How to install and use PlatformIO for Arduino and Hackberry Project

Hackberry project with PlatformIO

- Why PlatformIO instead of Arduino IDE?

→PlatformIO is much more flexible than Arduino in how to architect a complex program (such as the Hackberry project).

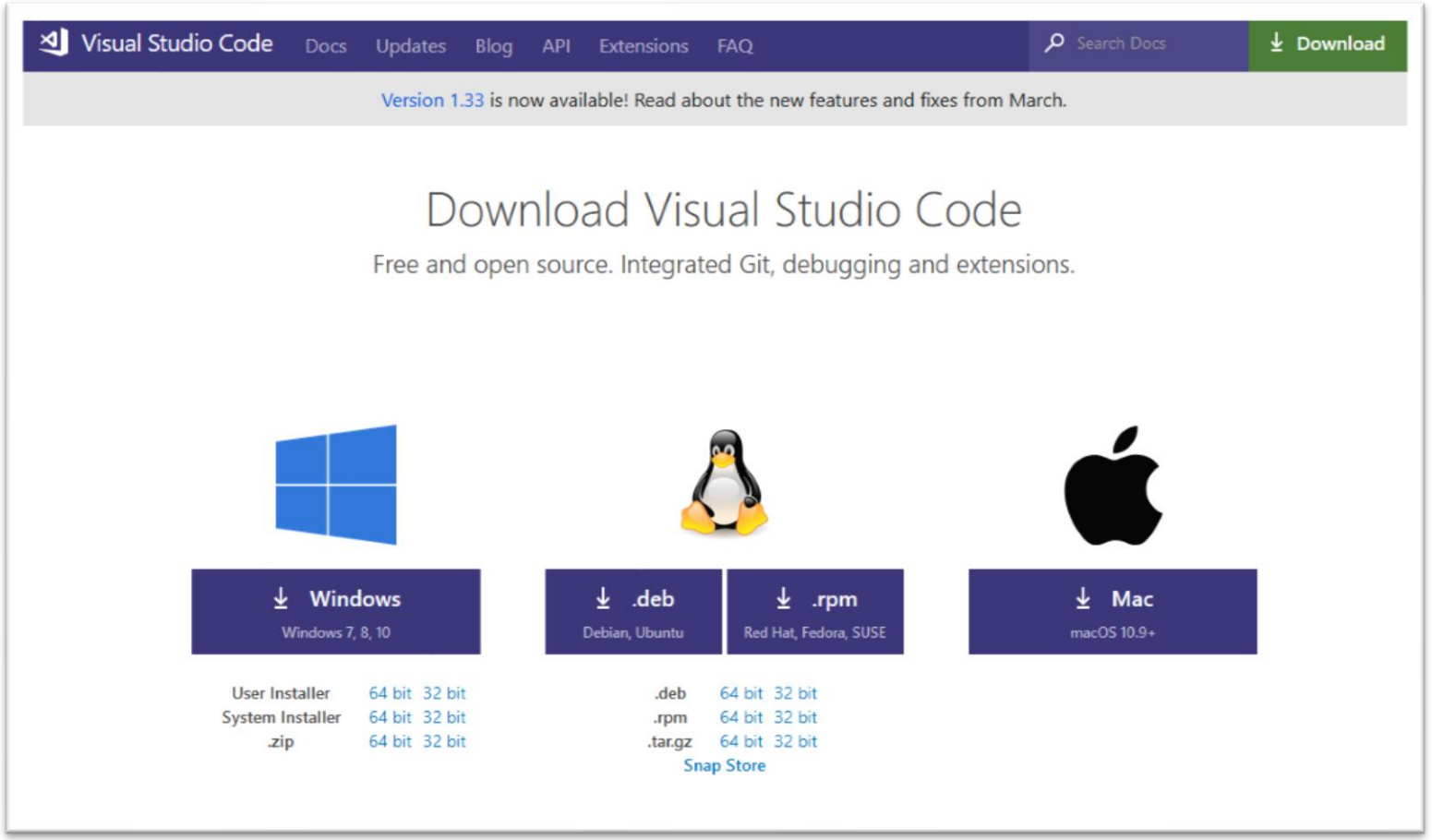
→It also supports a lot more development board (ATmega, STM32, ESP8266, PIC32, etc ...) and is fully compatible with Arduino.

