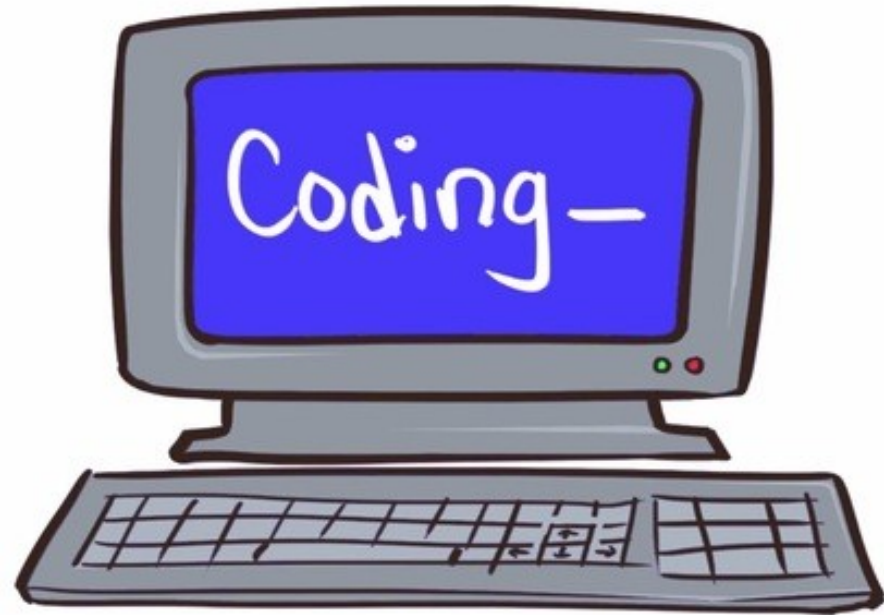


Koding

- C / C++ language
- Arduino IDE
- ESP32 wifi/processor



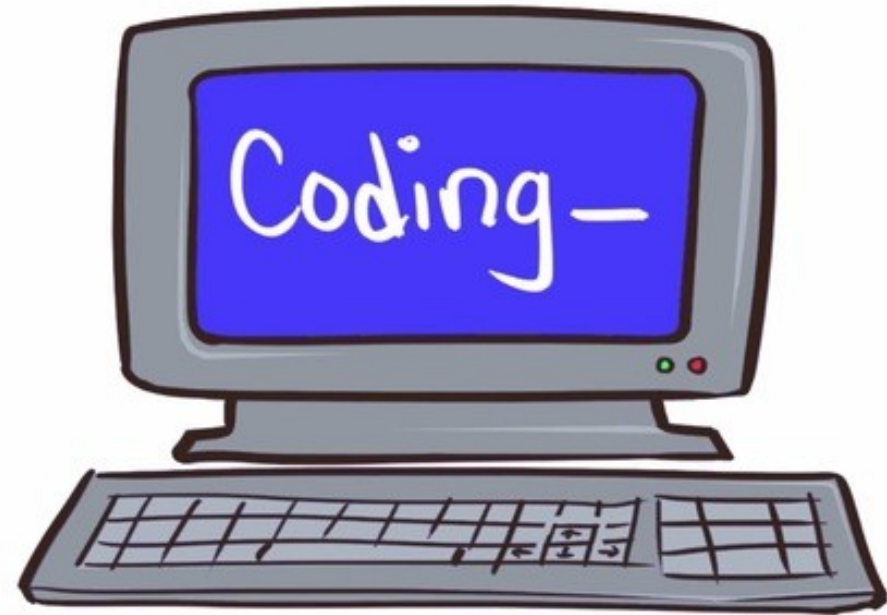
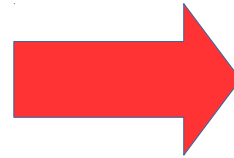
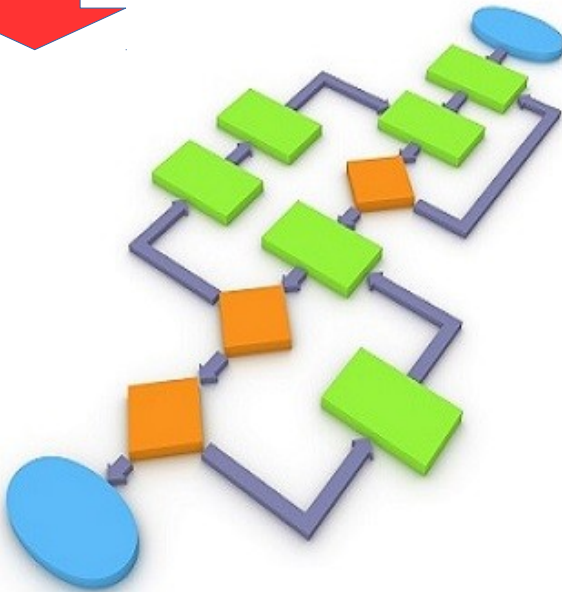
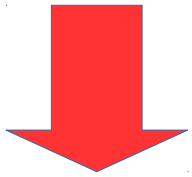
Today's task

