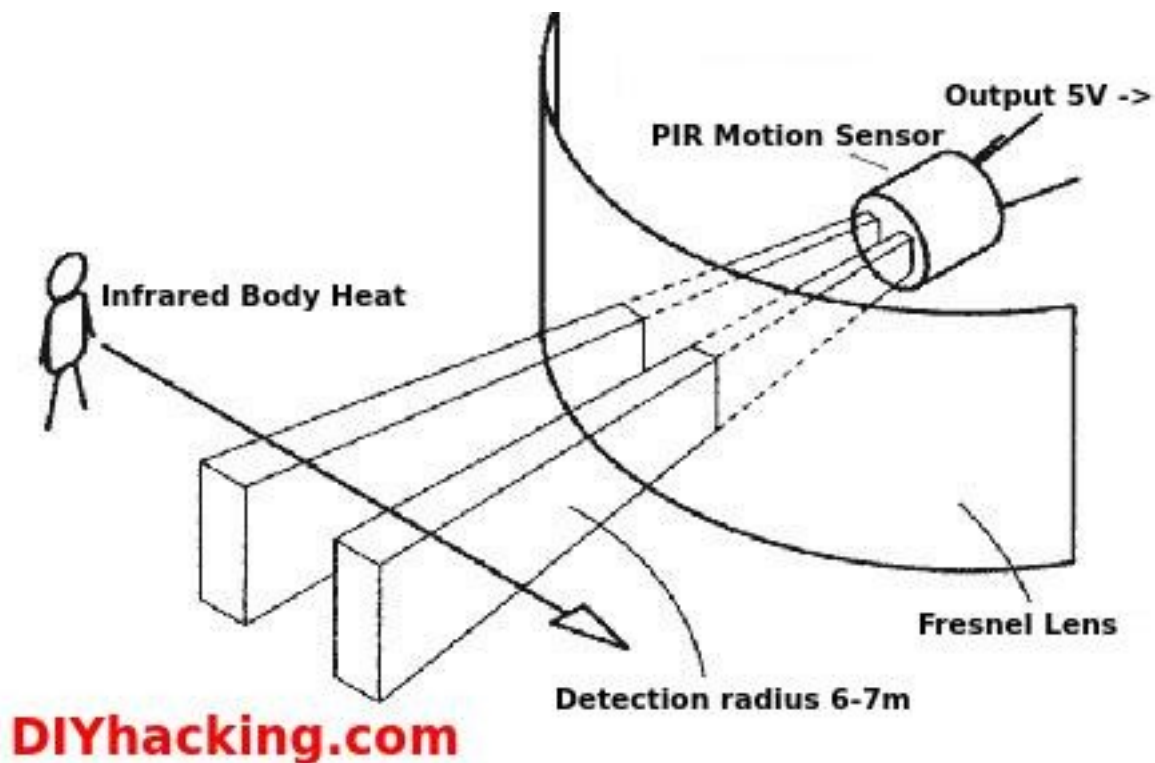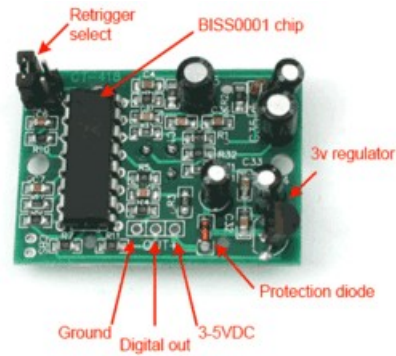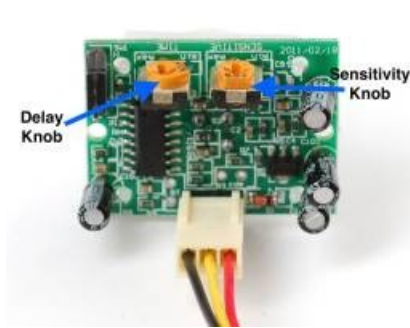# Using PIR Sensor with Raspberry-Pi

About PIR Sensor:

A passive infrared sensor (PIR sensor) is an electronic sensor that measures infrared (IR) light radiating from objects in its field of view. They are most often used in PIR-based motion detectors.

All objects with a temperature above absolute zero emit heat energy in the form of radiation. Usually this radiation isn't visible to the human eye because it radiates at infrared wavelengths, but it can be detected by electronic devices designed for such a purpose.

The term passive in this instance refers to the fact that PIR devices do not generate or radiate any energy for detection purposes. They work entirely by detecting the energy given off by other objects. PIR sensors don't detect or measure "heat"; instead they detect the infrared radiation emitted or reflected from an object.