→Debug tools and other extensions (ex : beautifier, code completion, etc…) are available

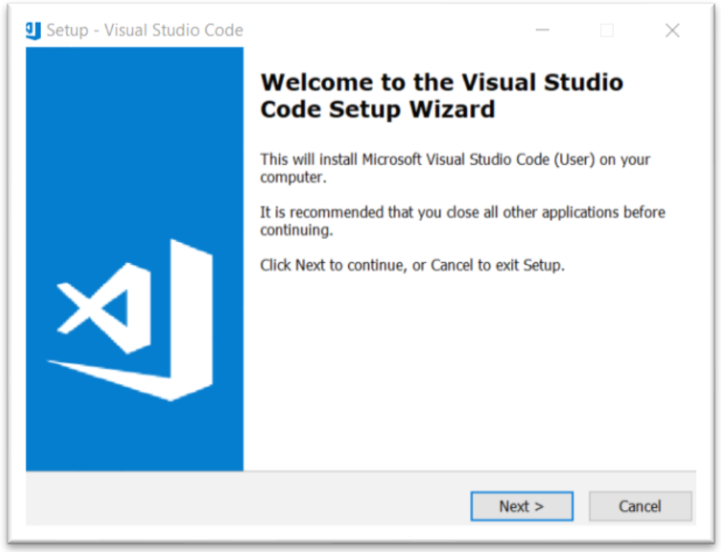
→Can integrate your version management tools (ex: Git)

Download Visual Studio Code

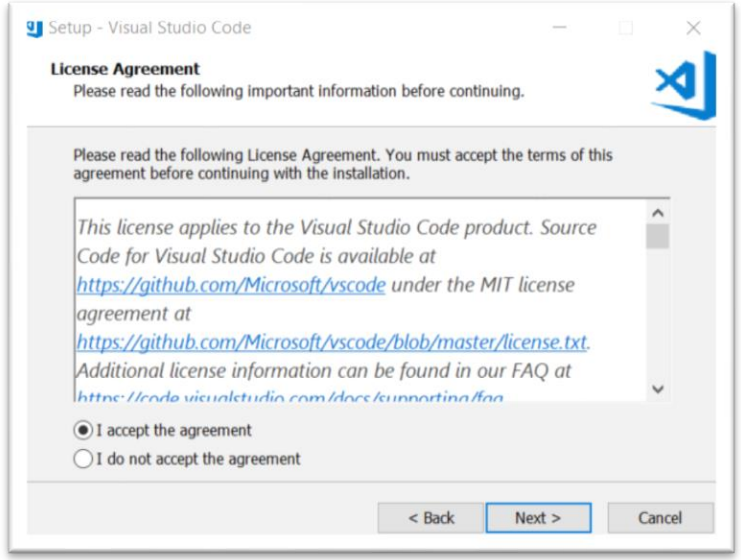
- Visual Studio Code is an IDE available on all platforms. Its installation is required to use PlatformIO.
- Download link : https://code.visualstudio.com/Download



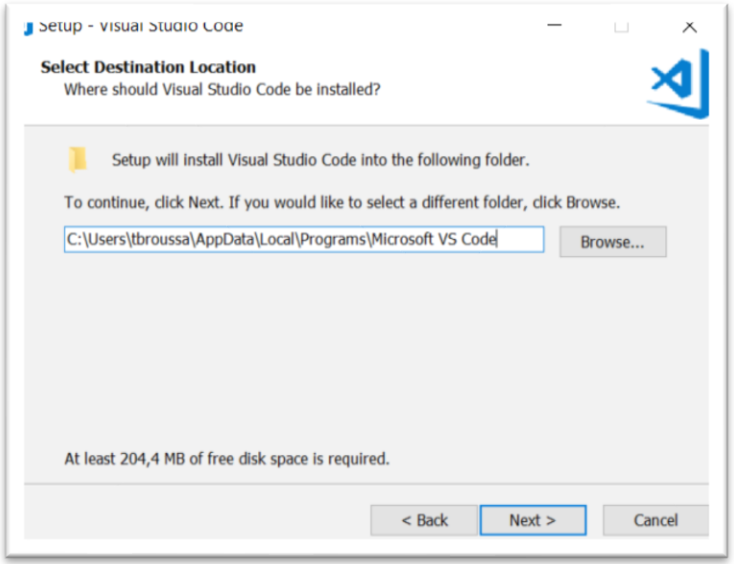
Visual Studio Code Setup (1/2)



1 - Click on « Next »

