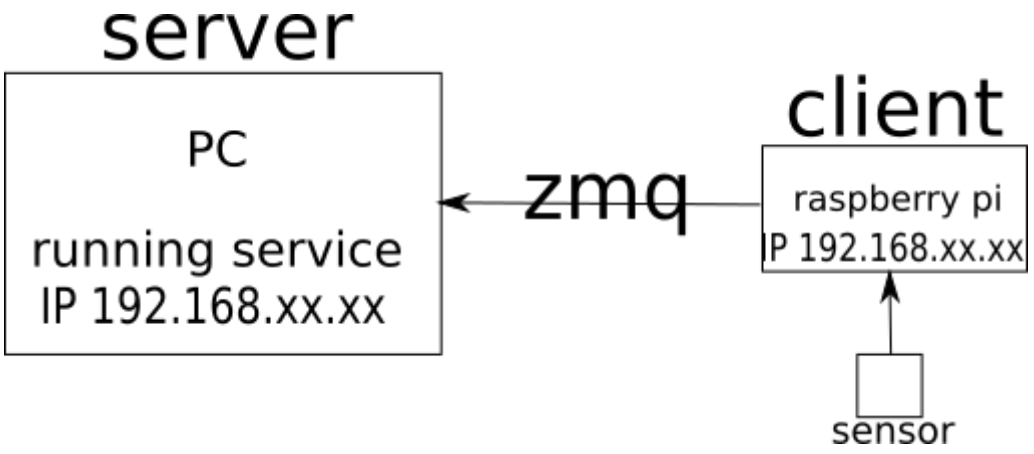
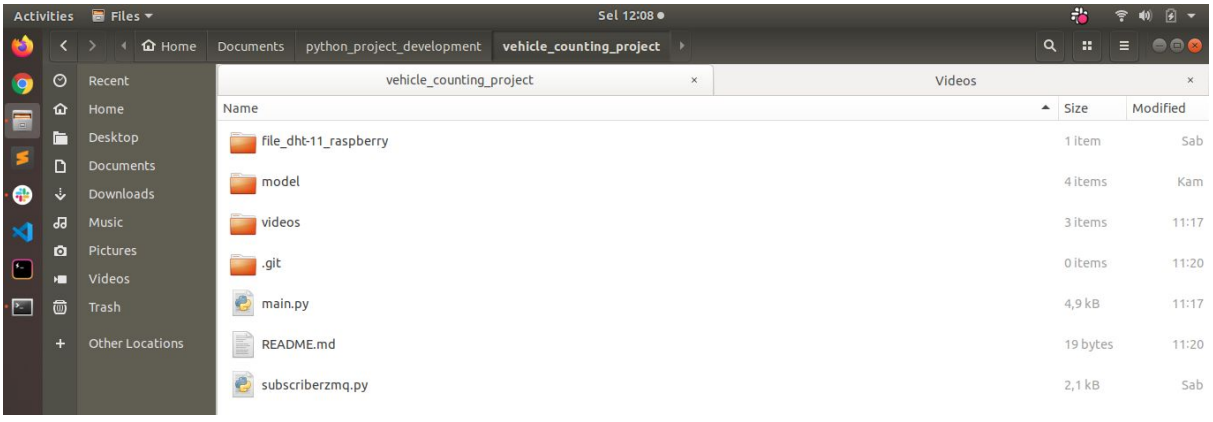
VEHICLE DETECTION AND COUNTING

The project is vehicle counting and detection. This project uses deep learning with the YOLO method with a dataset of cars, buses, trucks, motorcycles, and bicycles. this project will also display the street name, temperature and humidity of the dht-11 sensor sent by raspberries.

The system configuration uses a client server where the server is a PC that will run the vehicle detection service, and raspberries as a client that sends temperature and humidity sensor information to the server.

