IOT LAB INTERNAL-2
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Question: As the part of security, continuous monitoring of the home and ofces is mandatory. So, develop an IOT based Intrusion detection system and notify the user at periodic intervals of the time.

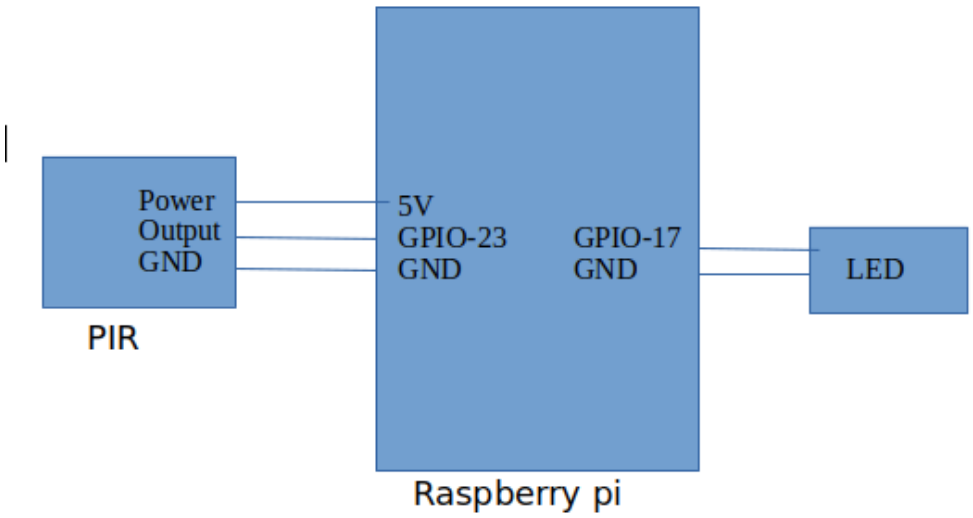
Aim: To develop an IOT based Intrusion detection system and notify the user at periodic intervals of the time.

Description: An intrusion detection system (IDS) is a type of security software designed to automatically alert administrators when someone or something is trying to compromise information system through malicious activities or through security policy violations.If any moment in the home it will send an email alert to the owner.
For this we will use **PIR** sensor, it will sense any moment in the room give alert message to the owner.

Requirements:

- Raspberry pi
- PIR sensor
- Buzzer, LED
- Jumper wires
- Power supply

Cicuit diagram:



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Steps:

1.Connect the raspberry pi to the monitor.
2.connect all 3 pir sensors to the Raspberry pi at gpio-23.
3.connect the buzzer at gpio-17.
4.Open the python id and run the program.
5.Observe the output on the buzzer.

Program:

```
import RPi.GPIO as GPIO
import time

import smtplib
from email.mime.multipart import MIMEMultipart
from email.mime.text import MIMEText
from email.mime.base import MIMEBase
from email import encoders
from email.mime.image import MIMEImage

fromaddr = "suryachandu5981@gmail.com"
toaddr = "rithik.yennam@gmail.com"

mail = MIMEMultipart()

mail['From'] = fromaddr
mail['To'] = toaddr
mail['Subject'] = "Alert"
body = "motion detected"

def sendMail():
    server = smtplib.SMTP('smtp', 587)
    server.starttls()
    server.login(fromaddr, "bhai@007")
    text = mail.as_string()
    server.sendmail(fromaddr, toaddr, text)
    server.quit()
    print("Mail send")

GPIO.setmode(GPIO.BCM)

GPIO.setup(23, GPIO.IN)
GPIO.setup(24, GPIO.OUT)
```

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```
try:
   time.sleep(2)
   while True:
      print(GPIO.input(23));
      if GPIO.input(23):
         GPIO.output(24, True)
         time.sleep(0.5)
         GPIO.output(24, False)
         print("Motion Detected...")
         print("Buzzer ON");
         time.sleep(5)
      time.sleep(1.5)

except:
   GPIO.cleanup()
```

Output:

```
>>>
====================== RESTART: /home/pi/Desktop/led.py ======================
0
0
0
0
1
Motion Detected...
Buzzer ON
Mail Sent
```