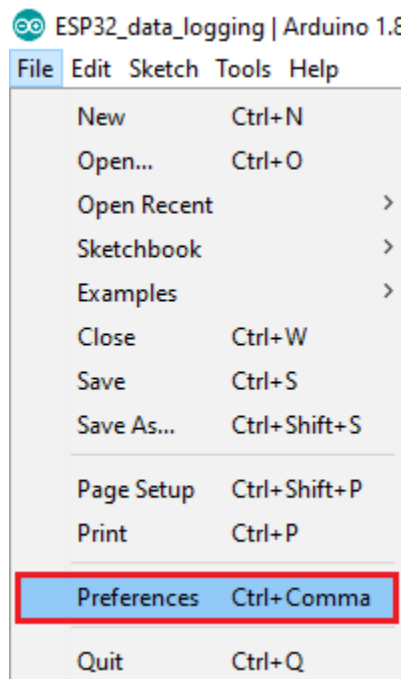
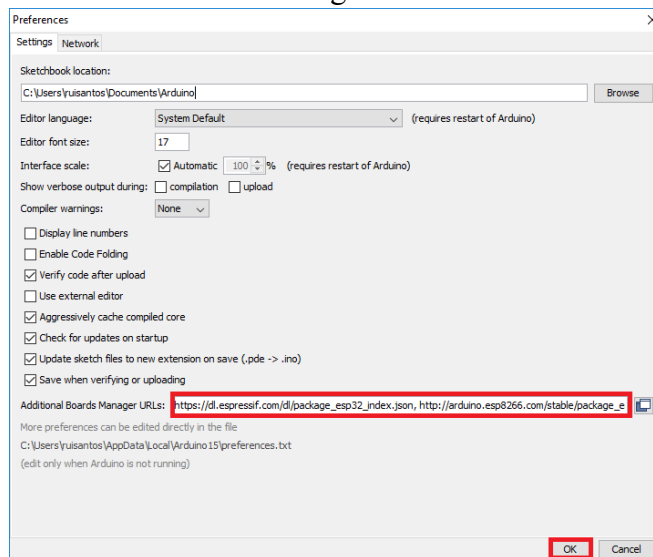


1. The ESP32 should come pre setup with the lab code, but follow these steps if you need to reinstall the code
2. Download the Arduino IDE for your respective system here
 - a. <https://www.arduino.cc/en/Main/Software>
 - b. Use the default install options
3. Follow along with this guide to install the ESP32 Add-on in the Arduino IDE (details copied below)
 - a. <https://randomnerdtutorials.com/installing-the-esp32-board-in-arduino-ide-windows-instructions/>
 - b. Go to File > Preferences

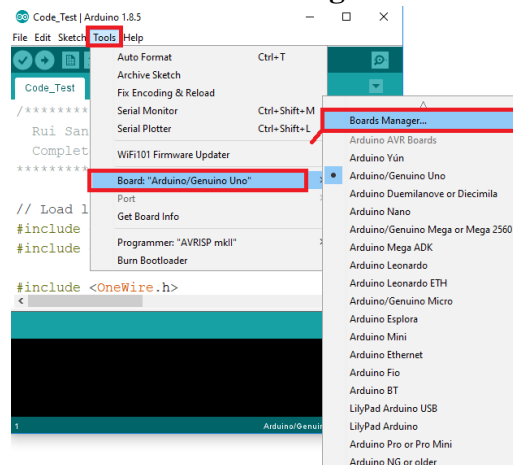


- i.
- c. Find the Additional Board Manager URLs” field.

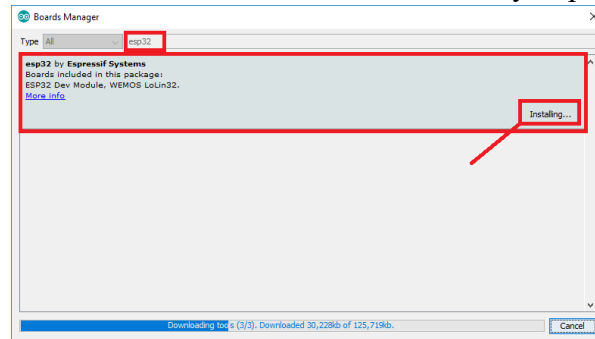


- i.
- ii. Enter: https://dl.espressif.com/dl/package_esp32_index.json

d. **Tools > Board > Boards Manager**



- i.
- ii. Search for ESP32 and install “ESP32 by Espressif Systems”