- To get arduino & ESP32 support installed on everyone's PC.
- To try the first few edit/compile/upload examples.

1. Identify the problem



3. Write the code to suit



2. Design HOW to solve

IDE Installation with ESP32 support

- **WINDOWS:**

Install arduino and then paste in a folder
.../Arduino/hardware from our website

- **LINUX:**

Add a complete portable folder of arduino185
with ESP32 support included.

Sketchbook folder

- Each project file (ino) must sit in a folder of the same name. Eg ERC.ini is in folder .../Arduino/ERC
- The special folder .../Arduino/libraries contains all user-added library packages

In many weeks I will supply various ino project files and various library packs to be added.

Our common config file

- myconfig is a library file. Put it there.

Arduino

- libraries
- myconfig
- myconfig.h

- Can you see what pins we will use later for RGB led or I2C?

```
1
2 #define SERV01 32
3 #define SERV02 33
4
5 // #define LED 5
6 #define ECHO 39
7 #define TRIG 25
8
9 #define red 18
10 #define green 19
11 #define blue 23
12
13 #define SDA 21
14 #define SCL 22
15 #define SERIAL_BAUD 115200
16
17 #define blynktoken "cc145"
18 #define WIFI_SSID "theBestS"
19 #define WIFI_PW "theBestS"
20
21 #define IRRX 36
```

First example

- The IDE has a LOT of example sketches. Some won't suit the ESP32.
- Most new hardware extensions (eg our ESP32) and most library packs come with new example sketches to try.
- 1st try: File/Examples/Basics/Blink. Blink the one onboard LED.

ERC

Needs the
remote terminal
function.

ERC sketch.

Derived from Gordon's DRC (projects.drogon.net) for testing GPIOs on Raspberry Pi. We have used derivatives for arduino, ESP8266, and now ESP32.

```
oNN      Set pin NN as (digital) output (eg o05)
iNN      Set pin NN as analog or digital input (i00)
uNN      Set pin NN as input with PULLUP (u06)
pNN      Set pin NN as PWM output
LNN      Write pin NN as LOW (eg L05)
HNN      Write pin NN as HIGH
rNN      Read digital pin NN (eg r06)
aNN      Read ADC analog on pin NN (reply 0-4095)
PNNvvv  Write pin NN with PWM value vvv 0-255 (eg V11211)
```


lolin32

TX = GPIO01
RX = GPIO03
User LED = GPIO05
VP = GPIO36
VN = GPIO39



Supplied sketches:

Before you start, set correct SSID/PASSWORD for wifi in myconfig.h

- simpletime.ino (fetches internet time)
- i2cscan.ino (altho we don't have anything I2C connected yet!)