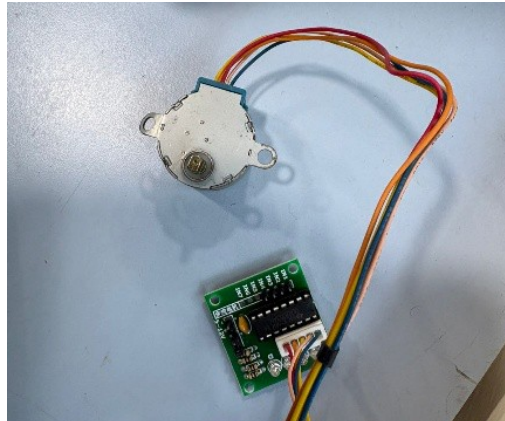


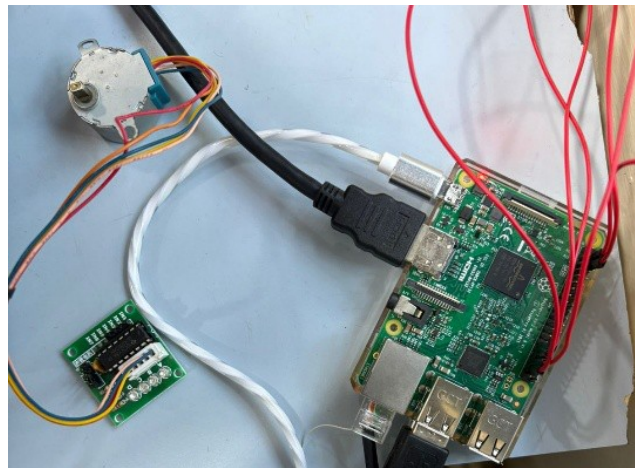
Practical No 5

Aim :- Working of ULN2003 driver with stepper motor and raspberry pi.

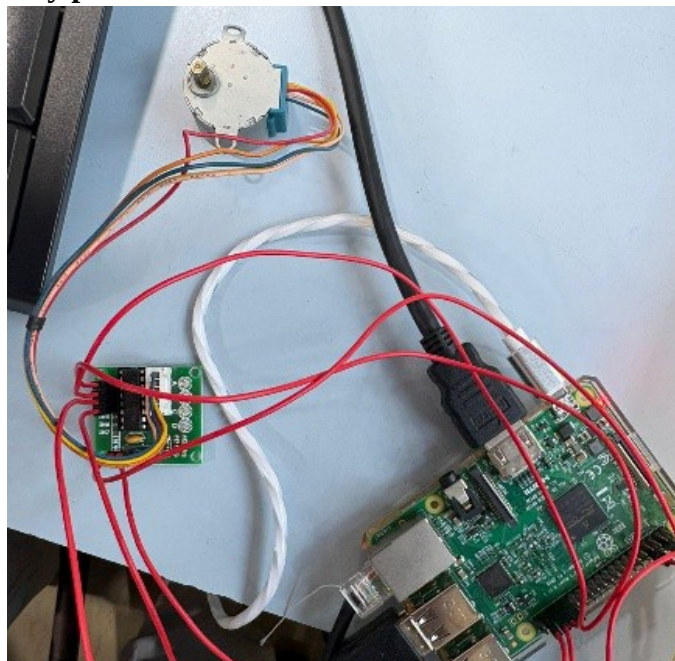
Step 1: Take the motor.



Step 2: Make the connection in the raspberry pie.



Step 3: Connect the raspberry pie and motor.



Step 4: Write the code and then execute the code.

```
from gpiozero import OutputDevice
import time

# Define GPIO pins
pins = [
    OutputDevice(17),
    OutputDevice(18),
    OutputDevice(27),
    OutputDevice(22)
]

# Half-step sequence
sequence = [
    [1,0,0,0],
    [1,1,0,0],
    [0,1,0,0],
    [0,1,1,0],
    [0,0,1,0],
    [0,0,1,1],
    [0,0,0,1],
    [1,0,0,1]
]

def step(delay=0.002):
    for pattern in sequence:
        for pin, value in zip(pins, pattern):
            pin.value = value
            time.sleep(delay)

try:
    while True:
        step()

except KeyboardInterrupt:
    for pin in pins:
        pin.off()
```

Step 5: Finally the motor spins and led turns on.

