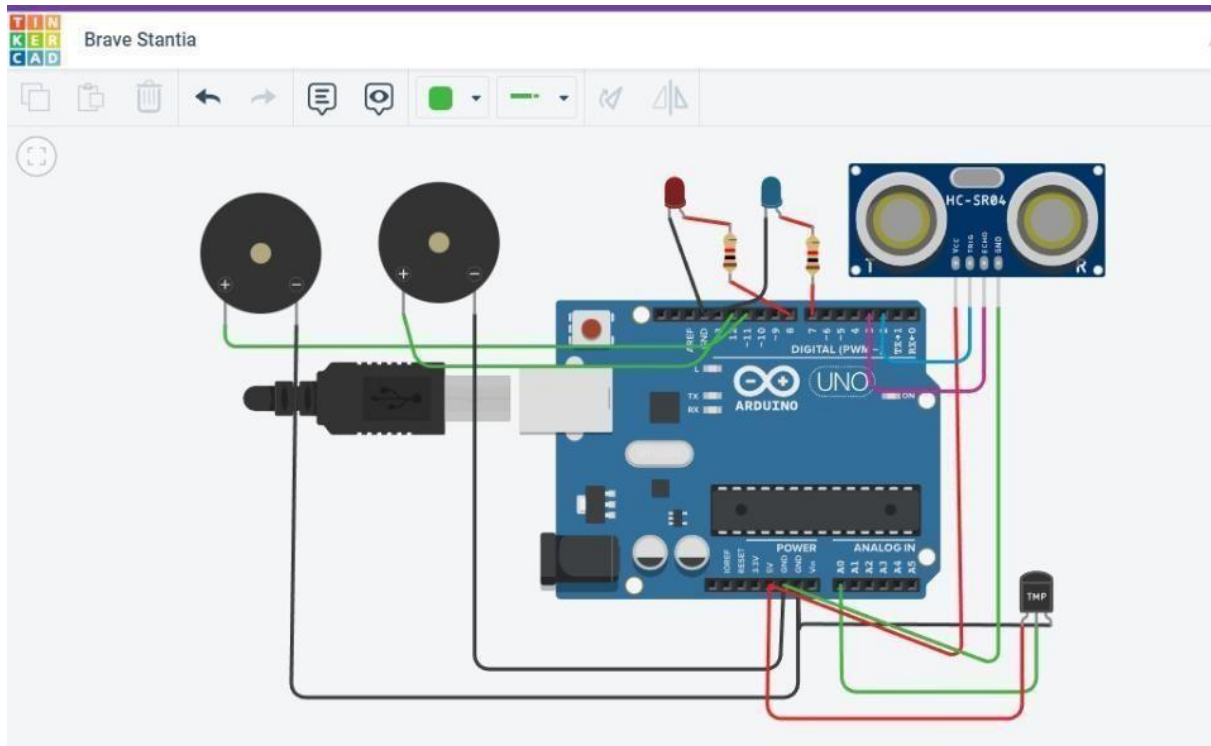


IBM-NALAYATHIRAN  
DOMAIN: IoT  
ASSIGNMENT 1:SMART HOME

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:**