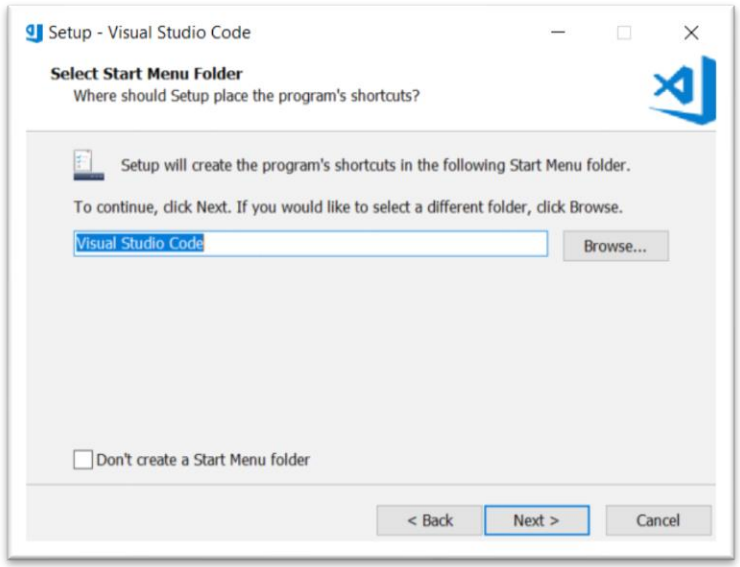


2 – Accept the agreement and click on « Next »

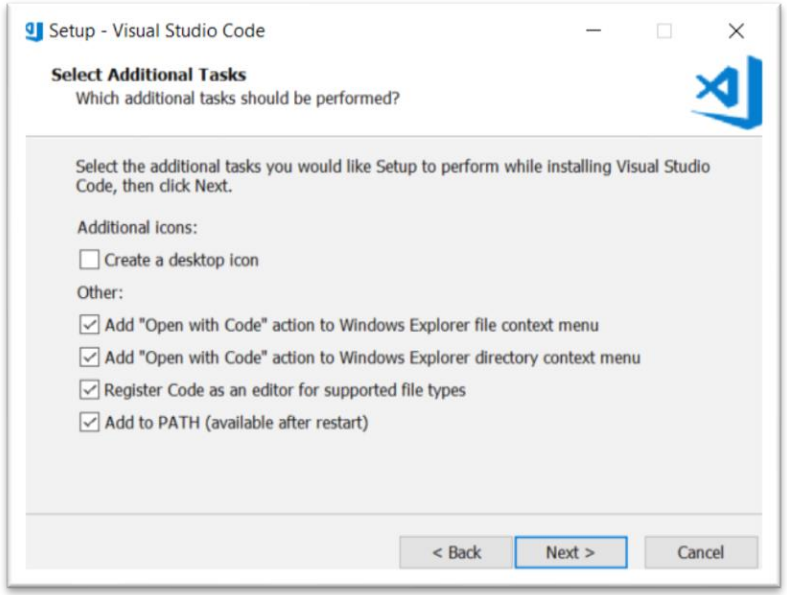


3 – Select the setup folder and click on « Next »

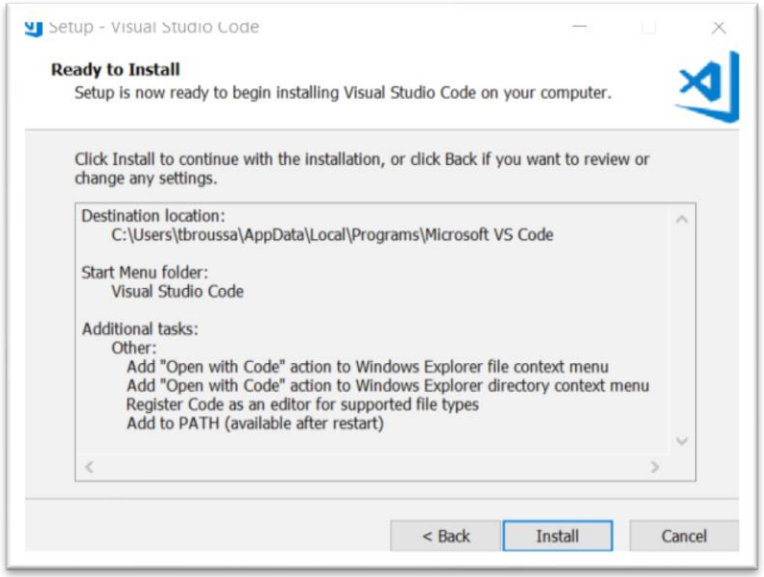
Visual Studio Code Setup (2/2)



4 - Click on « Next »



5 – Tick at least all the Other options and click on « Next »

