I would really be grateful if you start to build the project, that you go to Gitnub and say hi.

billbill100/Weather-Clock: Arduino ESP Weather Clock. Takes time and local weather data from the Internet and displays it on a 3.5" TFT screen (github.com)

ESP32 Arduino IDE Software Load. V1.3 21/01/2024

Note:- The guides below must be followed in the correct order
ESP32 Installing USB Driver
ESP32 Arduino Software Load
ESP32 Firmware Load

Arduino IDE (Integrated Development Environment) is a computer program used to communicate with the Arduino & ESP32 processor boards. The program allows writing & development of Arduino code and has many other features and uses.

One such feature, is the ability of the Arduino module or ESP32 to send data directly to the program for display on the computer screen. This is called 'Serial Monitor'. This is used in projects like ESP_32 Shutter Tester.

It also has the ability to input data to the microcontroller also, as in the Weather-Clock, where the user can add their WIFI and location details

Download the software
To get started, download the Arduino 2.x software from
Software | Arduino

Install the software
To watch a tutorial for the install process, watch this video up to 6.04

(284) How To Install Arduino IDE 2.0 On Windows 10/11 [2023 Update] Arduino Uno Complete Guide - YouTube

Note:- The video past 6.04 is not applicable for our use and will not work with ESP32 unless additional definitions are loaded. Details of how to load the definitions, for those wanting to learn programming of the ESP32, can be found at the end of this document.

That is it. The software can be run.

1 Connect the ESP32 board to the computer with a suitable USB cable.

2 Select Arduino Nano and the correct COM port

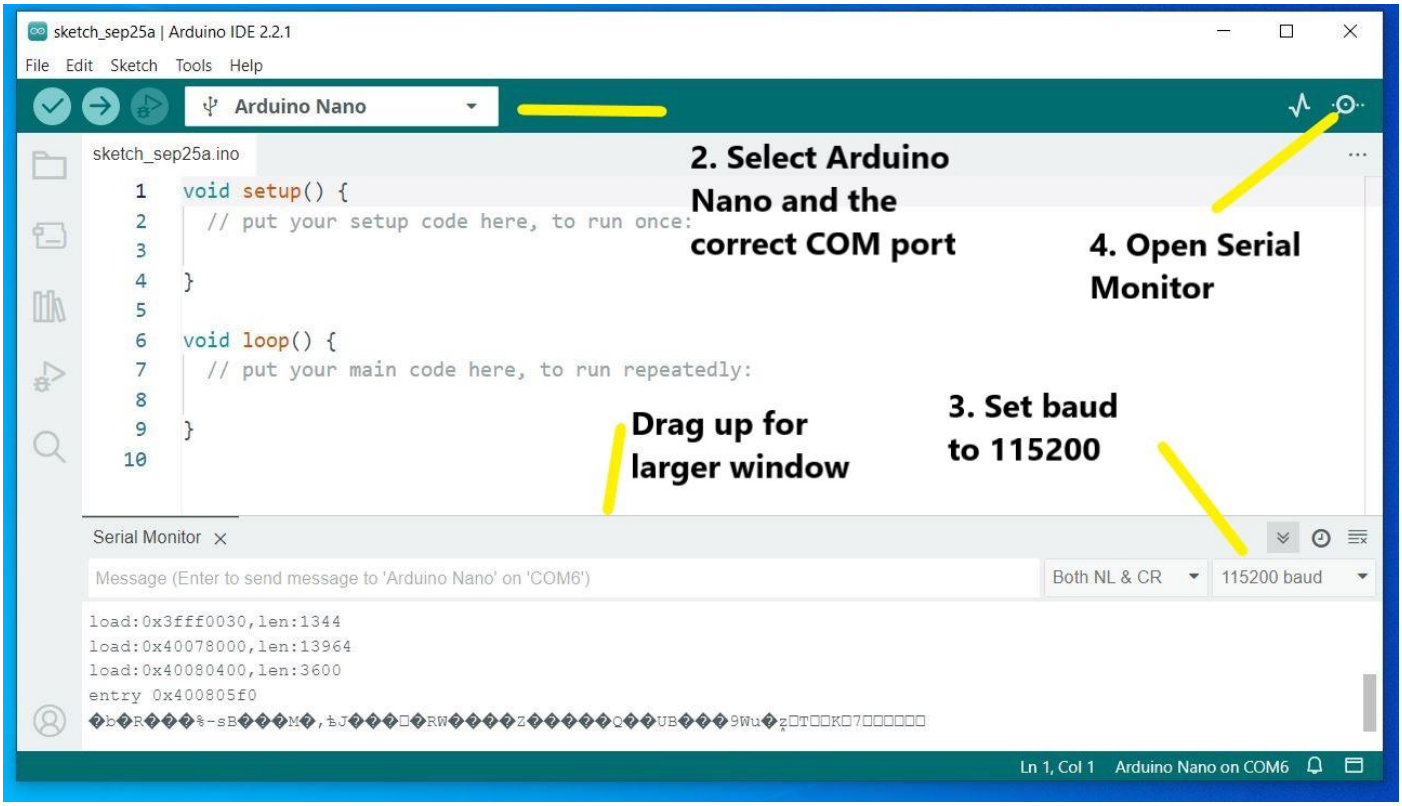
3 Change the baud to 115200.

