**OLED message generator code:-**

records\_char=[]

import machine

import time

from machine import Pin, I2C

import ssd1306

led = machine.Pin(2,machine.Pin.OUT)

led.off()

i2c = I2C(0, scl=Pin(22), sda=Pin(21))

oled\_width = 128

oled\_height = 64

oled = ssd1306.SSD1306\_I2C(oled\_width, oled\_height, i2c)

# \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

# Configure the ESP32 wifi

# as STAtion mode.

import network

#import wifi\_credentials

sta = network.WLAN(network.STA\_IF)

if not sta.isconnected():

print('connecting to network...')

sta.active(True)

sta.connect('Dd13', '1234abcd')

#sta.connect(wifi\_credentials.ssid, wifi\_credentials.password)

while not sta.isconnected():

pass

print('network config:', sta.ifconfig())

# \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

# Configure the socket connection

# over TCP/IP

import socket

# AF\_INET - use Internet Protocol v4 addresses

# SOCK\_STREAM means that it is a TCP socket.

# SOCK\_DGRAM means that it is a UDP socket.

s = socket.socket(socket.AF\_INET, socket.SOCK\_STREAM)

s.bind(('',80)) # specifies that the socket is reachable

# by any address the machine happens to have

s.listen(5) # max of 5 socket connections

# \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

# Function for creating the

# web page to be displayed

def prc(char,x,y,clr=1):

oled.text(char,x,y,clr)

oled.show()

def web\_page():

'''if led.value()==1:

led\_state = 'ON'

oled.fill(0)

oled.show()

oled.text('XYZ',0,0)

oled.show()

#print('led is ON')

elif led.value()==0:

led\_state = 'OFF'

oled.fill(0)

oled.show()

oled.text('A',0,0)

oled.show()

#print('led is OFF')

'''

html\_page = """

<!DOCTYPE html>

<html>

<head>

<meta content="width=device-width, initial-scale=1" name="viewport"></meta>

</head>

<body>

<center><h2>ESP32 Message Generator using Wifi Module in Micropython</h2></center>

<center>

<form>

<div class="num">

<button name="LED" type="submit" value="0">0</button>

<button name="LED" type="submit" value="1">1</button>

<button name="LED" type="submit" value="2">2</button>

<button name="LED" type="submit" value="3">3</button>

<button name="LED" type="submit" value="4">4</button>

<button name="LED" type="submit" value="5">5</button>

<button name="LED" type="submit" value="6">6</button>

<button name="LED" type="submit" value="7">7</button>

<button name="LED" type="submit" value="8">8</button>

<button name="LED" type="submit" value="9">9</button>

<button name="LED" type="submit" value=".">.</button>

</div>

<div class="line1">

<button name="LED" type="submit" value="Q">Q</button>

<button name="LED" type="submit" value="W">W</button>

<button name="LED" type="submit" value="E">E</button>

<button name="LED" type="submit" value="R">R</button>

<button name="LED" type="submit" value="T">T</button>

<button name="LED" type="submit" value="Y">Y</button>

<button name="LED" type="submit" value="U">U</button>

<button name="LED" type="submit" value="I">I</button>

<button name="LED" type="submit" value="O">O</button>

<button name="LED" type="submit" value="P">P</button>

<button name="LED" type="submit" value="-">CLR</button>

</div>

<div class="line2">

<button name="LED" type="submit" value="A">A</button>

<button name="LED" type="submit" value="S">S</button>

<button name="LED" type="submit" value="D">D</button>

<button name="LED" type="submit" value="F">F</button>

<button name="LED" type="submit" value="G">G</button>

<button name="LED" type="submit" value="H">H</button>

<button name="LED" type="submit" value="J">J</button>

<button name="LED" type="submit" value="K">K</button>

<button name="LED" type="submit" value="L">L</button>

<button name="LED" type="submit" value="\*">ENTER</button>

<button name="LED" type="submit" value="/"> BKC</button>

</div>

<div class="line3">

<button name="LED" type="submit" value="Z">Z</button>

<button name="LED" type="submit" value="X">X</button>

<button name="LED" type="submit" value="C">C</button>

<button name="LED" type="submit" value="V">V</button>

<button name="LED" type="submit" value="B">B</button>

<button name="LED" type="submit" value="N">N</button>

<button name="LED" type="submit" value="M">M</button>

<button name="LED" type="submit" value="\_">SPACE</button>

</div>

</form>

</center>

<center><p>LED is now <strong>""" + "led\_state" + """</strong>.</p></center>

</body>

</html>

"""

return html\_page

x=0

y=0

prc('WELCOME USER',5,5)

# prc('WELCOME USER',5,5)

time.sleep(2)

oled.fill(0)

oled.show()

while True:

if x>=127:

y+=11

x=0

# Socket accept()

conn, addr = s.accept()

print("Got connection from %s" % str(addr))

# Socket receive()

request=conn.recv(1024)

print("")

print("")

print("Content %s" % str(request))

# Socket send()

request = str(request)

#char=input("Next character: ")