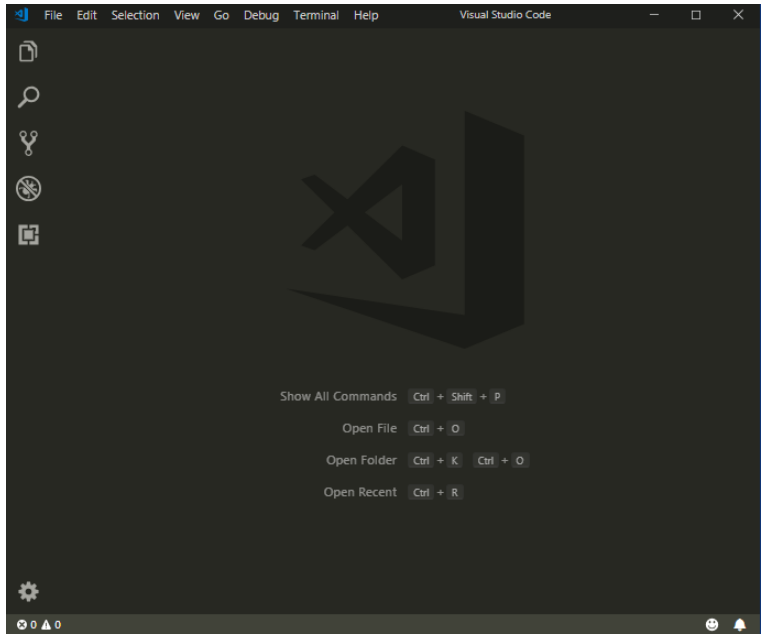


6 – Click on « Install »

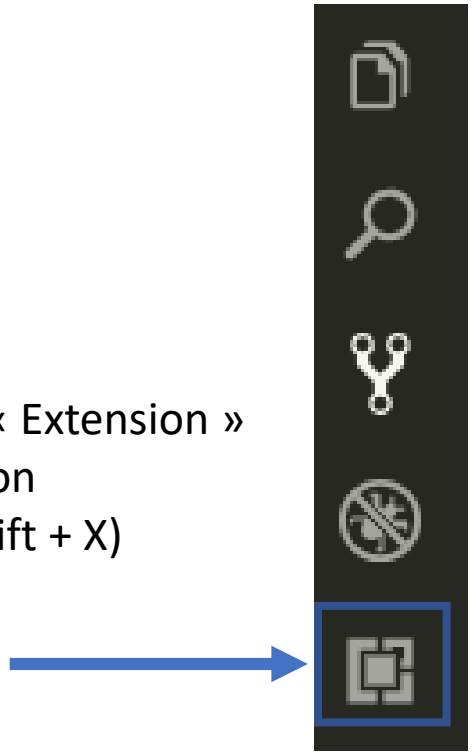
PlatformIO Setup (1/2)

1 - Once setup is finished,
a new shortcut will be available
on your desktop. Click on it.

2 - The Visual Studio Code IDE appears

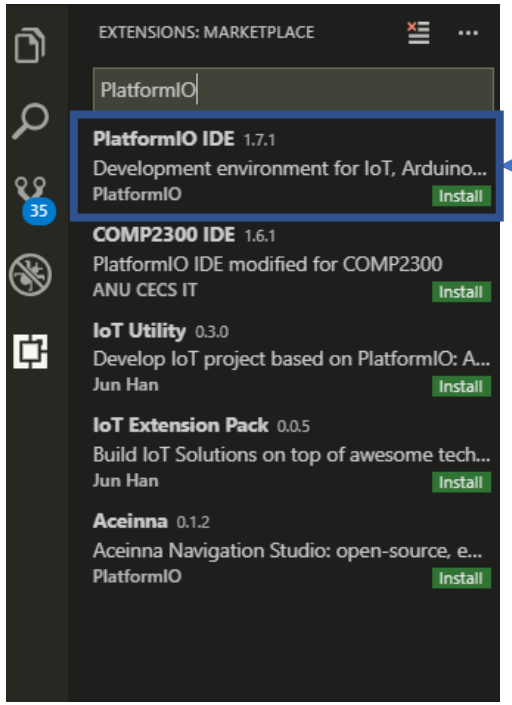


3 - Click on the « Extension »
button
(Ctrl + Shift + X)



PlatformIO Setup (2/2)