Specification minimum
core i7
ram 4gb





server side

1. make sure you have python environment
dependency
- opencv (pip3 install opencv-python)
- zmq (pip3 install pyzmq)

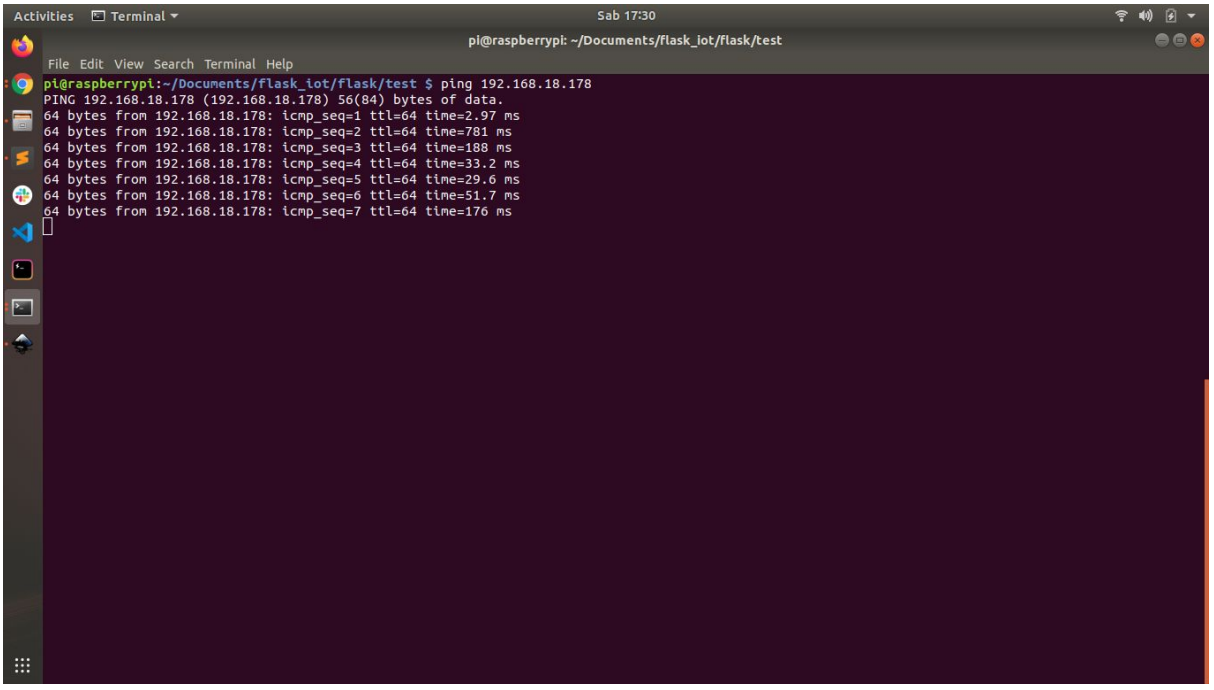
2. check your ip addres (exp: 192.168.x.xx)

3. try to running service
   python main.py
4. if you want to change file video just change name of file in script

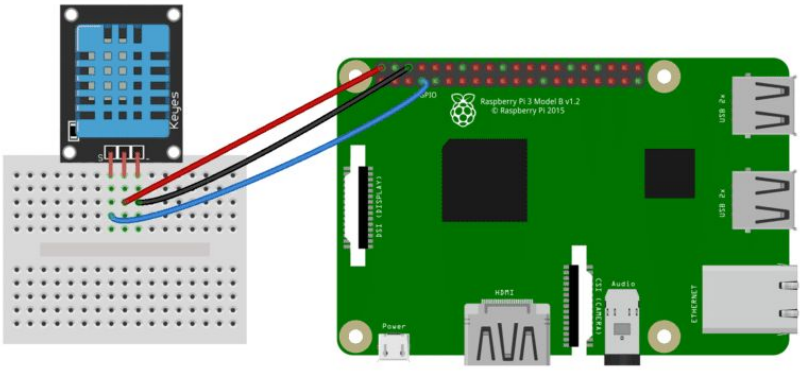
if an error occurs, install the required library listed on the terminal

