IBM- Nallaiya Thiran Project

Assignment 1-Smart Home

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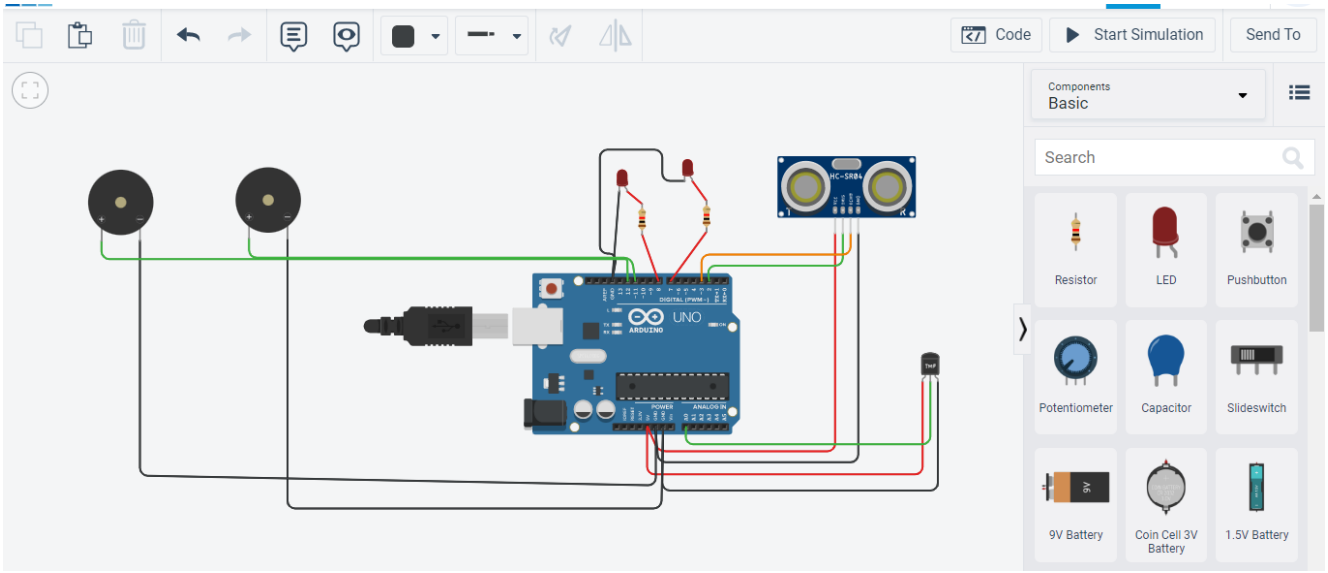
CIRCUIT DIAGRAM:



SOURCE CODE:

```
// C++ code
//
int t=2;
int e=3;
void setup()
{
Serial.begin(9600);
pinMode(t,OUTPUT);
pinMode(e,INPUT);
pinMode(12,OUTPUT);
}
void loop()
{
```

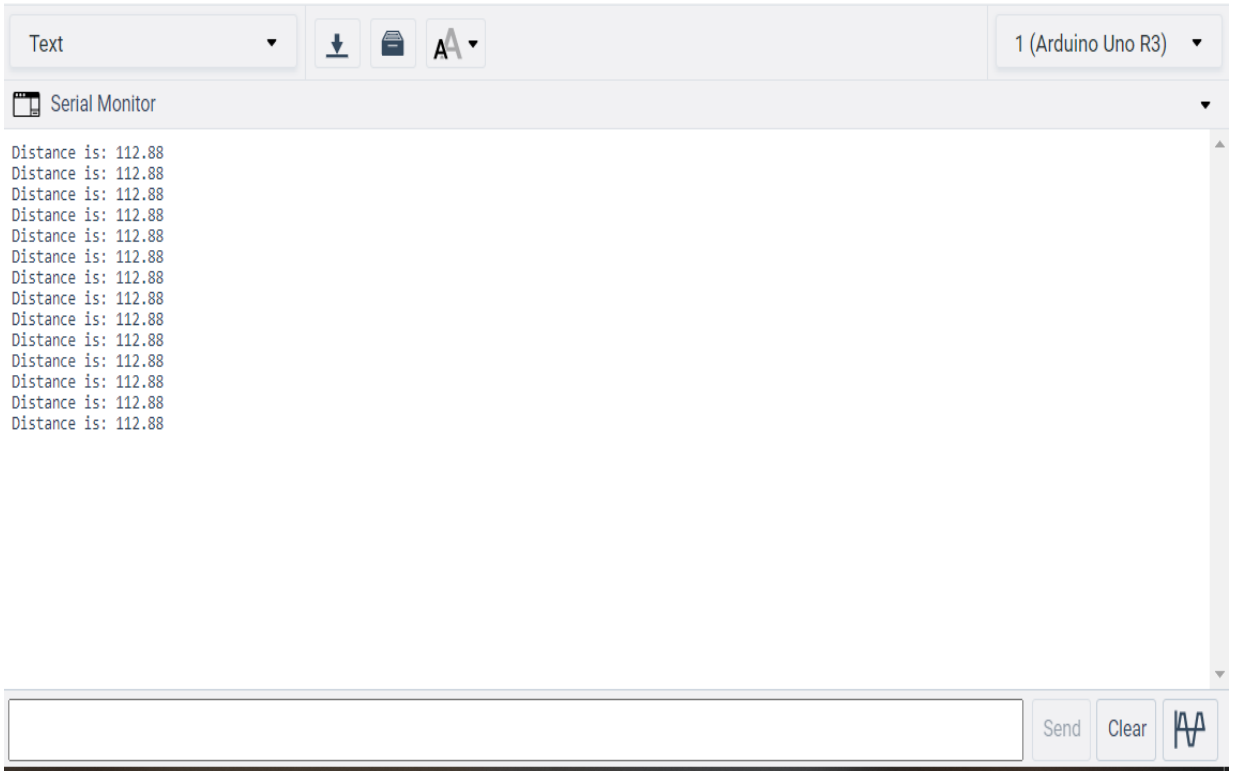
```
//ultrasonic sensor
digitalWrite(t,LOW);
digitalWrite(t,HIGH);
delayMicroseconds(10);
digitalWrite(t,LOW);
float dur=pulseIn(e,HIGH);
float dis=(dur*0.0343)/2;
Serial.print("Distance is: ");
Serial.println(dis);
//LED ON
if(dis>=100)
{
  digitalWrite(8,HIGH);
  digitalWrite(7,HIGH);
  }
   //Buzzer 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: ");
```

