```
int Hall_sensor=7; //set pin 7 to connect the hall sensor
int count;
int frequency;
int F;
int F1;
int clocksignal=3;
void setup()
{
 Serial.begin(9600);
  pinMode(Hall_sensor,INPUT);     //set pin7 as input
  pinMode(clocksignal,OUTPUT);    //set pin 3 as output

}
void loop()
{
  count=pulseIn(Hall_sensor,HIGH);  //get the time of the puls
frequency=count/100000;            // get the frequency
F=abs(frequency);
 Serial.print("The RPM is");
 Serial.println(F);
 F1=count*360;                    // get the new frequency (1 degree)
 digitalWrite(clocksignal,HIGH);   //creat new clock signal (high)
 delay(F1);
 digitalWrite(clocksignal,LOW);    //creat new clock signal (low)
 delay(F1);
}
```

```
The RPM is0
The RPM is0
The RPM is0
The RPM is0
The RPM is0
The RPM is0
The RPM is0
The RPM is0
The RPM is27136
The RPM is28033
The RPM is8488
The RPM is26338
The RPM is17894
The RPM is0
The RPM is395
The RPM is8270
The RPM is23483
The RPM is0
The RPM is0
The RPM is0
The RPM is0
The RPM is0
The RPM is0
The RPM is0
The RPM is0
The RPM is0
The RPM is0
The RPM is0
The RPM is0
The RPM is0
The RPM is0
The RPM is0
```

This is the result when I test the code. Because I don't have a motor and I can't have a very high speed to change the magnetic pole, I just change the code from

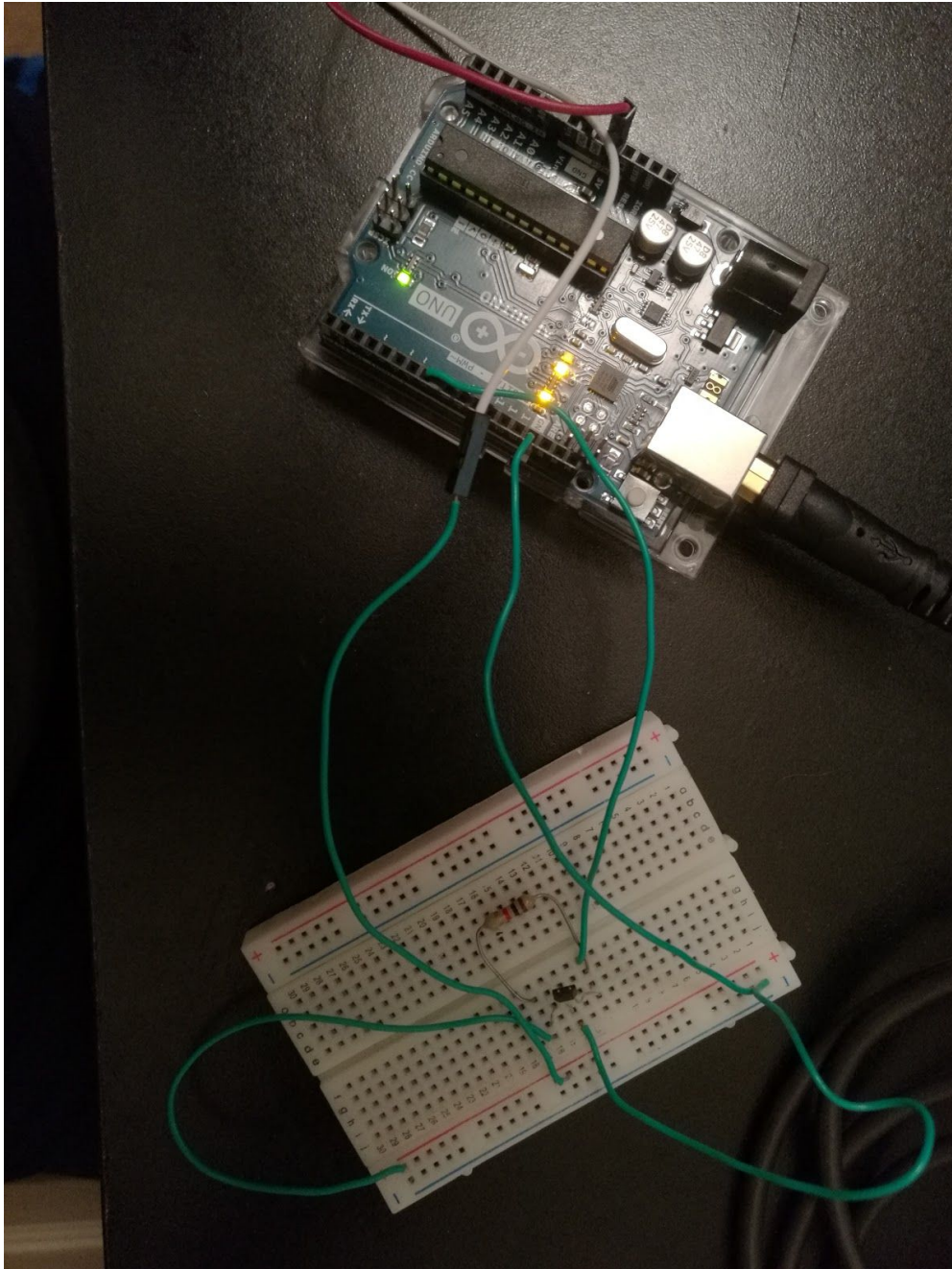   frequency=count/100000;
         to
         Frequency =count;

This is because the unit of the Arduino is µs.

This is the connection of the Hall sensor.
Pin 1 of the Hall sensor connect to the 5v VCC;
Pin 2 of the Hall sensor connect to the GND
Pin 3 of the Hall sensor is output, and connect to the GPIO7 of Arduino Uno.
Pin 1 and pin 3 have a resistor in parallel