4 Open Serial Monitor window. This opens at the bottom, but can be dragged up to make it larger.

5 Press the Reset button on the ESP32 module and the bootloader output will be seen in the Serial Monitor window.

Success :o)

6**. Note** If following this guide for **The Shutter Tester** Project, change the **baud rate to 460800** when using the Shutter Tester.



This software is only used for the Serial Monitor function and needs no other changes than those detailed above.

Optional Steps.

To write and load code to ESP32 processors, additional processor definitions have to be loaded. These are **NOT** necessary for our purpose , but for those that wish to experiment with the ESP32 and write their own code, details of the additional steps required are detailed below.

Add the ESP32 definitions
To add the extra ESP32 definitions, follow this video

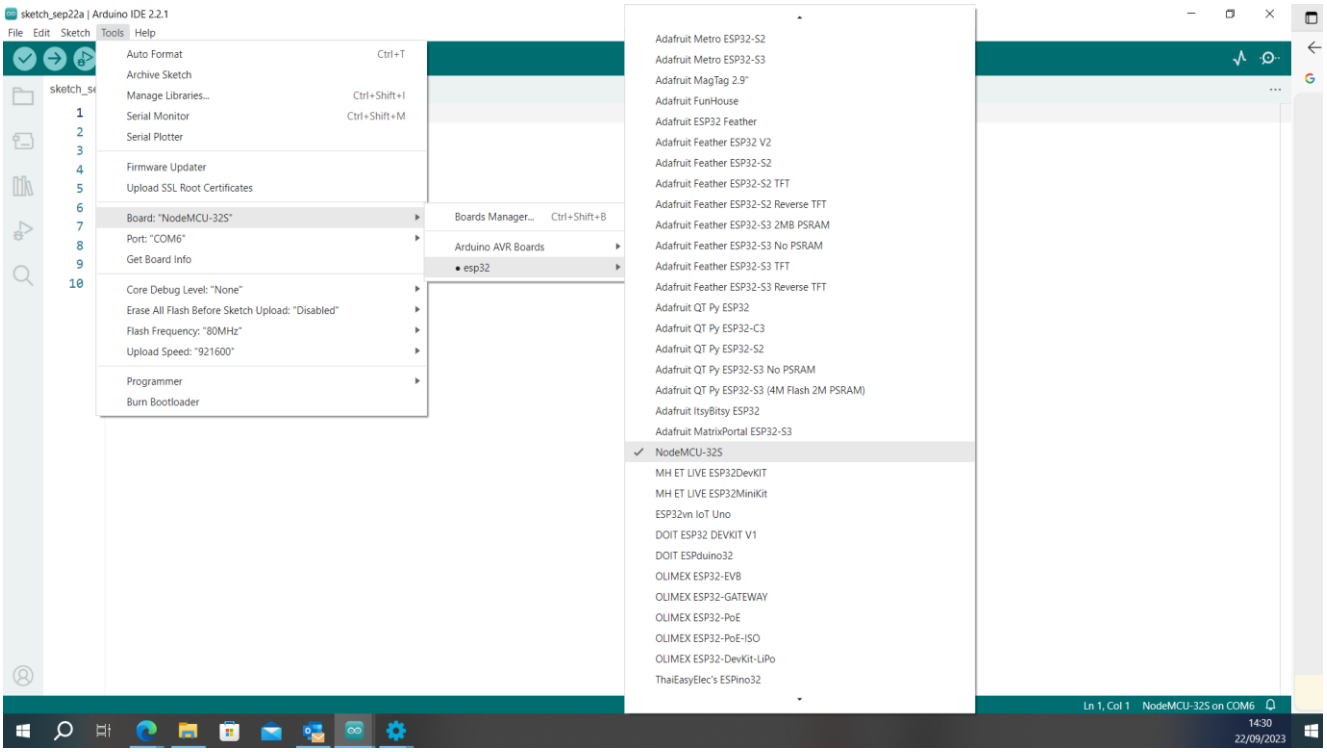
[(296) ESP32 install Arduino IDE 2 in 90 seconds #ESP32 - YouTube]

