

```

int speaker = A3;
int speaker2 = 12;
int motor = A5;
int ledPin = 5;
int ledPin2 = 9;
unsigned long time;

void setup()
{
  pinMode(ledPin, OUTPUT); // sets the green led as output
  pinMode(ledPin2, OUTPUT); //sets the red led as output
  pinMode(motor, HIGH); //sets vibe board as output
  pinMode(speaker, OUTPUT); //sets speaker as output
  pinMode(speaker2, OUTPUT);
}

void loop()
{
  time = millis(); //keeps track of time

  if (time >= 7200000) //if the time is equal to or greater than 120 minutes
  {
    digitalWrite(ledPin, HIGH); //turns off green light
    digitalWrite(ledPin2, LOW); //turns on red light
    digitalWrite(motor, HIGH); //turns on vibe board
    scale(); //plays scale
  }
  else
  {
    digitalWrite(ledPin, LOW); //turns on green light
    digitalWrite(ledPin2, HIGH); //turns off red light
    delay(1000); //sets delay
    digitalWrite(ledPin2, LOW);
    digitalWrite(motor, LOW); //turns off vibe board
  }
}

void beep (unsigned char speaker, int frequencyInHertz, long timeInMilliseconds)
// the sound producing function
{
  int x;
  long delayAmount = (long)(1000000/frequencyInHertz);
  long loopTime = (long)((timeInMilliseconds*1000)/(delayAmount*2));

```

```
for (x=0;x<loopTime;x++)  
{  
  digitalWrite(speaker,HIGH);  
  delayMicroseconds(delayAmount);  
  digitalWrite(speaker,LOW);  
  delayMicroseconds(delayAmount);  
}  
}
```

```
void scale ()  
{  
  beep(speaker,4186,700);    //C: play the note C (C7 from the chart linked to  
above) for 500ms  
  beep(speaker,5274,700);    //D  
  //C  
}
```