## Description

This is a sound detector project built on Raspberry Pi that detects sound. When sound is produced in the surrounding it also looks for the motion movement along with sound and also prints whether motion is detected or motion is not detected. This is assuming you have a working interface for your raspberry pi. This specific tutorial mounts the Raspberry Pi GPIO extension and uses Thonny IDE to run the code.

GitHub Link: <https://github.com/abhand3/IOT-projects-Anjita-Bhandari/tree/main/Sound%20Sensor>

## Materials Needed

### Hardware

1. 1 Raspberry Pi
2. 1 Breadboard
3. 1 sound sensor
4. 1 Pir Motion Sensor
5. 4 Male-to-Male cables (1 red, 1 orange, 1 yellow, 1 black)
6. 4 Male-to-Female cables (1 red, 1 orange, 1 yellow, 1 black)

*Note: the color of the cables do not matter*

Sound Sensor:

A picture containing electronics, circuit

Description automatically generated

Connection Setup

1. Mount the extension in the breadboard
2. Connect the sound Sensor and pir motion sensor to the breadboard cables to match the diagram below.

A picture containing electronics

Description automatically generated

Connection Setup for sound sensor:

|  |  |  |
| --- | --- | --- |
| Cable Connections | | |
| Cable Color | Ultrasonic Connection | extension Connection |
| white | VCC | 5v |
| Black | GND | GND |
| Purple | OUT | GIPO17 |

Connection Setup for Pir motion sensor:

|  |  |  |
| --- | --- | --- |
| Cable Connections | | |
| Cable Color | Pir Motion Sensor Connection | extension Connection |
| Orange | GND | GND |
| Brown | OUT | GPIO4 |
| Red | VCC | 5v |

## Software Instructions

1. Open Thonny IDE and change to Python 3.7.3
2. Click Plus sign and copy paste the code (from flameDetector.py) and save it or

Download the file from GitHub and save it.

Reference:

<http://www.piddlerintheroot.com/sound-sensor/>