Using Sound Sensor with Raspberry-Pi

About Sound Sensor:

A microphone (also senses the sound), colloquially nicknamed mic is a transducer that converts sound into an electrical signal:

Pin Connection:

Connect the pins of the Sensor to raspberry-pi as follows(**Note:** The order of the pins in the sensor module may vary):

Pin of Sensor → Pin of Raspberry-Pi
Vcc → Pin 2
GND → Pin 6
OP or D0 → Pin 7(GPIO 4)

Also note that there is an adjustable screw in the sensor, and an LED indicating when the sound is sensed.

Hence adjust the screw accordingly.

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)==1):
                        print("No sound")
                else:
                        print("!Sound Detected")
                sleep(0.3);
        except KeyboardInterrupt:
                exit()
GPIO.cleanup()
```

Try this out:

Connect an LED to GPIO 18 (Physical pin 12), and use the following code, so that when sound it detected the **LED toggles** between ON and OFF.

The code is given below:

```
from time import sleep
import RPi.GPIO as GPIO
GPIO.setmode(GPIO.BCM)
GPIO.setup(4,GPIO.IN)
GPIO.setup(18,GPIO.OUT)

state=0;
def changeState():
        global state;
        if state == 0:
                GPIO.output(18,GPIO.HIGH)
                state=1;
        elif state==1:
                GPIO.output(18,GPIO.LOW)
                state = 0;
        return
while True:
        try:
                if (GPIO.input(4)==1):
                        print("No sound")
                else:
                        print("!Sound Detected")
                        changeState()
                        sleep(1);

        except KeyboardInterrupt:
                exit()
GPIO.cleanup()
```

Sample Output: