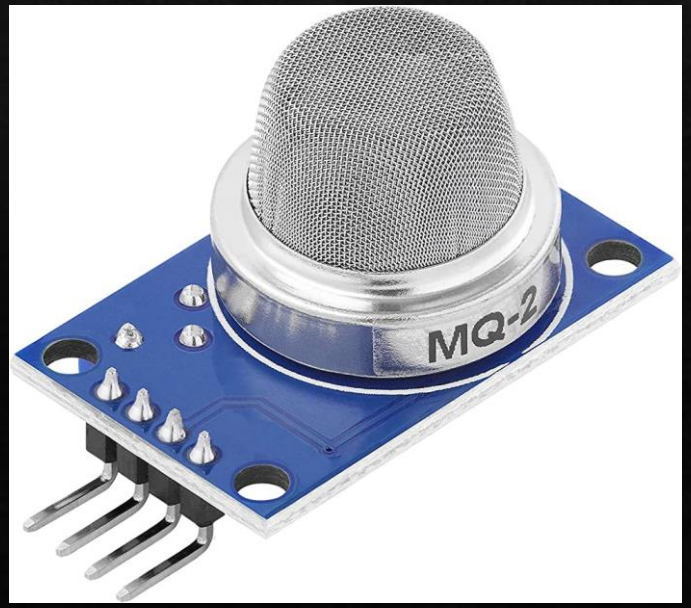

Demonstrating Gas sensor using Raspberry pi
IIOT

GAS SENSOR

- The primary function of a gas sensor is to find various gases in the atmosphere. It is a piece of equipment that reacts to the amount of gas (measured in parts per million, or ppm) in the area where it is located. The device operates by modifying the resistance of the material's internal sensor to produce a potential difference.



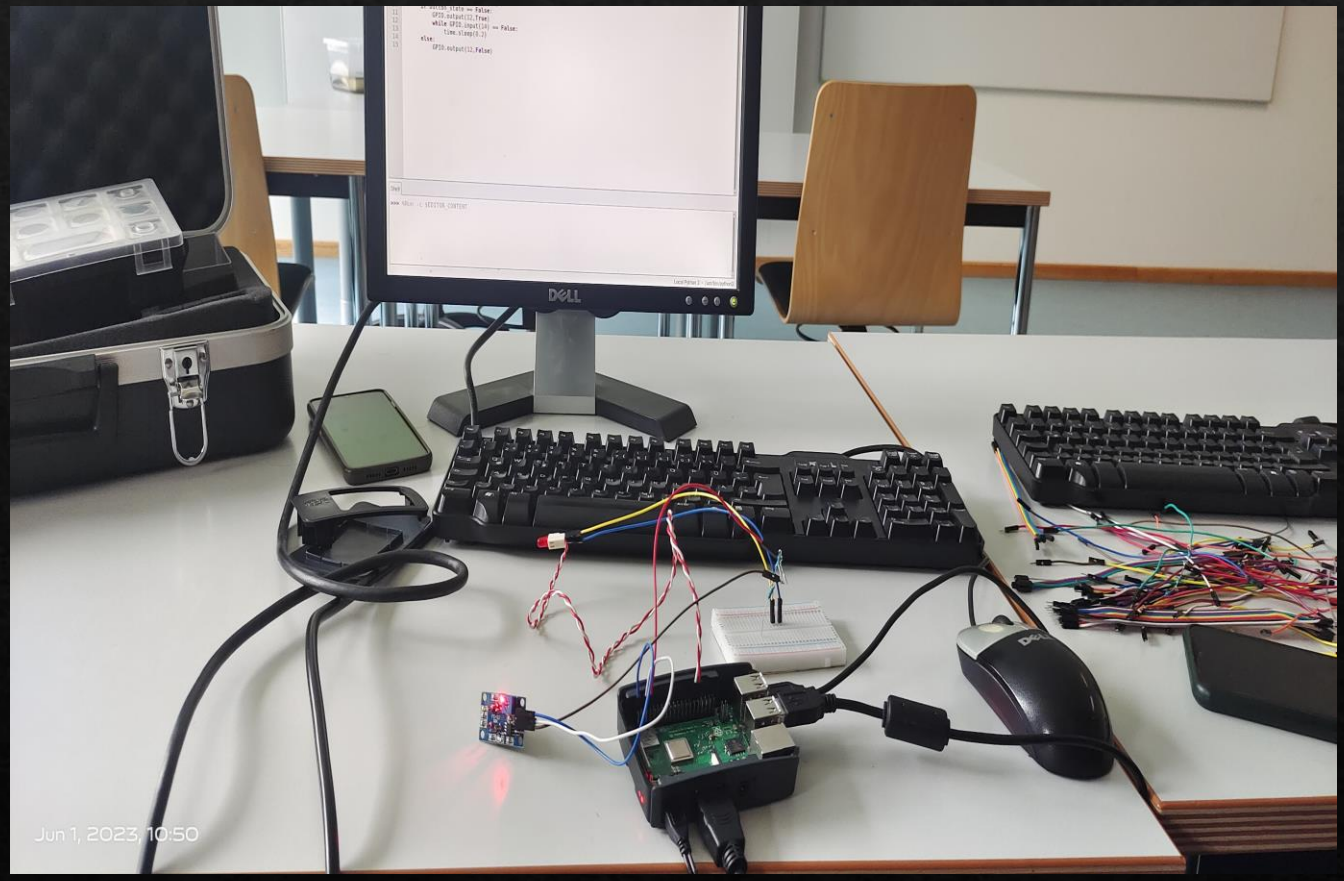
Application of Gas sensor

- Petroleum industries often use gas sensors for various purposes related to safety, environmental monitoring, and process control. Gas sensors are crucial in detecting and monitoring the presence of hazardous gases, such as hydrocarbons, in petroleum production, refining, storage, and transportation facilities. Here are some common applications of gas sensors in petroleum industries

1. Leak detection
2. Combustible gas detection
3. Toxic gas detection
4. Environmental monitoring
5. Process control
6. Tank level monitoring

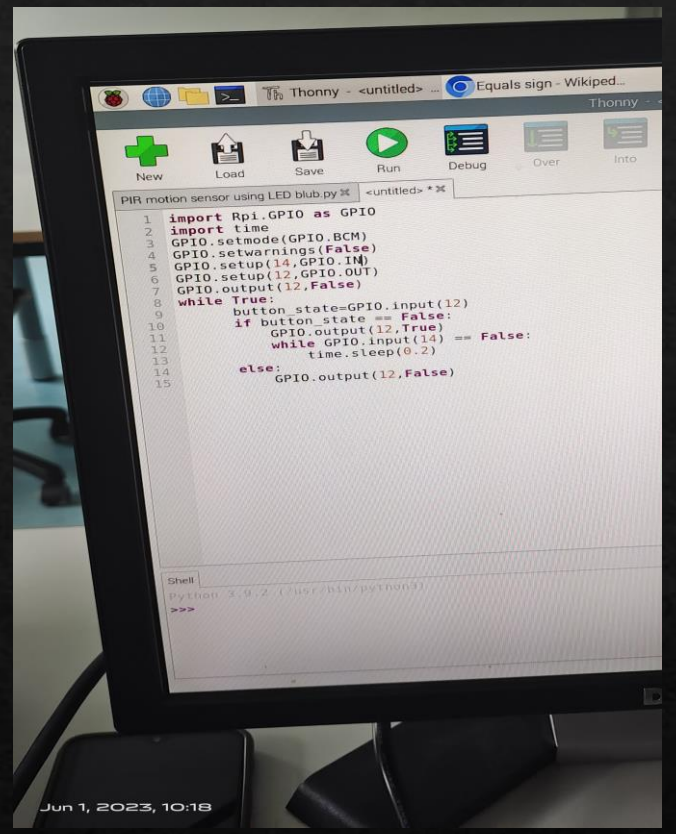
Components Used

- LCD screen monitor
- Raspberry pi processor
- Bread board
- LED light
- 1k Resistors
- Connectors
- Gas sensor



Code used

- The coding done here was using THONNY .



import Rpi. GPIO as GPIO

import time

GPIO.setmode (GPIO.BCM)

GPIO.setwarnings (False)

GPIO.setup(14, GPIO.IN)

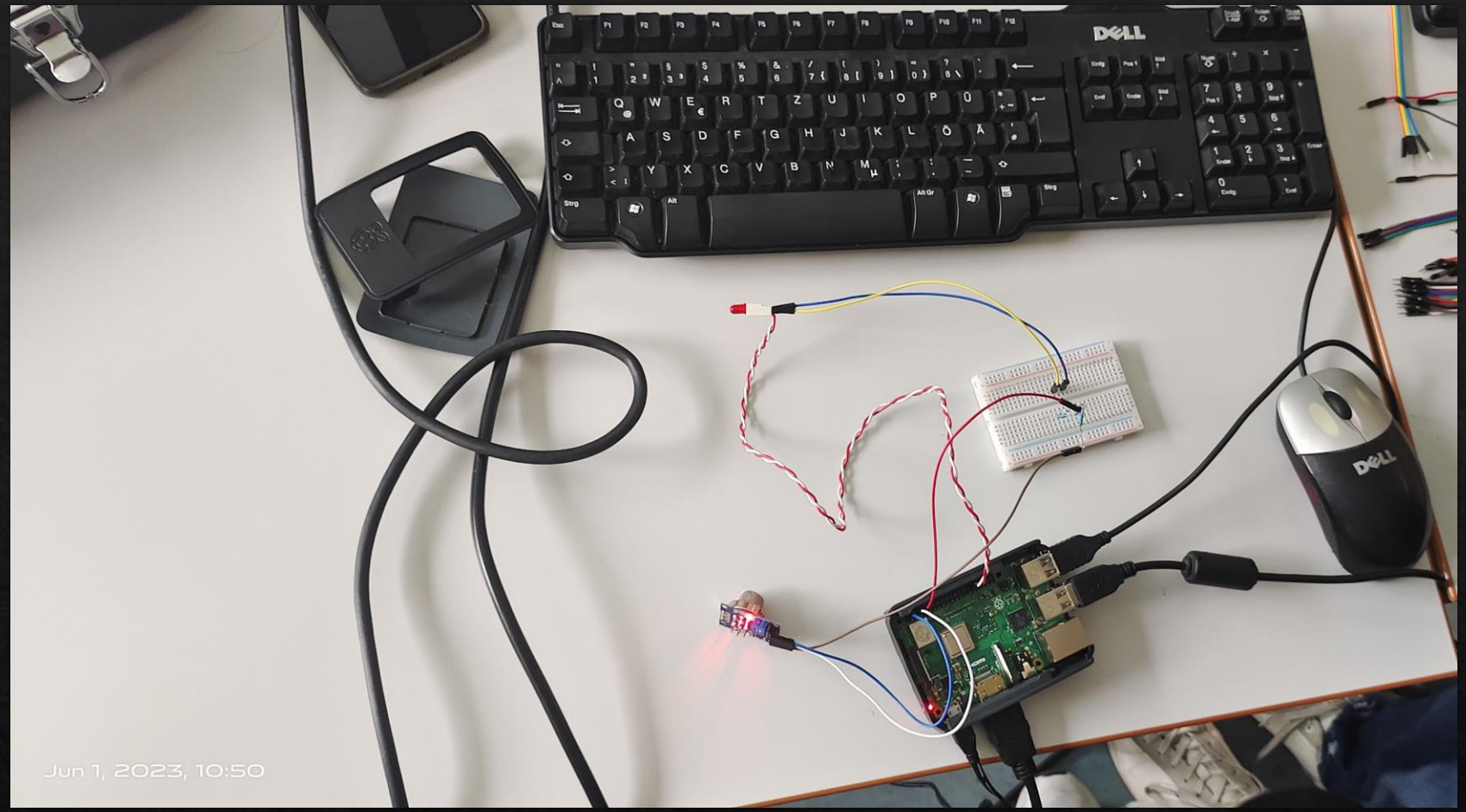
GPIO.setup(12, GPIO. OUT) GPIO.output (12, False)

while True:

button_state=GPIO.input (12) if button state False: == GPIO.output (12, True)
while GPIO.input (14) == False:

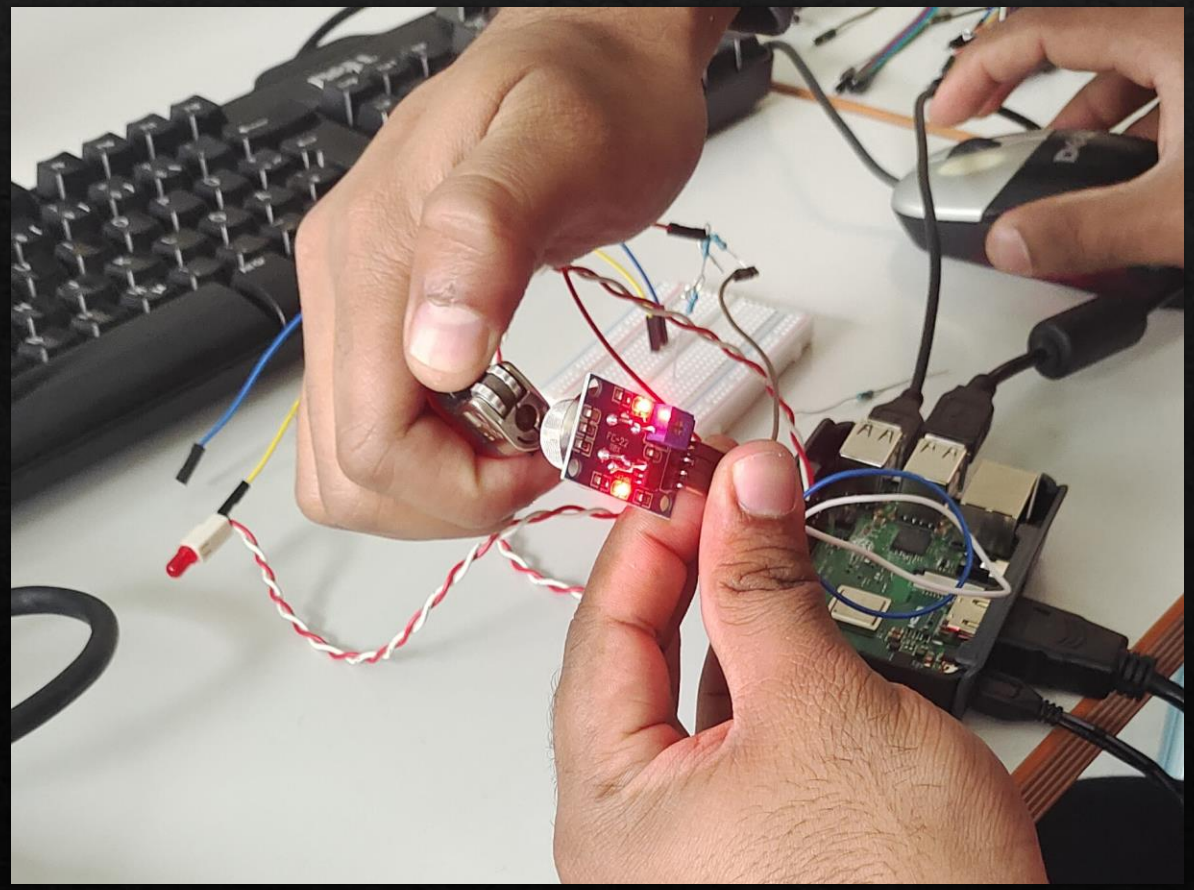
time.sleep(0.2)

else:GPIO.output (12, False)

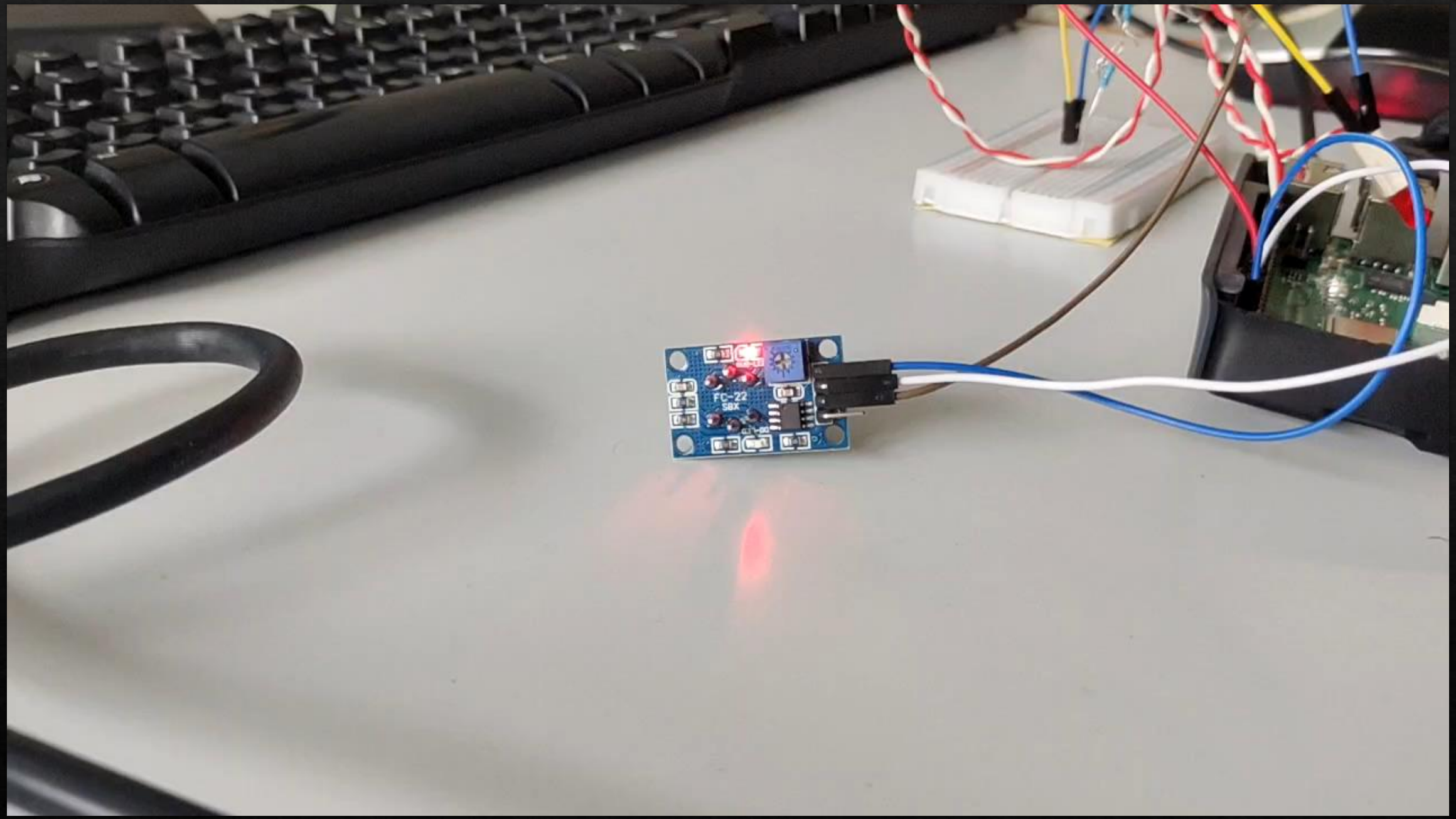


Connection of the bread board to Raspberry pi

Working of the Sensor



When the methane gas is released from the fire lighter the LED indicator pops up as an alert for the various purpose of use.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SBX

Thank You