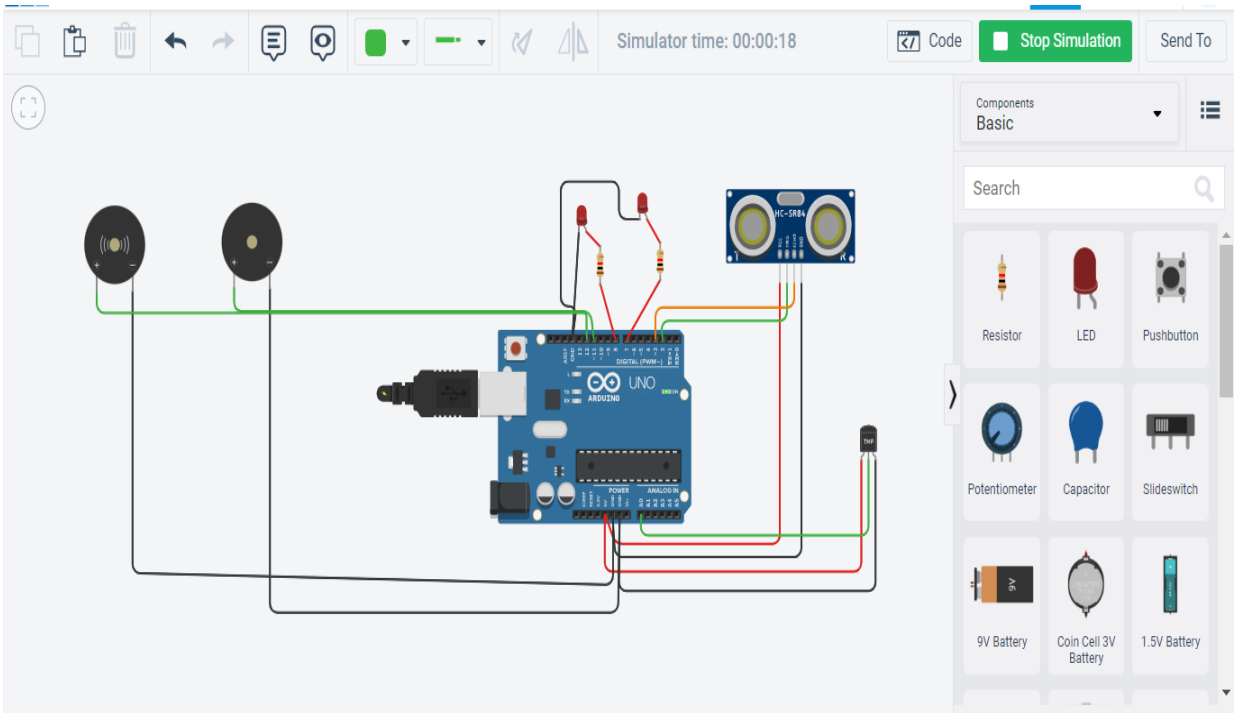
```
  Serial.println(t);
  delay(1000);
 //LED ON
 if(t>=100)
{
 digitalWrite(8,HIGH);
 digitalWrite(7,HIGH);
 }
 //Buzzer for Temperature Sensor
 if(t>=100)
 {
 for(int i=0; i<=30000; i=i+10)
 {
 tone(12,i);
 delay(1000);
 noTone(12);
 delay(1000);
 }
 }
 //LED OFF
if(t<100)
 {
 digitalWrite(8,LOW);
 digitalWrite(7,LOW);
 }
 }
```

TINKERCAD LINK:

https://www.tinkercad.com/things/9JfowNrmJXS-iot-on-child-safety/editel

OUTPUT:


Text
1 (Arduino Uno R3)
Serial Monitor
Distance is: 112.88
Distance is: 112.88
Distance is: 112.88
Distance is: 112.88
Distance is: 112.88
Distance is: 112.88
Distance is: 112.88
Distance is: 112.88
Distance is: 112.88
Distance is: 112.88
Distance is: 112.88
Distance is: 112.88
Distance is: 112.88
Send
Clear


Simulator time: 00:00:18
Code
Stop Simulation
Send To
Components
Basic
Search
Resistor
LED
Pushbutton
Potentiometer
Capacitor
Slideswitch
9V Battery
Coin Cell 3V Battery
1.5V Battery