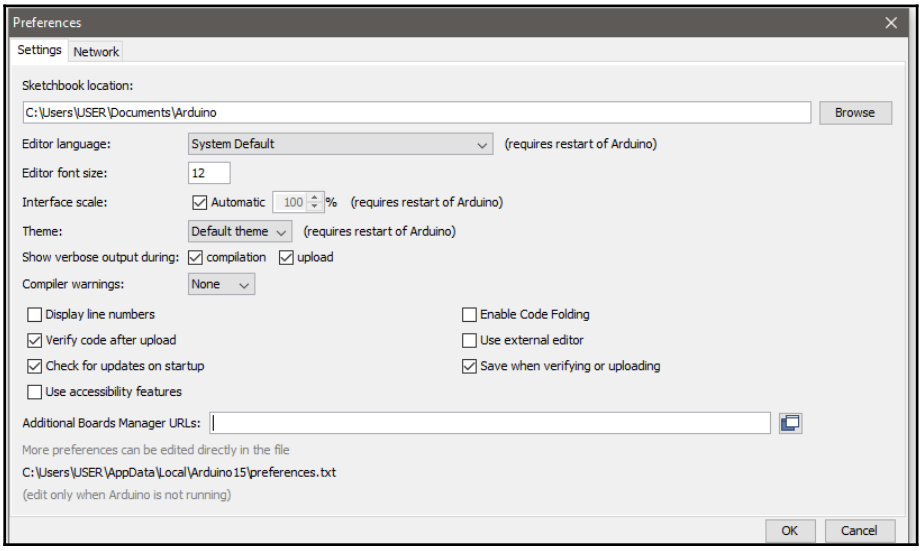
Setup of ESP32 with the Arduino

Prerequisites:

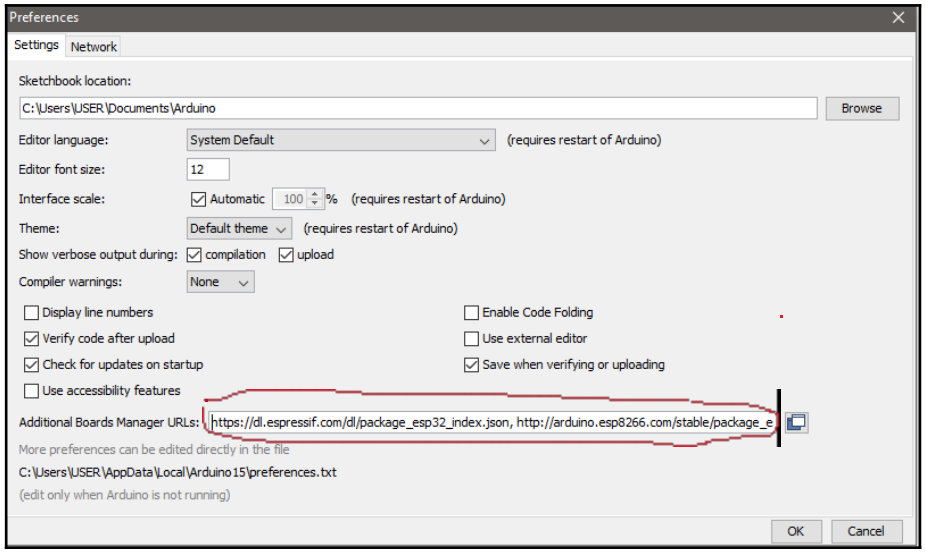
- Windows based PC/Ubuntu(version > 16.04)
- ESP32 Board(WROOM-32)
- Arduino IDE (Preferably 1.8.16)

Steps:

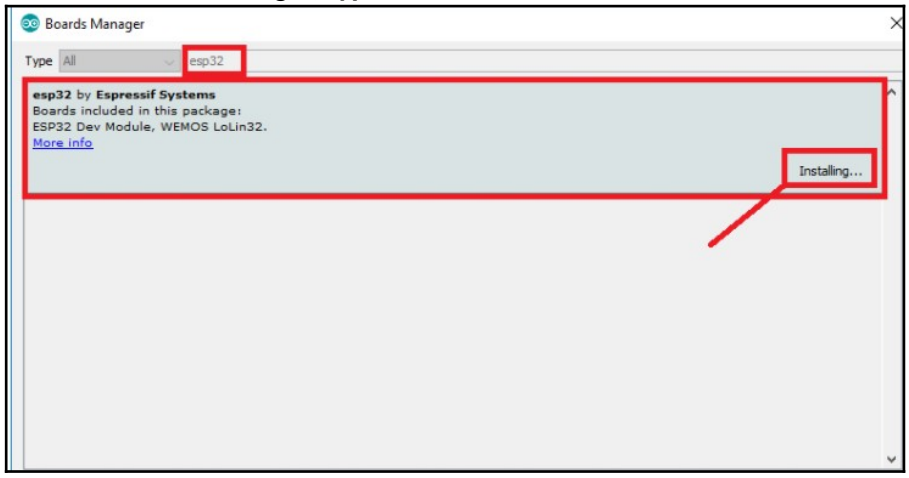
- **Install Arduino IDE if not installed.**
  - In case of linux, in terminal **sudo snap install arduino**
  - In case of windows, **click on below link to download the software**
    - **https://www.arduino.cc/en/software**
- **After installation of Arduino IDE, open the IDE and go to file -> preferences**