# char=getch()

#response = web\_page()

button\_respA = request.find("/?LED=A")

button\_respB = request.find("/?LED=B")

button\_respC = request.find("/?LED=C")

button\_respD = request.find("/?LED=D")

button\_respE = request.find("/?LED=E")

button\_respF = request.find("/?LED=F")

button\_respG = request.find("/?LED=G")

button\_respH = request.find("/?LED=H")

button\_respI = request.find("/?LED=I")

button\_respJ = request.find("/?LED=J")

button\_respK = request.find("/?LED=K")

button\_respL = request.find("/?LED=L")

button\_respM = request.find("/?LED=M")

button\_respN = request.find("/?LED=N")

button\_respO = request.find("/?LED=O")

button\_respP = request.find("/?LED=P")

button\_respQ = request.find("/?LED=Q")

button\_respR = request.find("/?LED=R")

button\_respS = request.find("/?LED=S")

button\_respT = request.find("/?LED=T")

button\_respU = request.find("/?LED=U")

button\_respV = request.find("/?LED=V")

button\_respW = request.find("/?LED=W")

button\_respX = request.find("/?LED=X")

button\_respY = request.find("/?LED=Y")

button\_respZ = request.find("/?LED=Z")

button\_resp0 = request.find("/?LED=0")

button\_resp1 = request.find("/?LED=1")

button\_resp2 = request.find("/?LED=2")

button\_resp3 = request.find("/?LED=3")

button\_resp4 = request.find("/?LED=4")

button\_resp5 = request.find("/?LED=5")

button\_resp6 = request.find("/?LED=6")

button\_resp7 = request.find("/?LED=7")

button\_resp8 = request.find("/?LED=8")

button\_resp9 = request.find("/?LED=9")

button\_dot = request.find("/?LED=.")

button\_clr = request.find("/?LED=-")

button\_bkc = request.find("/?LED=/")

button\_ent = request.find("/?LED=\*")

button\_spc = request.find("/?LED=\_")

if button\_respA == 6:

prc('A',x,y)

x+=9

records\_char.append('A')

elif button\_respB == 6:

prc('B',x,y)

x+=9

records\_char.append('B')

elif button\_respC == 6:

prc('C',x,y)

x+=9

records\_char.append('C')

elif button\_respD == 6:

prc('D',x,y)

x+=9

records\_char.append('D')

elif button\_respE == 6:

prc('E',x,y)

x+=9

records\_char.append('E')

elif button\_respF == 6:

prc('F',x,y)

x+=9

records\_char.append('F')

elif button\_respG == 6:

prc('G',x,y)

x+=9

records\_char.append('G')

elif button\_respH == 6:

prc('H',x,y)

x+=9

records\_char.append('H')

elif button\_respI == 6:

prc('I',x,y)

x+=9

records\_char.append('I')

elif button\_respJ == 6:

prc('J',x,y)

x+=9

records\_char.append('J')

elif button\_respK == 6:

prc('K',x,y)

x+=9

records\_char.append('K')

elif button\_respL == 6:

prc('L',x,y)

x+=9

records\_char.append('L')

elif button\_respM == 6:

prc('M',x,y)

x+=9

records\_char.append('M')

elif button\_respN == 6:

prc('N',x,y)

x+=9

records\_char.append('N')

elif button\_respO == 6:

prc('O',x,y)

x+=9

records\_char.append('O')

elif button\_respP == 6:

prc('P',x,y)

x+=9

records\_char.append('P')

elif button\_respQ == 6:

prc('Q',x,y)

x+=9

records\_char.append('Q')

elif button\_respR == 6:

prc('R',x,y)

x+=9

records\_char.append('R')

elif button\_respS == 6:

prc('S',x,y)

x+=9

records\_char.append('S')

elif button\_respT == 6:

prc('T',x,y)

x+=9

records\_char.append('T')

elif button\_respU == 6:

prc('U',x,y)

x+=9

records\_char.append('U')

elif button\_respV == 6:

prc('V',x,y)

x+=9

records\_char.append('V')

elif button\_respW == 6:

prc('W',x,y)

x+=9

records\_char.append('W')

elif button\_respX == 6:

prc('X',x,y)

x+=9

records\_char.append('X')

elif button\_respY == 6:

prc('Y',x,y)

x+=9

records\_char.append('Y')

elif button\_respZ == 6:

prc('Z',x,y)

x+=9

records\_char.append('Z')

elif button\_resp0 == 6:

prc('0',x,y)

x+=9

records\_char.append('0')

elif button\_resp1 == 6:

prc('1',x,y)

x+=9

records\_char.append('1')

elif button\_resp2 == 6:

prc('2',x,y)

x+=9

records\_char.append('2')

elif button\_resp3 == 6:

prc('3',x,y)

x+=9

records\_char.append('3')

elif button\_resp4 == 6:

prc('4',x,y)

x+=9

records\_char.append('4')

elif button\_resp5 == 6:

prc('5',x,y)

x+=9

records\_char.append('5')

elif button\_resp6 == 6:

prc('6',x,y)

x+=9

records\_char.append('6')

elif button\_resp7 == 6:

prc('7',x,y)

x+=9

records\_char.append('7')

elif button\_resp8 == 6:

prc('8',x,y)

x+=9

records\_char.append('8')

elif button\_resp9 == 6:

prc('9',x,y)

x+=9

records\_char.append('9')

elif button\_dot == 6:

prc('.',x,y)

x+=9

records\_char.append('.')

elif button\_bkc == 6:

x-=9

prc(records\_char[len(records\_char)-1],x,y,0)

e=records\_char.pop()

elif button\_clr == 6:

oled.fill(0)

oled.show()

x=0

y=0

elif button\_ent == 6:

#if char=='ent':

# char='\n'

y+=11

x=0

continue

elif button\_spc == 6:

#prc('\_',x,y)

x+=7

response=web\_page()

conn.send('HTTP/1.1 200 OK\n')

conn.send('Content-Type: text/html\n')

conn.send('Connection: close\n\n')

conn.sendall(response)

# Socket close()

conn.close()