client side

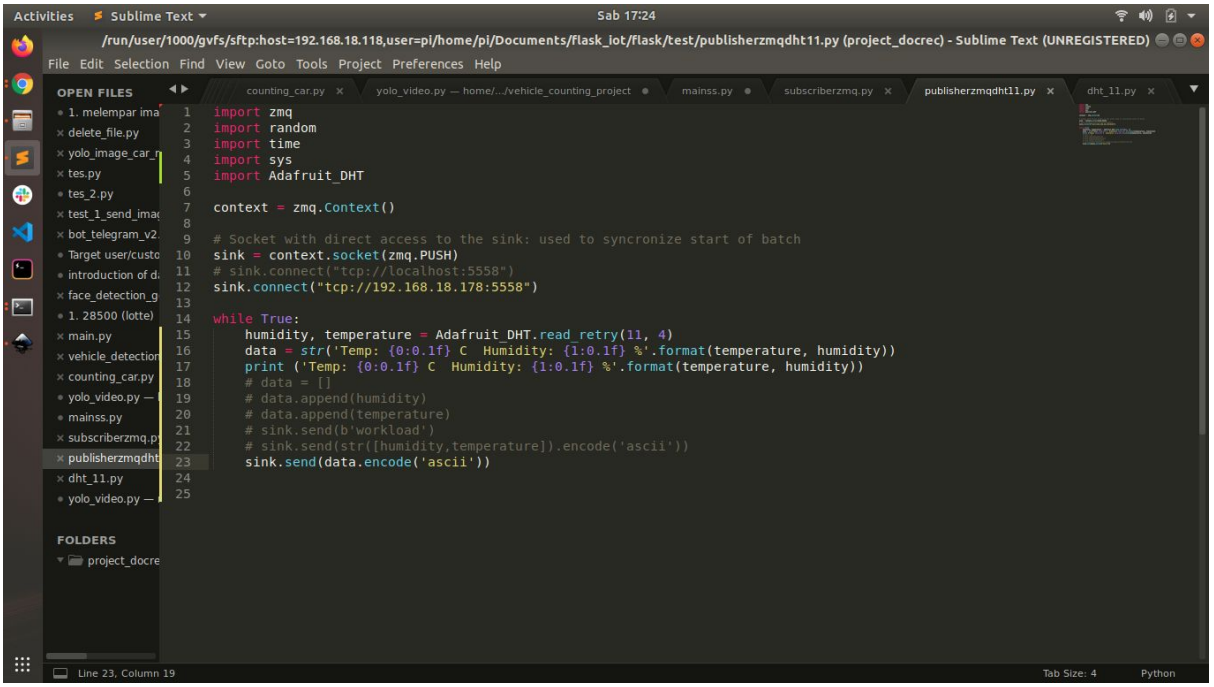
1. copy file in folder file_dht-11_raspberry to your raspberry
2. now check your connection with the server
   ping 192.168.xx.xx



3. make sure your the sensor has been connected with raspberry



4. change ip address in script publisherzmqdht11.py with your server ip address (exp:192.168.xx.xx)