At 1.15 in the video, select NodeMCU-32S. Also ensure the correct COM port is selected.

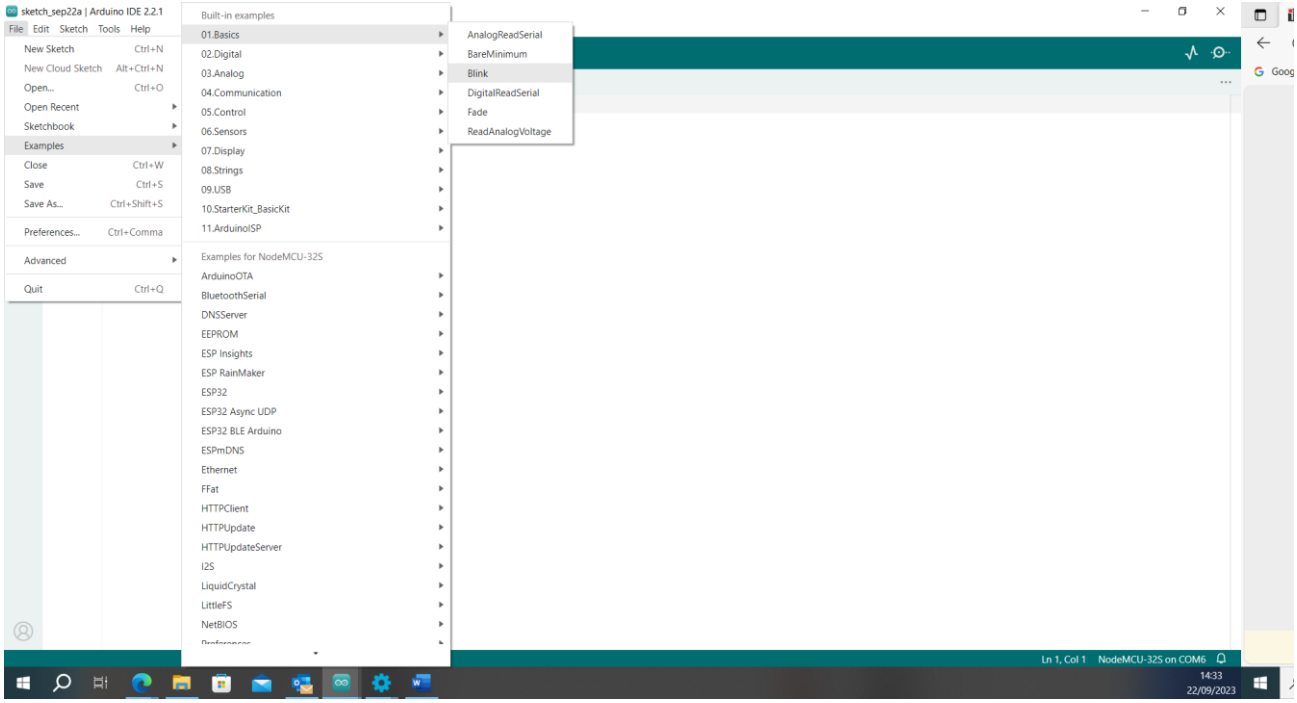
Load a sketch onto the ESP32
Now go back to the 'How To Install Arduino IDE' software install video and load the Blink sketch as described from 6.04, ensuring NodeMCU-32S is selected for the board.

