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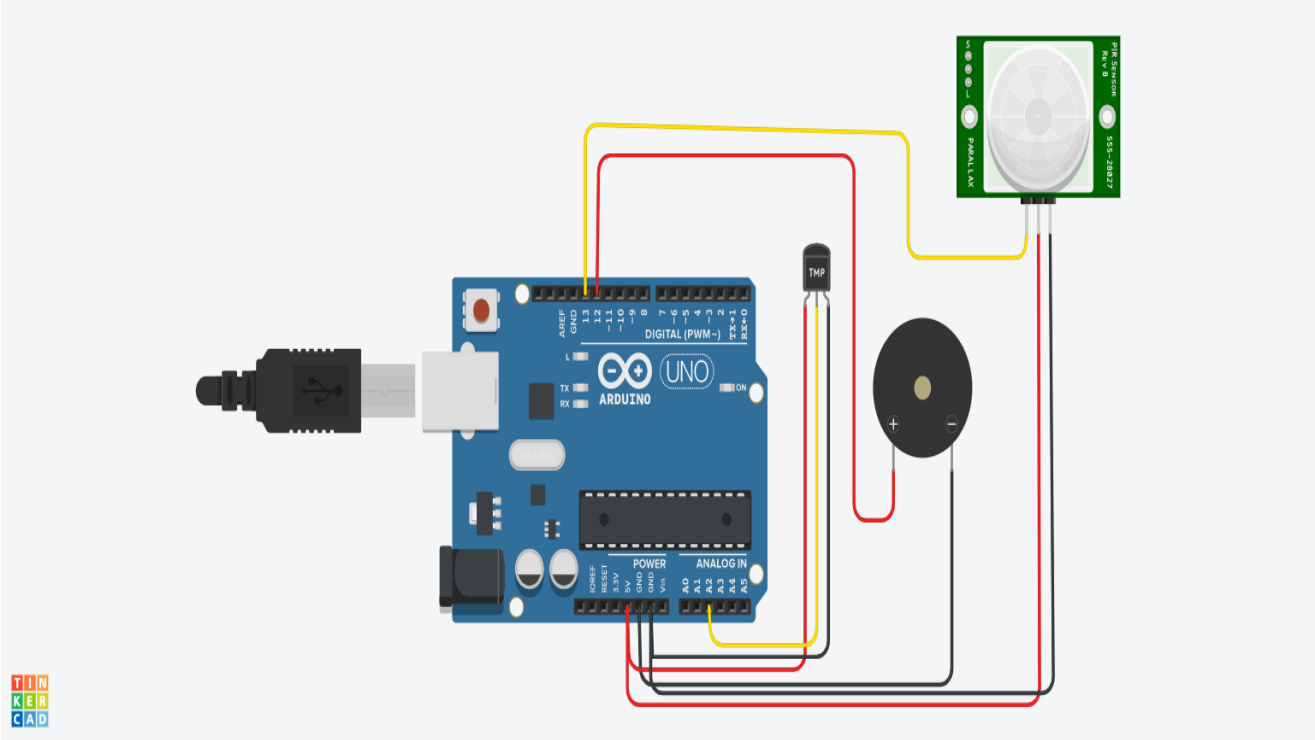
Circuit Design using Piezo Alarm for Detection of Rise in Temperature using Temperature Sensor and Motion Detection using PIR Sensor

Features:

- ❖ Alarm buzzes when temperature is detected above 60 deg C.
- ❖ Alarm buzzes another sound if motion is detected.

Circuit Diagram:



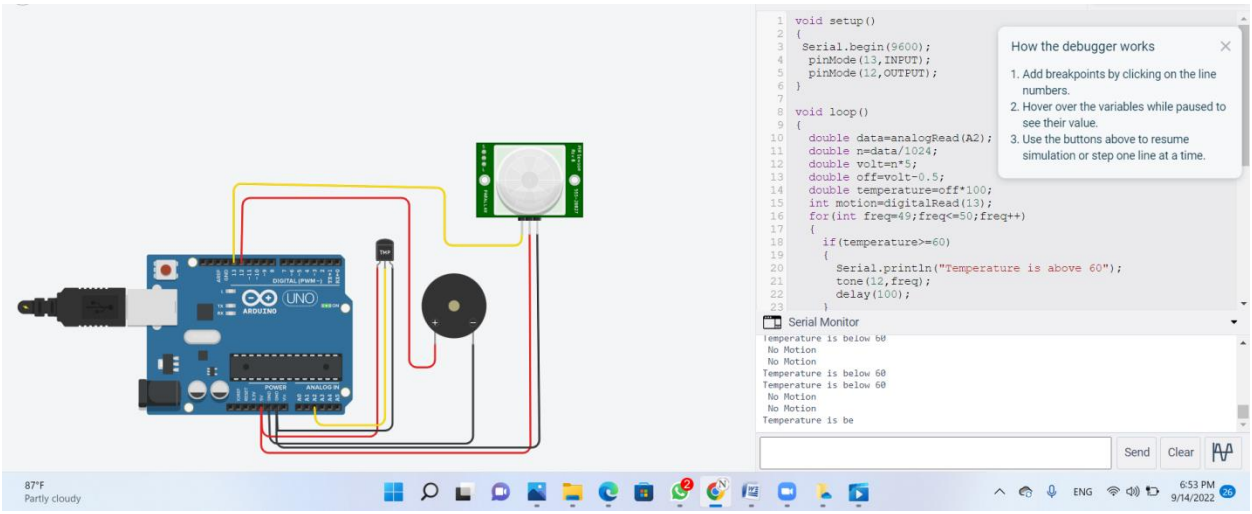
Program:

```
void setup()
{
        Serial.begin(9600);
        pinMode(13,INPUT);
        pinMode(12,OUTPUT);
}
void loop()
{
  double data=analogRead(A2);
  double n=data/1024;
  double volt=n*5;
  double off=volt-0.5;
  double temperature=off*100;
  int motion=digitalRead(13);
  for(int freq=49;freq<=50;freq++)
  {
        if(temperature>=60)
        {
                Serial.println("Temperature is above 60");
                tone(12,freq);
                delay(100);
        }
        else
```

