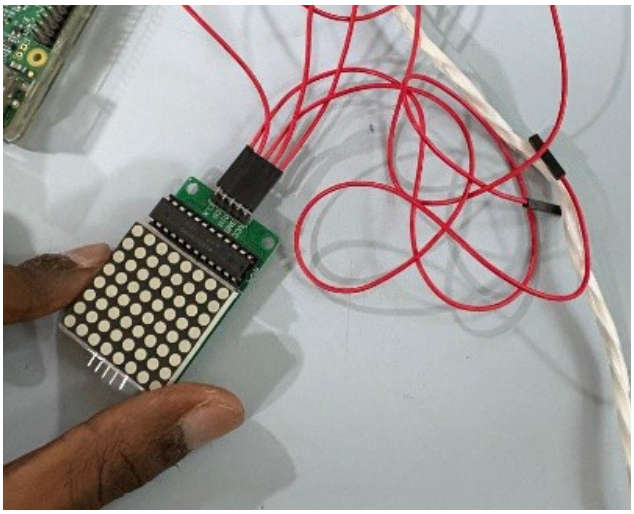
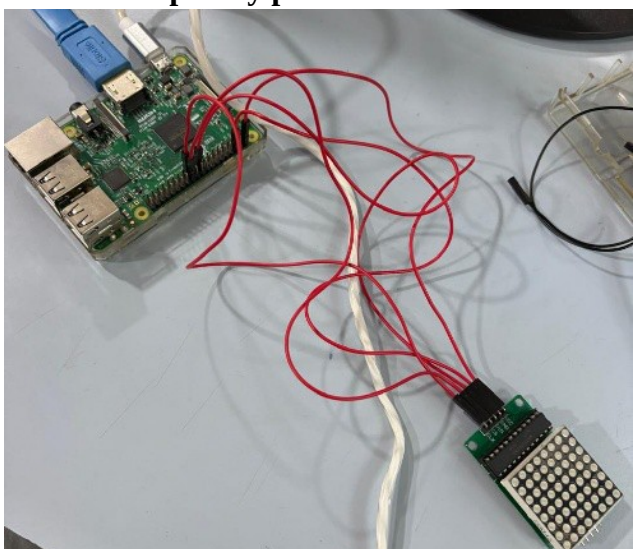
Practical No 4

Aim: working of 8*8 led using raspberry pi and code.

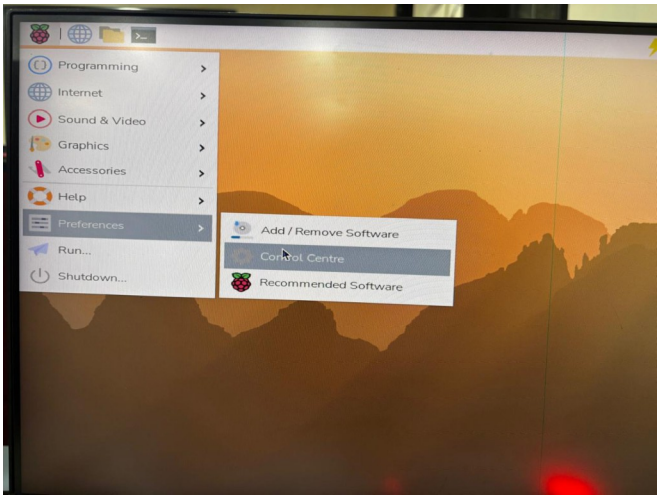
Step 1: Take the 8x8 led.



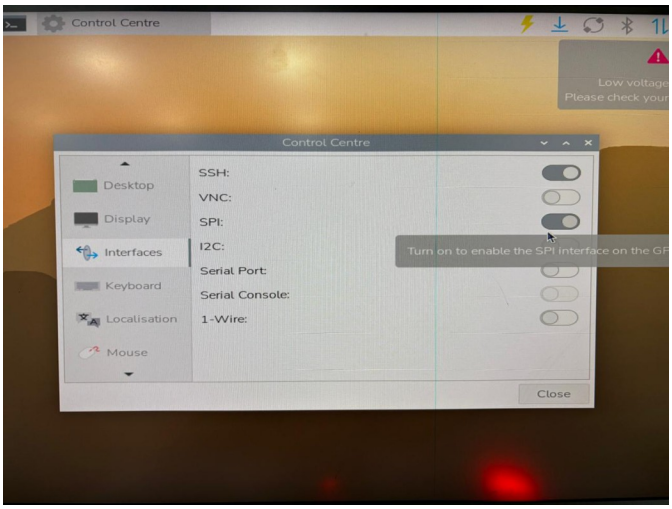
Step 2: Connect the led with the raspberry pie.



Step 3: Turn on the pc and go to preference and control center.



Step 4: Enable the SPI setting.



Step 5: Run the 2 codes in terminal before running the actual code.

- sudo pip3 install luma.led_matrix --break-system-packages
- sudo pip3 install luma.core –break-system-packages

```
import time
from luma.led_matrix.device import max7219
from luma.core.interface.serial import spi, noop
from luma.core.legacy import text, show_message

def demo():
    #create the spi serial interface
    serial = spi(port=0, device=0, gpio=noop())

    #create the led matrix device
    device = max7219(serial, cascade=1, block_orientation=90)
    print("LED Matrix Device Created")

    #Starting demo text
    msg = "LED Matrix Demo"
    print(msg)

    show_message(device, msg, fill="White",
                 scroll_delay=0.05)

    time.sleep(0.5)

    #take user input
    msg = input("Enter your text: ")
    sd = float(input("Enter scroll delay value(example 0.05):"))
```

```
    print("Displaying your message")


    show_message(device, msg, fill="White",
                 scroll_delay=sd)

    time.sleep(0.5)

    #different font demonstration
    print("Alternative Font")
    show_message(device, msg, fill="White",
                 scroll_delay=0.1)

if __name__ == "__main__":
    try:
        demo()
    except KeyboardInterrupt:
        print("Program stopped by user.")
        pass
```

Step 6: The led is finally turned on.