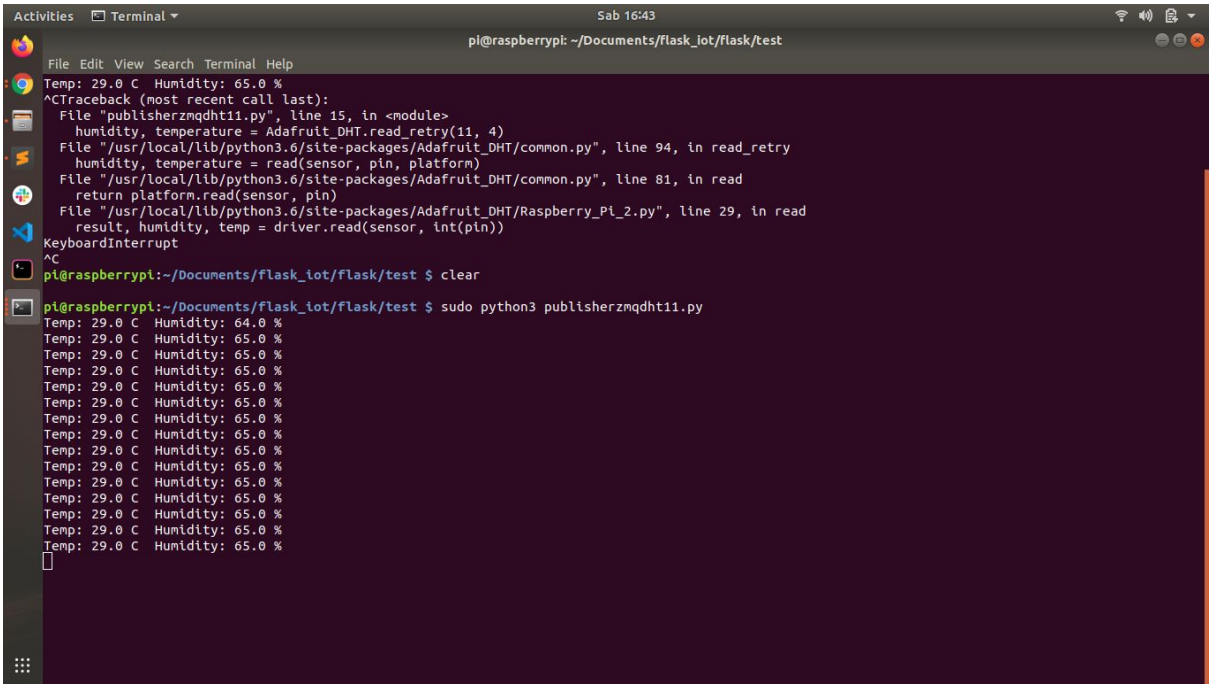


don’t change the port 5558

5. after that try running the service

   python publisherzmqdht11.py

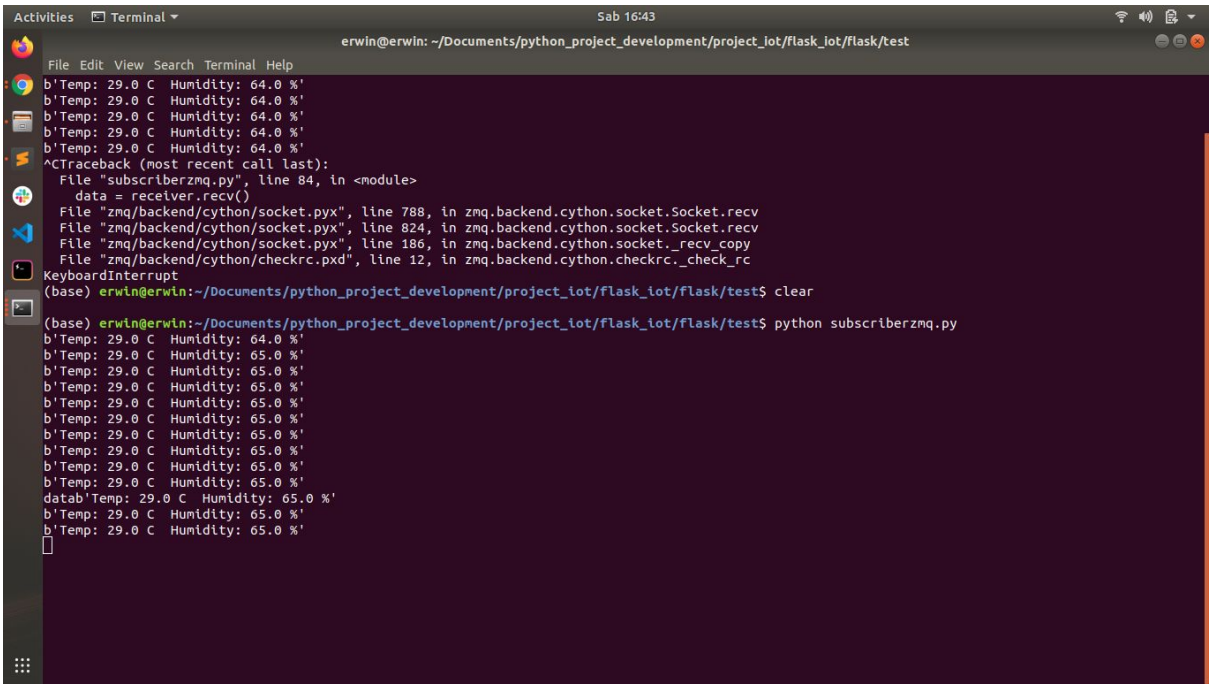
6. if you see the terminal like image bellow



the sensor has been working (don’t close the program)

7. now check your data in server side. in your PC try running subscribezmq.py (running this script in your PC not raspberry)

if you see like image below your data has been sent to the server.



close the service.

Running main program

1. in server side running main.py

   python main.py
2. if there is no error you will see the window like this