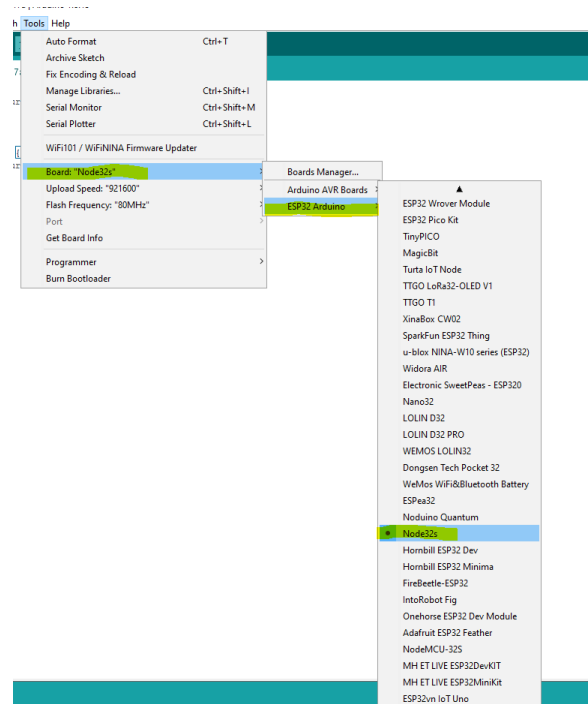


iii.

4. Upload the code to the board

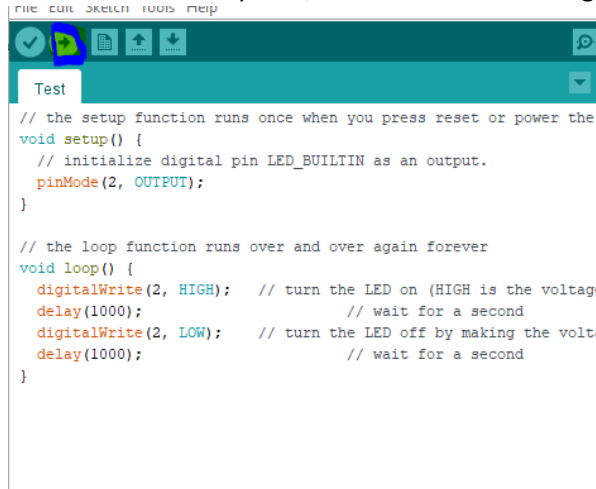
a. Select the board type

i. **Tools > Board > ESP32 Arduino > Node32s**



b.

- c. Download the code from Canvas and open it with the Arduino IDE
 - i. This code will need to be in its own folder and the Arduino IDE will prompt you to create this folder
- d. Plug your board into your computer with a Micro USB cable.
 - i. Some connectors are power only and do not have data pins. If you have any issues where the power is on, but the code is not uploading to the board this may be your problem.
- e. Press the upload button while holding down the IO0 button switch next to the USB. This will upload the code to your board.
 - i. (There may be some boards of this type where you do not need to hold down the IO0 button to upload, but the one I was using for testing needed it.)



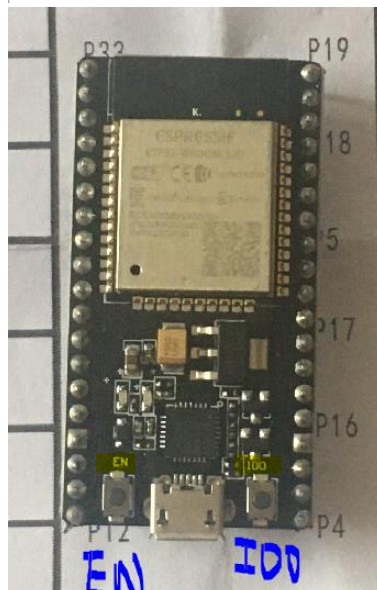
```

// the setup function runs once when you press reset or power the
void setup() {
  // initialize digital pin LED_BUILTIN as an output.
  pinMode(2, OUTPUT);
}

// the loop function runs over and over again forever
void loop() {
  digitalWrite(2, HIGH); // turn the LED on (HIGH is the voltage
  delay(1000);           // wait for a second
  digitalWrite(2, LOW);  // turn the LED off by making the voltage
  delay(1000);           // wait for a second
}

```

ii.



iii.

- f. After the code has finished uploading to the board, press the reset button switch labeled EN.
 - i. This will cause your board to process the code and load the most recently uploaded program