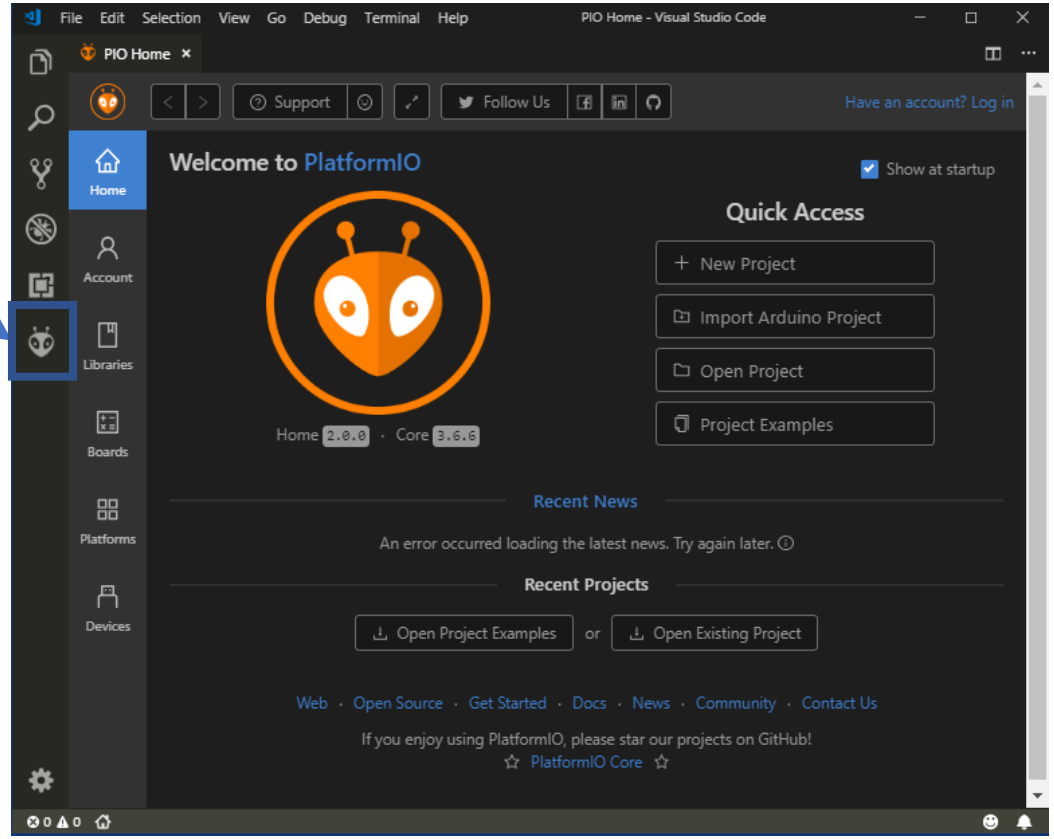
4 – In the Extensions:MartketPlace,
search for « PlatformIO ».
The PlatformIO IDE will appears.



Click on
« Install »

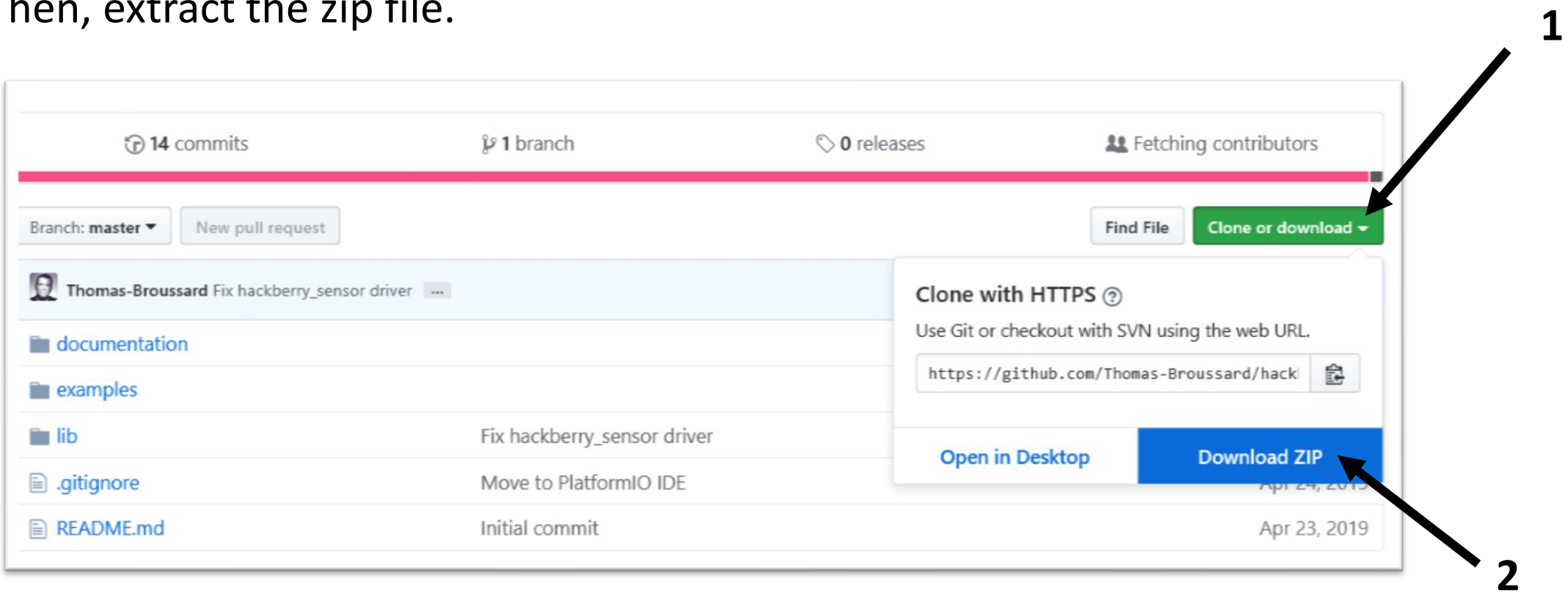
5 – Close and reopen the
Visual Studio Code IDE.
At startup, the PlatformIO screen will appear ,
and a new button will be available on the left side of the IDE

PlatformIO
button



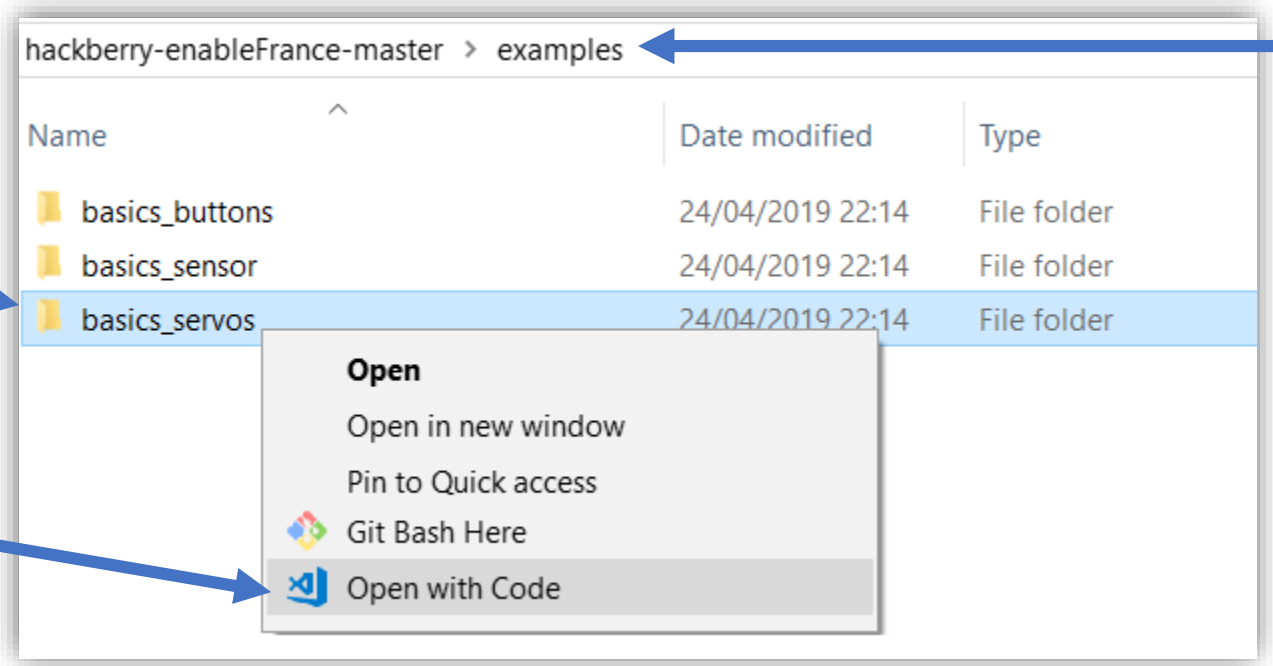
Hackberry Project with PlatformIO (1/5)

- 1 - Download the Hackberry project on Github :
  https://github.com/Thomas-Broussard/hackberry-enableFrance
  Then, extract the zip file.



Hackberry Project with PlatformIO (2/5)

- 2 - Open the unzipped folder : hackberry-enableFrance-master
- 3 - For this example, open folder **examples** and open **basics_servos** with Visual studio code :



