

THONNY

→ UFZ

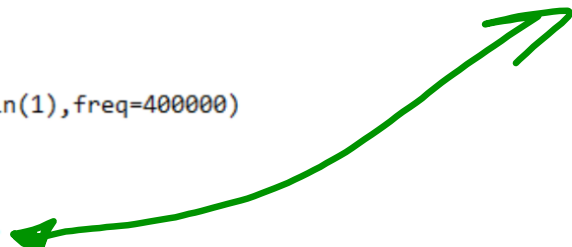
```
import network
import socket
from time import sleep
import machine

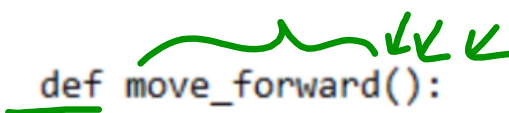
from machine import Pin,I2C
from ssd1306 import SSD1306_I2C

#YES
ssid='CompEngDpcdsb'
password='CompEng2023!'

i2c = I2C(0,sda=Pin(0),scl=Pin(1),freq=400000)
dsp= SSD1306_I2C(128,64,i2c)

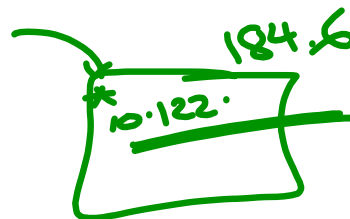
# Define pins to pin motors!
Mot_A_Forward=Pin(6, Pin.OUT)
```





```
def move_forward():  
    Mot_A_Forward.value(1)
```

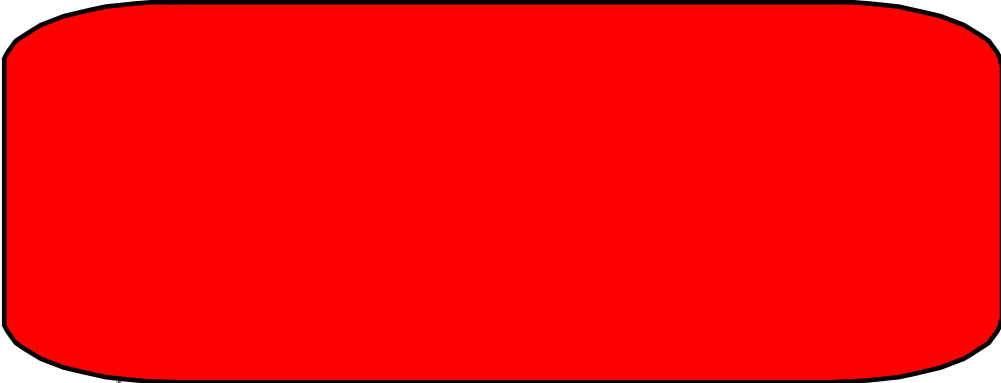
```
#Stop the robot as soon as possible  
move_stop()  
  
def connect():  
    #Connect to WLAN  
    wlan=network.WLAN(network.STA_IF)  
    wlan.active(True)  
    wlan.connect(ssid,password)  
    while wlan.isconnected()==False:  
        print("Waiting for connection...")  
        sleep(1)  
    ip=wlan.ifconfig()[0]  
    print(f'Connected on {ip}')  
    return ip  
  
def open_socket(ip):  
    #open a socket  
    address=(ip,80)  
    connection=socket.socket()  
    connection.bind(address)  
  
    dsp.text(str(ip),0,0) #IP:  
    dsp.text('PORT: '+str(80),0,16)  
    dsp.show() #test  
  
    connection.listen(1)  
    return connection
```



Plan:
1. actions.
2.
3.

```
def webpage():
    #Template HTML
    html=f"""
    <!DOCTYPE html>
    <html>
    <head>
    <title>Zumo Robot Control</title>
    </head>
    <center><b>
    <form action="/forward">
    <input type="submit" value="Forward" style="height:120px;width:120px" />
    </form>

    </body>
    </html>
    """
    return str(html)
```



```
def serve(connection):
    #Start web server
    while True:
        client=connection.accept()[0]
        request=client.recv(1024)
        request=str(request)
        try:
            request=request.split()[1]
        except IndexError:
            pass

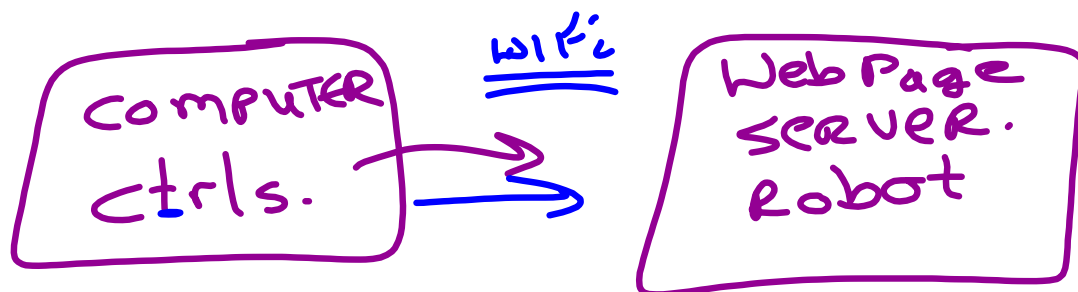
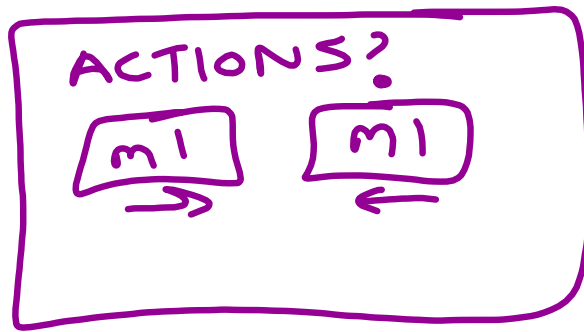
        if request=='/forward?':
            move_forward()

        html=webpage()
        client.send(html)
        client.close()

    try:
        ip=connect()
        connection=open_socket(ip)
        serve(connection)
    except KeyboardInterrupt:
        machine.reset()
```



DESIGN:



- 4 motors; Pico-W
- SBB ; DRV8833*2
- Arduino
- Battery Holder

3" Halls