

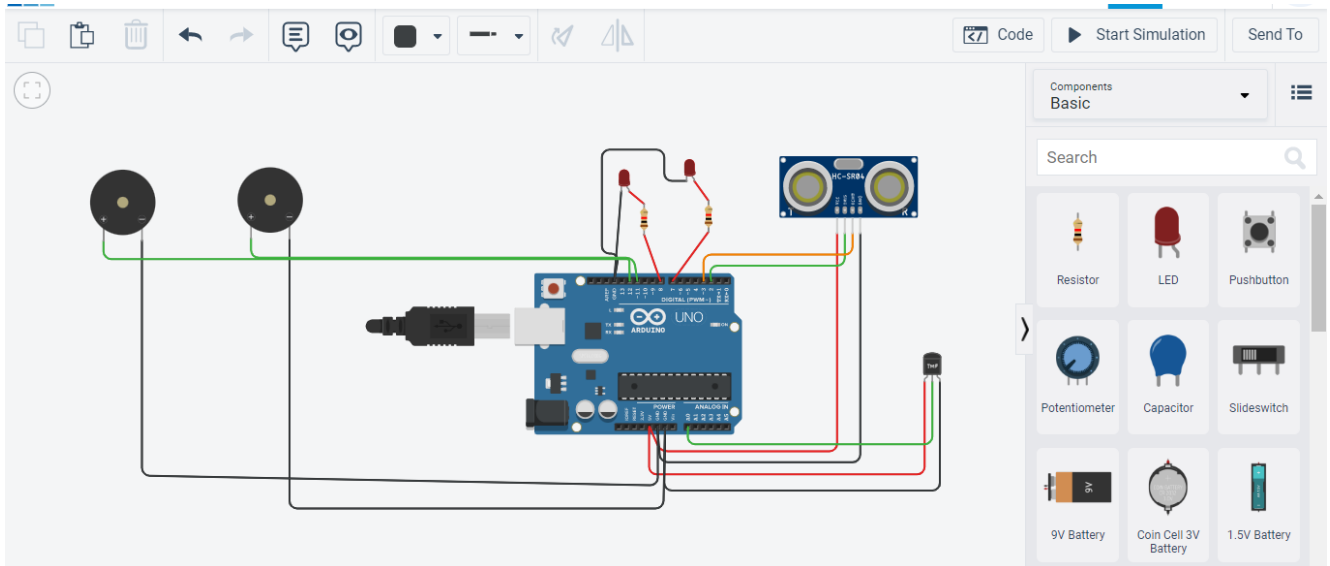
IBM- Nallaiya Thiran Project

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:

