

ASSIGNMENT 1

Topic : Smart Waste Management System For Metropolitan Cities

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CODE

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

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);
}
}

```

Output

