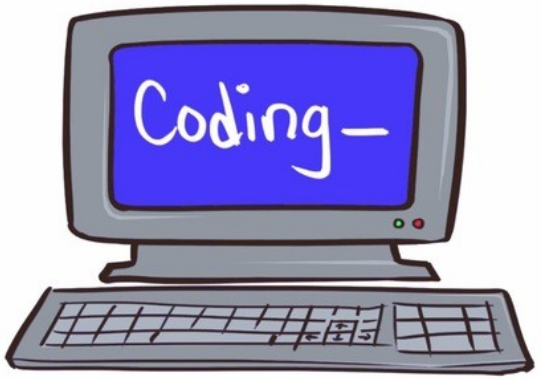
# Class38




– more Blynk

# easywifi - enhancements

1)multi logins

2)self-reconnect

3)time from internet

4)oled shows wifi result

5)led flash – see stages of login

# Wifi init status

LED_BUILTIN  gpio 5  (or 2 or 16?)

1. Wifi login  Slow flash
2. Fetch time  Fast flash (very quick?)

3a. OFF = all went OK

3b. ON = wifi or time fail

# Wifi status to Oled

SSID

IP

dB strength

Time

# Adding oled

WifiMultiWithOled.ino

```
#include "myconfig.h"
#include "easywifi.h"
#include "SSD1306.h"

SSD1306  display(OLEDADDR, SDA, SCL);

void setup()
{
    Serial.begin(115200);

    display.init();
    display.flipScreenVertically();

    wifiInit(display, __FILE__);
    // the optional 1st param "display" allows
    // the optional 2nd param "__FILE__" will
}

void loop()
{
    wifiWatch();    // or wifi_on = wifiWatch()
}
```

# New Sketches

- Blynk2Servo (2 servos from 2 sliders on app)
- BlynkGPS (phone gps to terminal at pc)
- BlynkLCD (message to lcd on app)
- WiFiMultiWithOled (use new version easywifi)
- BlynkAxlOled (phone accelerometer to oled)

# PreProcessor

#include

#define See BlynkSimpleGpio.ino

#ifdef #ifndef See easywifi.ino

macros See BlynkVpinIn.ino

# lower case / upper case?

Convention:

| | |
|---|---|
| **UPPERCASE** | a #define or macro name |
| Initialcap | often for Class or Object names |
| lowercase | 1 word variable names |
| CamelCase | multiword variable names |
| with_underscores | multi word names |

# main Blynk functions (at device)

Blynk  main Blynk object name

BLYNK_READ()  macros

BLYNK_WRITE()

Blynk.virtualWrite()  function (“method”) of Blynk

widgets – lcd, gps, accel,  Blynk widgets are minor objects from Blynk library.

Blynk library is huge & poorly organised.

# classes/objects

The “class” is the “recipe”. From that recipe, real individual “objects” are created.

Constructor
methods (ie daughter functions)
properties

Classes/objects we already have:

- **Serial**
- **WiFi**

- **Servo**
- **SSD1306** (ie the oled display)
- **Blynk**

# The constructor?

Serial – auto (= ”Serial”)

Wifi – Library does it (= “WiFi”)

Servo – manual (& we name it)

SSD1306 – manual (& we name it)

Blynk – Library does it (= “Blynk”)

# Arduino reference

https://www.arduino.cc/reference/en/

https://www.arduino.cc/en/Reference/Libraries

# ESP32 extra refs

Lots of Blynk examples:

https://examples.blynk.cc/?board=ESP32&shield=ESP32%20WiFi&example=GettingStarted%2FBlynkBlink

# For the really keen:

***Simple guides to writing your own class library:***

http://playground.arduino.cc/Code/Library

https://www.arduino.cc/en/Hacking/LibraryTutorial