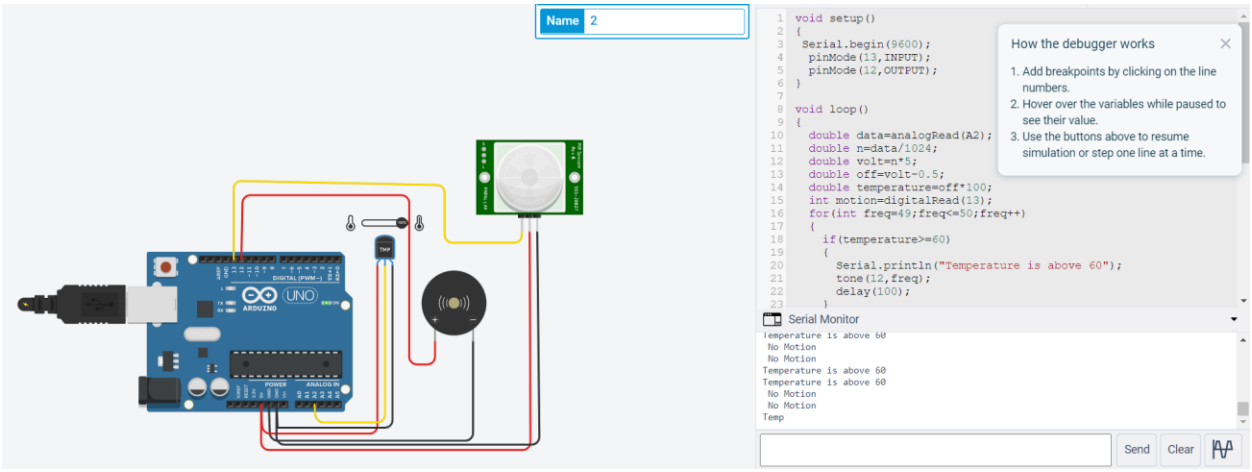
```
        {
                Serial.println("Temperature is below 60");
                 noTone(12);
        }
  }
   for(int freq=9;freq<=10;freq++)
   {
        if(motion==1)
        {
                Serial.println("Motion Detected");
                tone(12,freq);
                delay(200);
        }
        else
        {
                Serial.println(" No Motion");
                noTone(12);
        }
   }
}
```

Outputs:

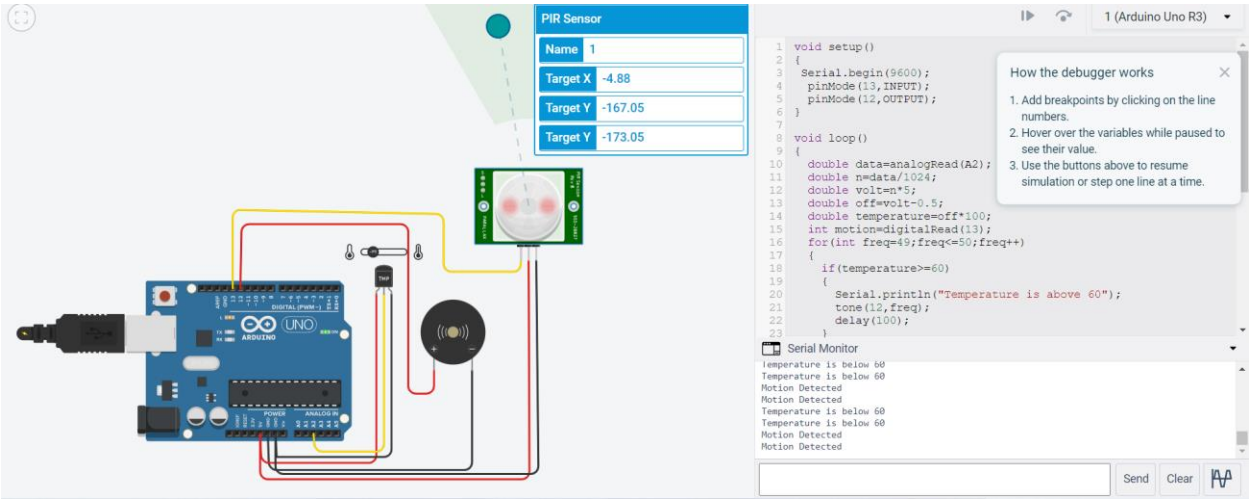
Initial Condition



When Temperature is above 60 C



When Motion Detected



Video Link:

https://drive.google.com/file/d/1g-LI3ePxCcu3v7roM4yPic6BJq7PjY1c/view?usp=drivesdk