Note:- when 'Connecting' is shown on the lower screen, the Boot button on the ESP32 board may need to be pressed and held until the code starts to load (around three seconds), depending on the board type.

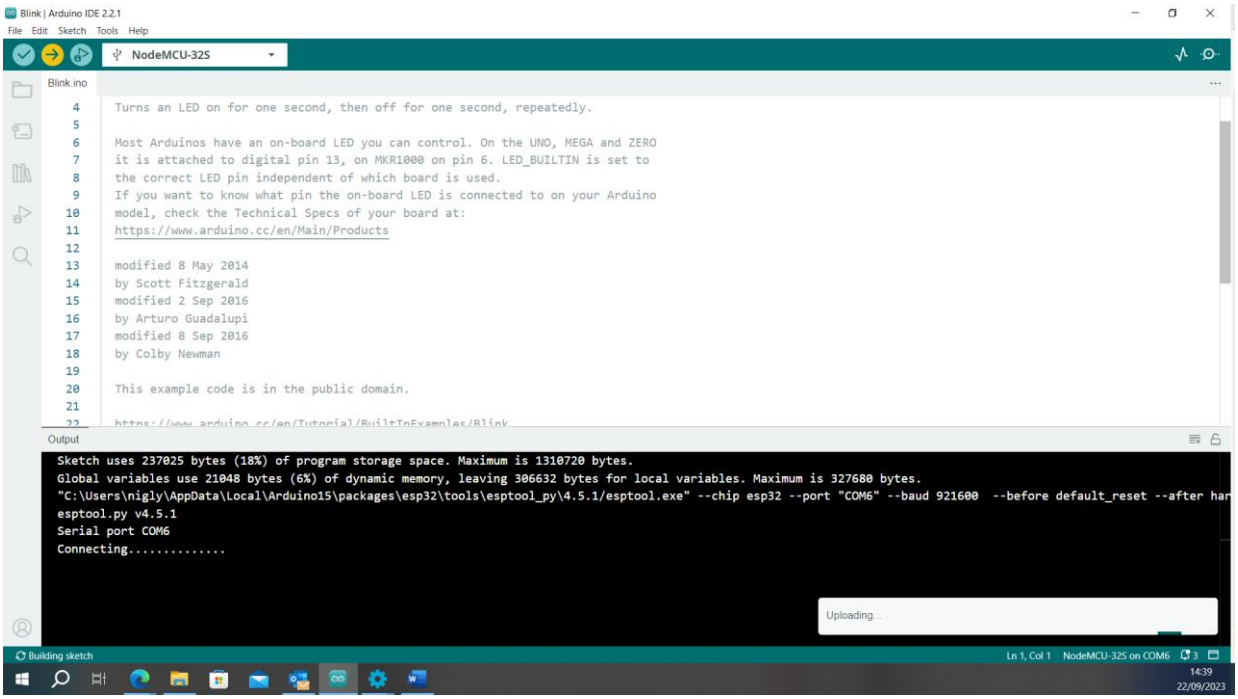
Selecting the correct board & COM port.



Select the Blink sketch



Click the button at the top (yellow) to compile & load the code
When ‘Connecting’ is shown in the lower screen, press the Boot button on the ESP32 for three seconds.



Code successfully downloaded to the ESP32 board.