1 - Open « examples » folder

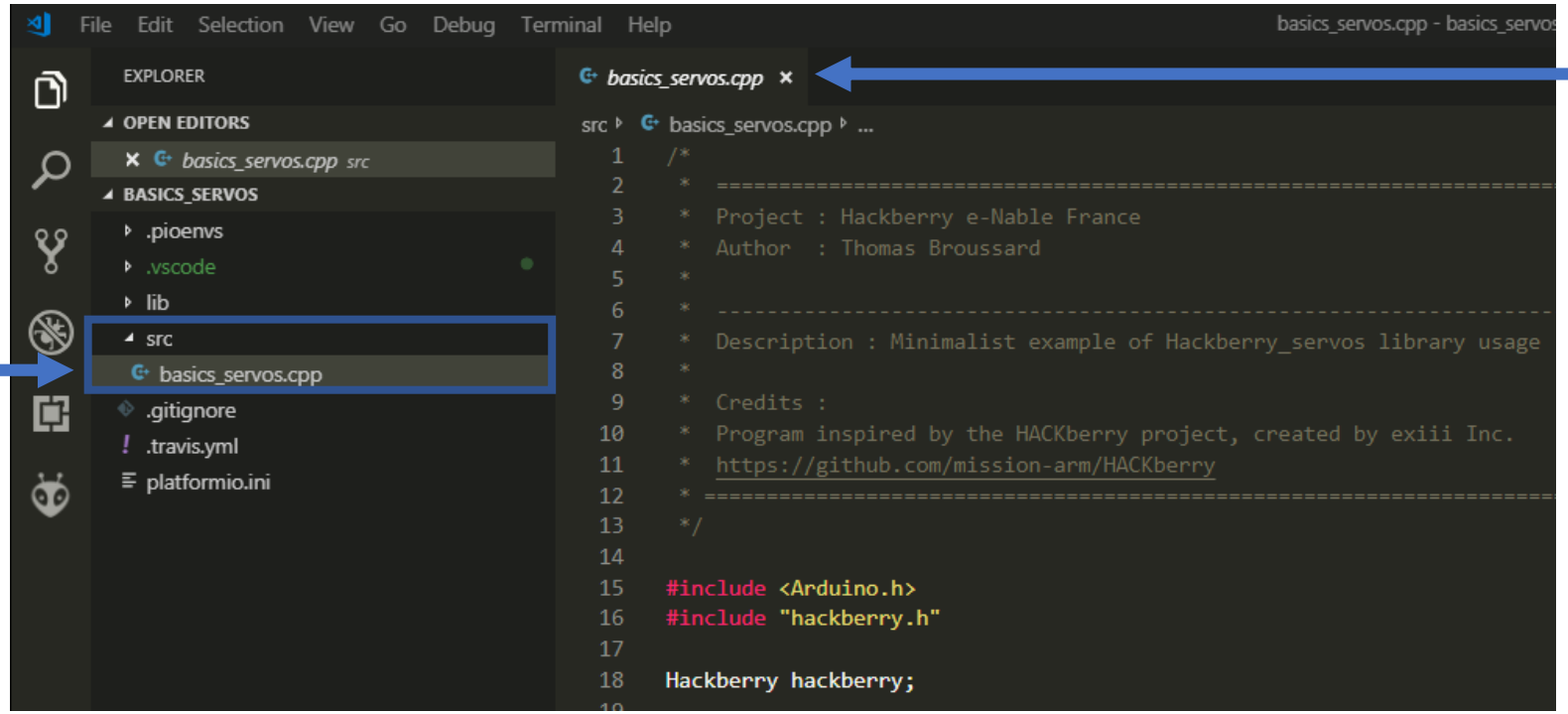
2 - Right Click on « basics_servos » folder

3 - Click on « Open with Code »

Hackberry Project with PlatformIO (3/5)

- 4 – Visual Studio Code appears. Open the **file src/basics_servos.cpp**

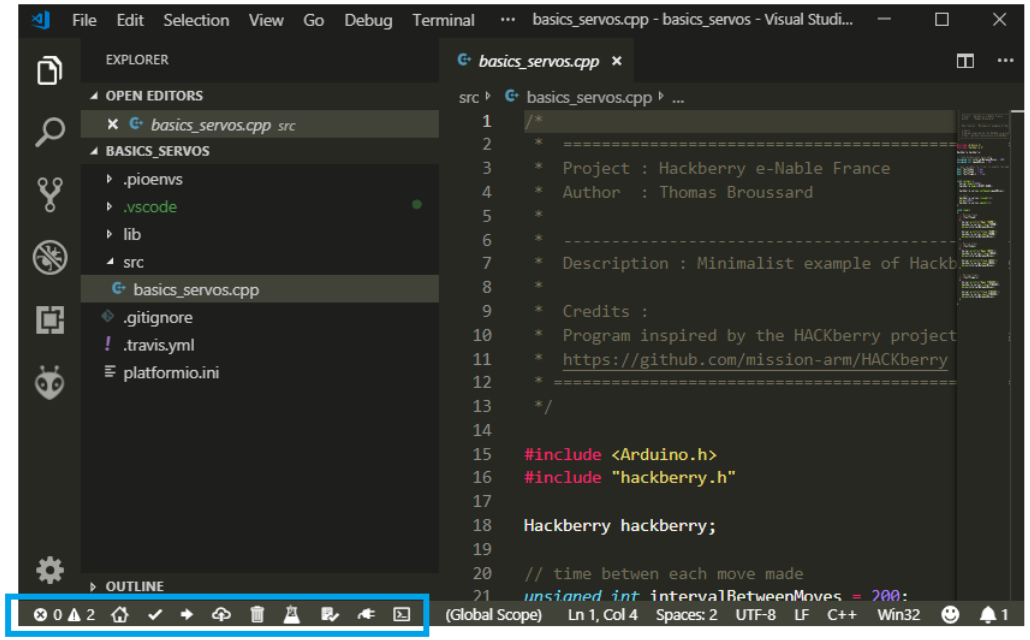
1 - Click on basics_servo.cpp



2 – basics_servo.cpp will appears in tabs

Hackberry Project with PlatformIO (4/5)