- **Now in the Additional boards manager URLs text box, paste the below links**
  - `https://dl.espressif.com/dl/package_esp32_index.json, http://arduino.esp8266.com/stable/package_esp8266com_index.json`



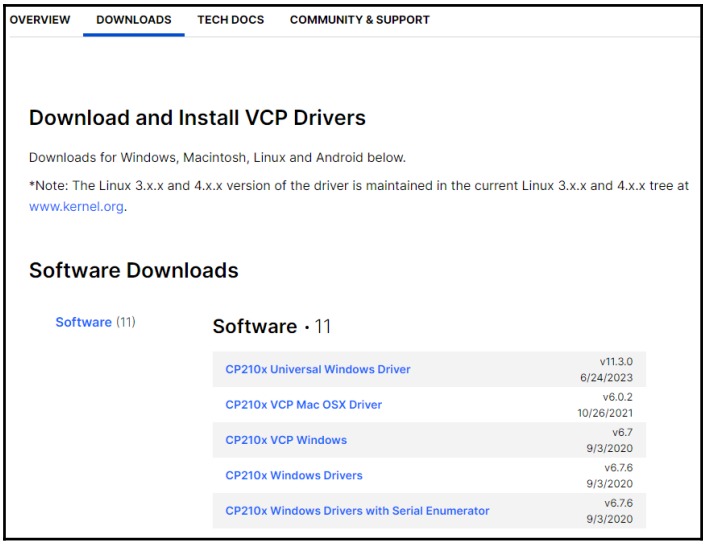
- **After pasting the URL click on OK.**
- **Now go to Tools->Board->Boards Manager**
    - **In this board manager, type ESP32 in the text box.**



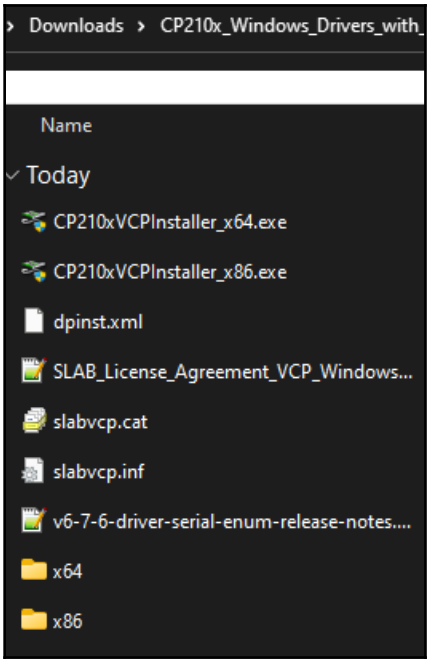
- **It shows esp32 by Espressif systems, selects the version (prefer latest one) and then clicks on install.**
- **It will take some time to install**
    - **After installation, close the window.**
- **This completes the ESP32 installation in the Arduino IDE.**

<u>Installation of CP210X USB to UART bridge controller:</u>

- **Once esp32 is installed in the boards manager, next install the USB to UART driver (CP210X USB to UART bridge controller)**
    - **Some times the driver is not installed by default then download the driver from the link below:**
    - https://www.silabs.com/developers/usb-to-uart-bridge-vcp-drivers
    - Now go to downloads section as shown below



- Now download the CP210X Windows Drivers With serial enumerator, now a zip file will be downloaded to your computer.
- Once downloaded, extract the zip file, and double click on the desired installer (x64 or x86 based on OS), install it.



- Once the driver is installed, the ESP32 will be detected on a particular COM port by the IDE.

Configuration of ESP32 board in Arduino IDE:

- Once installation is done, Select your **Board** in **Tools > Board -> ESP32 Arduino -> FireBeetle-ESP32.**
- Then next select the **COM port** of your ESP32 in **Tools-> ports.**
- **This completes the ESP32 configuration with Arduino IDE.**
- Now you can write your programs, compile, and flash on ESP32 board through Arduino.