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## CODE:

```
void setup()
{
  Serial.begin(9600);
  pinMode(12,OUTPUT);
  pinMode(2,INPUT);

}

void loop()
{
  int motion=digitalRead(2);
  double data=analogRead(A0);
  double n=data/1024;
  Serial.print("Converted Analog Data: ");
  Serial.println(n);
  double volt=n*5; //because connected to 5v
  Serial.print("Voltage data: ");
  Serial.println(volt);
  double off=volt-0.5;
  Serial.print("Offset Data: ");
  Serial.println(off);
```

```

double temperature=off*100;
Serial.print("Temperature Data: ");
Serial.println(temperature);
if(motion==1 && temperature<60)
    tone(12,100);
else if(motion==0 && temperature>60)
    tone(12,200);
else if(motion==1 && temperature>60)
    noTone(12);
else if(motion==0 && temperature<60)
    noTone(12);
}

```