- The action bar will appear on the bottom of your screen. You can do the same actions as with the Arduino IDE (compile, upload, and open the serial monitor) :



PlatformIO Action Bar

Main buttons on PlatformIO Action Bar :

Number of warning detected in your code

Upload the code to the development board

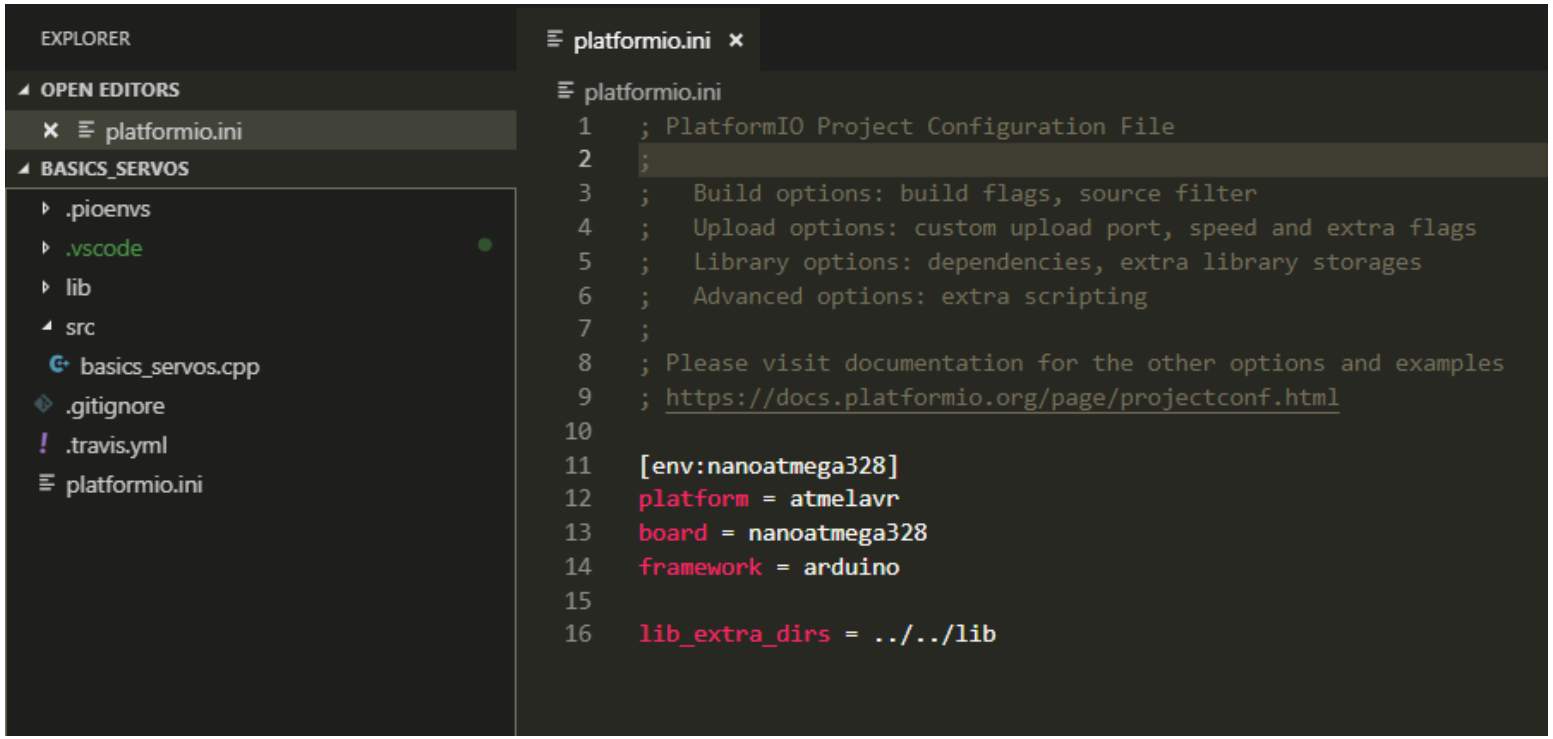
Number of errors detected in your code

Build (compile) the code

Open the serial monitor (default : 9600bauds)

Hackberry Project with PlatformIO (5/5)

- You do not need to select the development board. It is already configured in **platformio.ini** file :



WARNING : Modify this file only if you use other development boards !