Pin Connection:

Connect the pins of the Sensor to raspberry-pi as follows:

Pin of Sensor → Pin of Raspberry-Pi
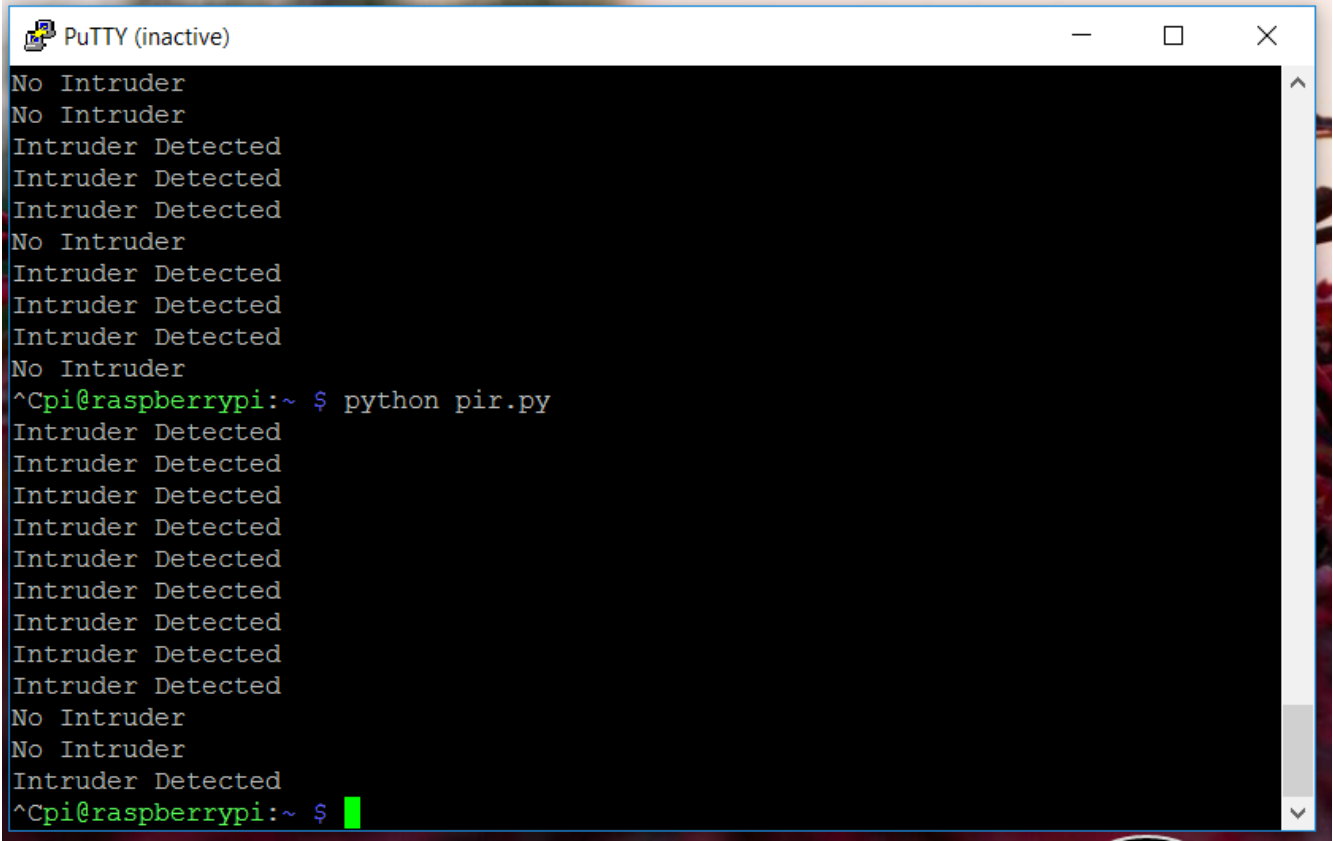Vcc → Pin 1
GND → Pin 6
OUT → Pin 7(GPIO 4)

Also note that there is an 2 adjustable screws in the sensor.
Hence adjust the screws accordingly (reduce the sensitivity so that you'll be able to test when you are close to the sensor)

Code:

```
from time import sleep
import RPi.GPIO as GPIO
GPIO.setmode(GPIO.BCM)
GPIO.setup(4,GPIO.IN)
while True:
    try:
        if (GPIO.input(4)):
            print("Intruder Detected")
        else:
            print("No Intruder")
        sleep(3)
    except KeyboardInterrupt:
        exit()
GPIO.cleanup()
```

Sample Output:

```
PuTTY (inactive)                                    —   □   ✕

No Intruder
No Intruder
Intruder Detected
Intruder Detected
Intruder Detected
No Intruder
Intruder Detected
Intruder Detected
Intruder Detected
No Intruder
^Cpi@raspberrypi:~ $ python pir.py
Intruder Detected
Intruder Detected
Intruder Detected
Intruder Detected
Intruder Detected
Intruder Detected
Intruder Detected
Intruder Detected
Intruder Detected
No Intruder
No Intruder
Intruder Detected
^Cpi@raspberrypi:~ $
```