IOT - IBM

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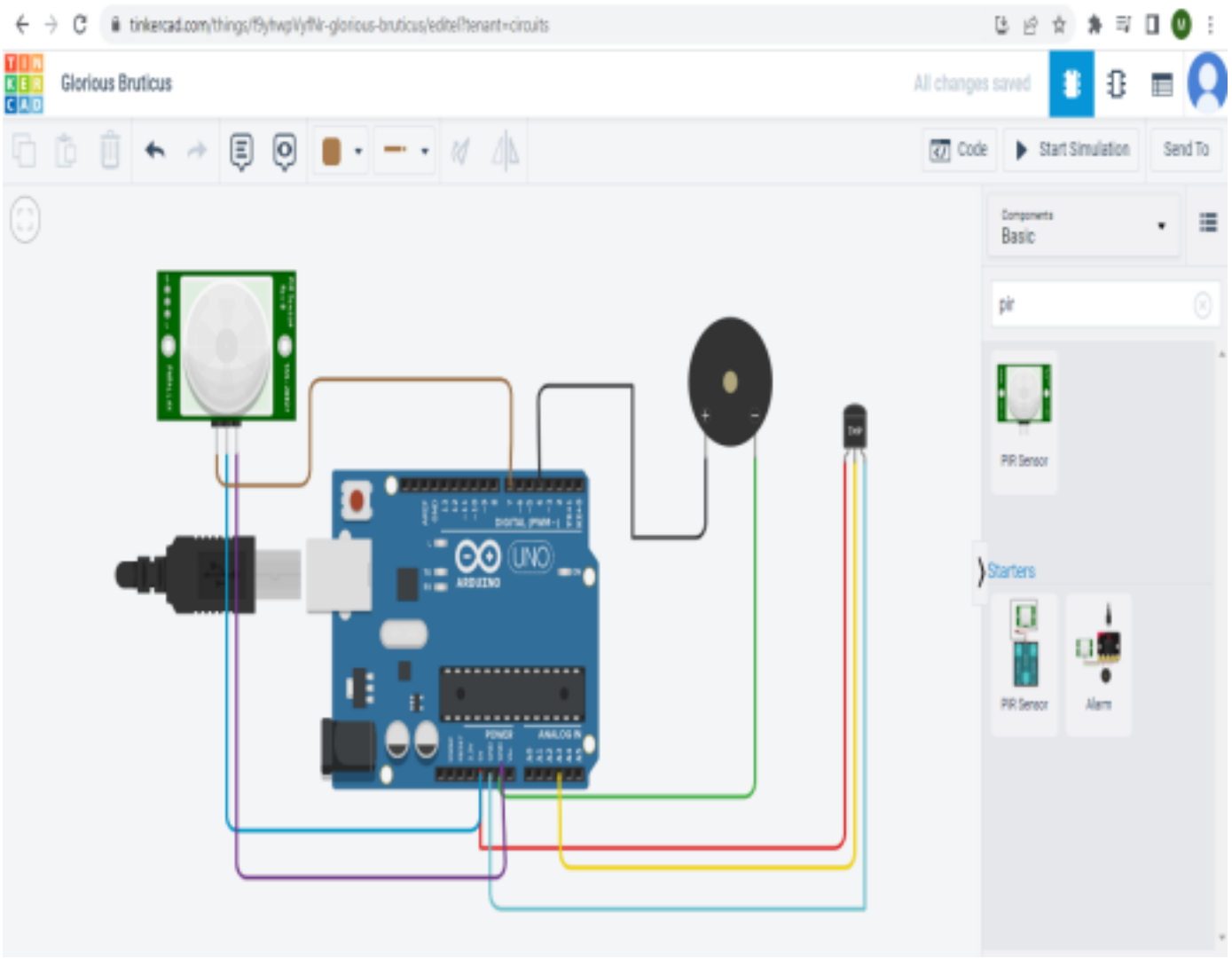
Topic:

To design a circuit using PIR sensor, Temperature sensor and Piezo alarm and to perform the following operations:

1. Alarm should sound in one manner if the temperature is above “60 C”.
2. Alarm should sound with another frequency if motion is detected using PIR sensor.

Circuit:

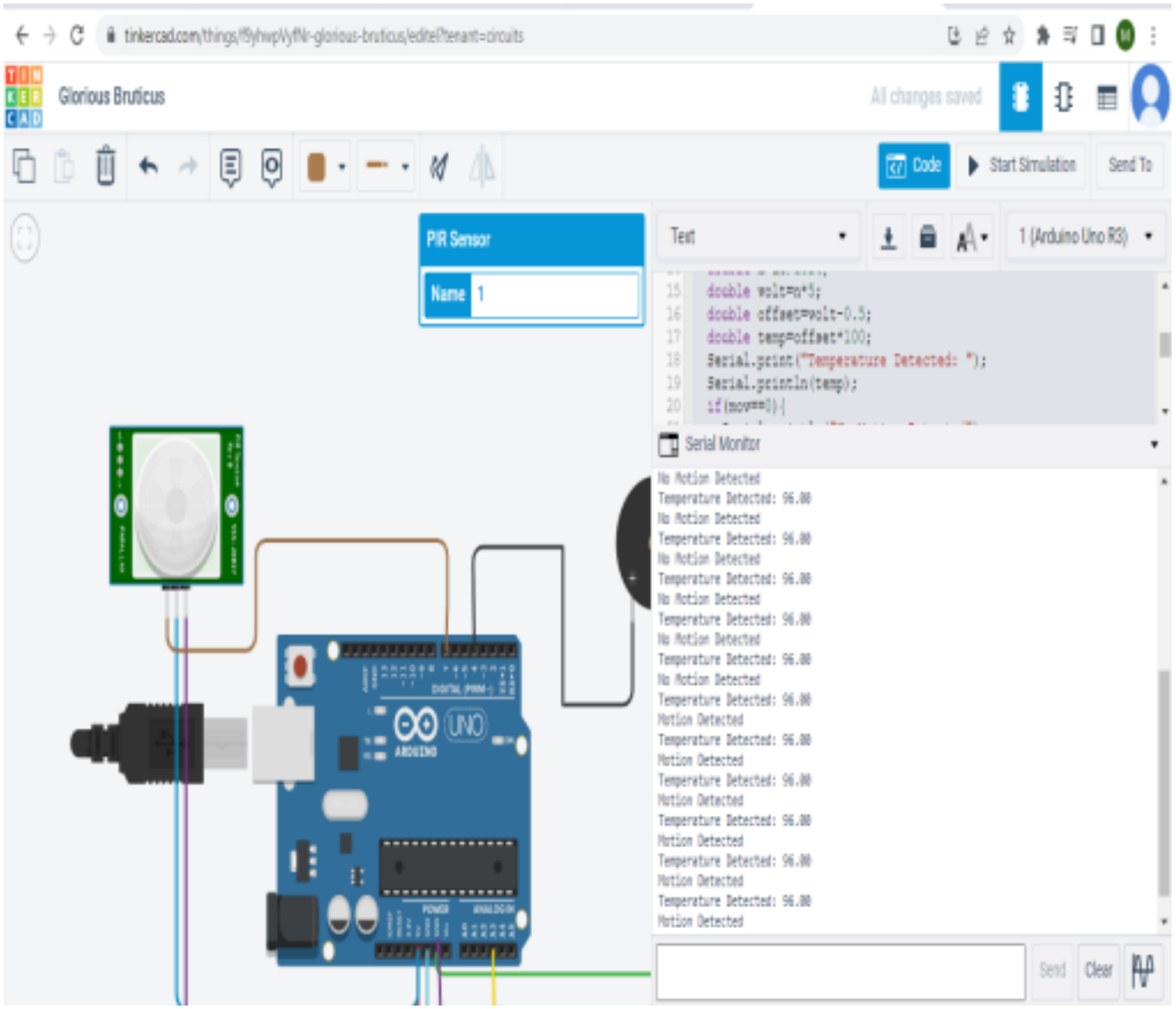


Code:

```
void setup()
 {
 Serial.begin(9600);
 pinMode(4,OUTPUT);
 pinMode(7,INPUT);
 }
void loop()
 {
 int mov=digitalRead(7);
 double dt=analogRead(A3);
 double n=dt/1024;
```

```
 double volt=n*5;
 double offset=volt-0.5;
 double temp=offset*100;
 Serial.print("Temperature Detected: ");
Serial.println(temp);
 if(mov==0){
 Serial.println("No Motion Detected");
}
 if(mov==1){
 Serial.println("Motion Detected");
tone(4,100,1000);
 }
 if(temp>60){
 tone(4,400,1000);
 }
 }
```

Output:


tinkercad.com/things/f5yhwpVyfNr-glorious-bruticus/editel?tenant=circuits
Glorious Bruticus
All changes saved
Code
Start Simulation
Send To
PIR Sensor
Name 1
Text
1 (Arduino Uno R3)
double volt=a*5;
double offset=volt-0.5;
double temp=offset*100;
Serial.print("Temperature Detected: ");
Serial.println(temp);
if(mov==0){
Serial Monitor
No Motion Detected
Temperature Detected: 96.00
No Motion Detected
Temperature Detected: 96.00
No Motion Detected
Temperature Detected: 96.00
No Motion Detected
Temperature Detected: 96.00
No Motion Detected
Temperature Detected: 96.00
No Motion Detected
Temperature Detected: 96.00
Motion Detected
Temperature Detected: 96.00
Motion Detected
Temperature Detected: 96.00
Motion Detected
Temperature Detected: 96.00
Motion Detected
Temperature Detected: 96.00
Motion Detected
Temperature Detected: 96.00
Motion Detected
Send
Clear