Presentation on:-> ARIES V 3.0 Peripherals Interface

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ARIES V 3.0 Arduino Setup

Overview

This guide will provide you with a step by step walk-through of running a software on VEGA based development boards using Arduino IDE. In every language, generally, the first Hello World project is a simple program that prints “Hello World”. We will see what such a code would look like for ARIES using Arduino IDE.

ARIES v3.0

The ARIES v3.0 is a fully indigenous and a “Made in India” product to get started with basic microprocessor programming and embedded systems. This board is built upon a RISC-V ISA compliant VEGA Processor with easy-to-use hardware and software. For more details about ARIES v3.0 boards please refer to the ARIES

Prerequisites

- Windows 10 or above/Linux (64 bit)
- Arduino IDE
- VEGA ARIES Board support package

Components Required

- ARIES v3.0 Board
- USB type C to USB type A cable

ARIES V 3.0 Arduino Setup

Setup VEGA Ecosystem

Download and install Arduino IDE 1.8.19

Once installed Open Arduino IDE

Open File->Preferences, Add below JSON in “Additional Boards Manager URL”, Press OK

https://gitlab.com/riscv-vega/vega-arduino/-/raw/main/package_vega_index.json

ARIES V 3.0 Arduino Setup

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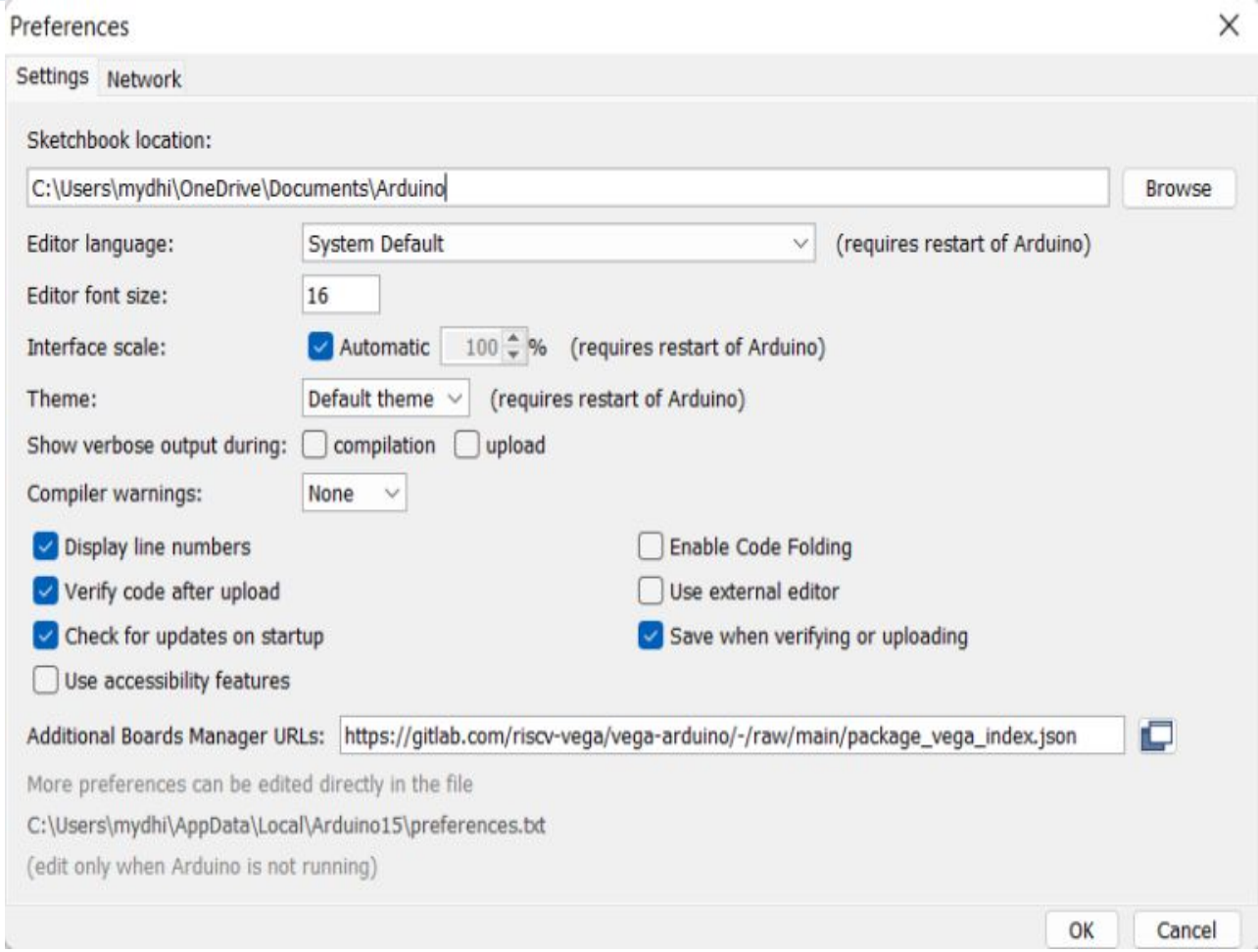
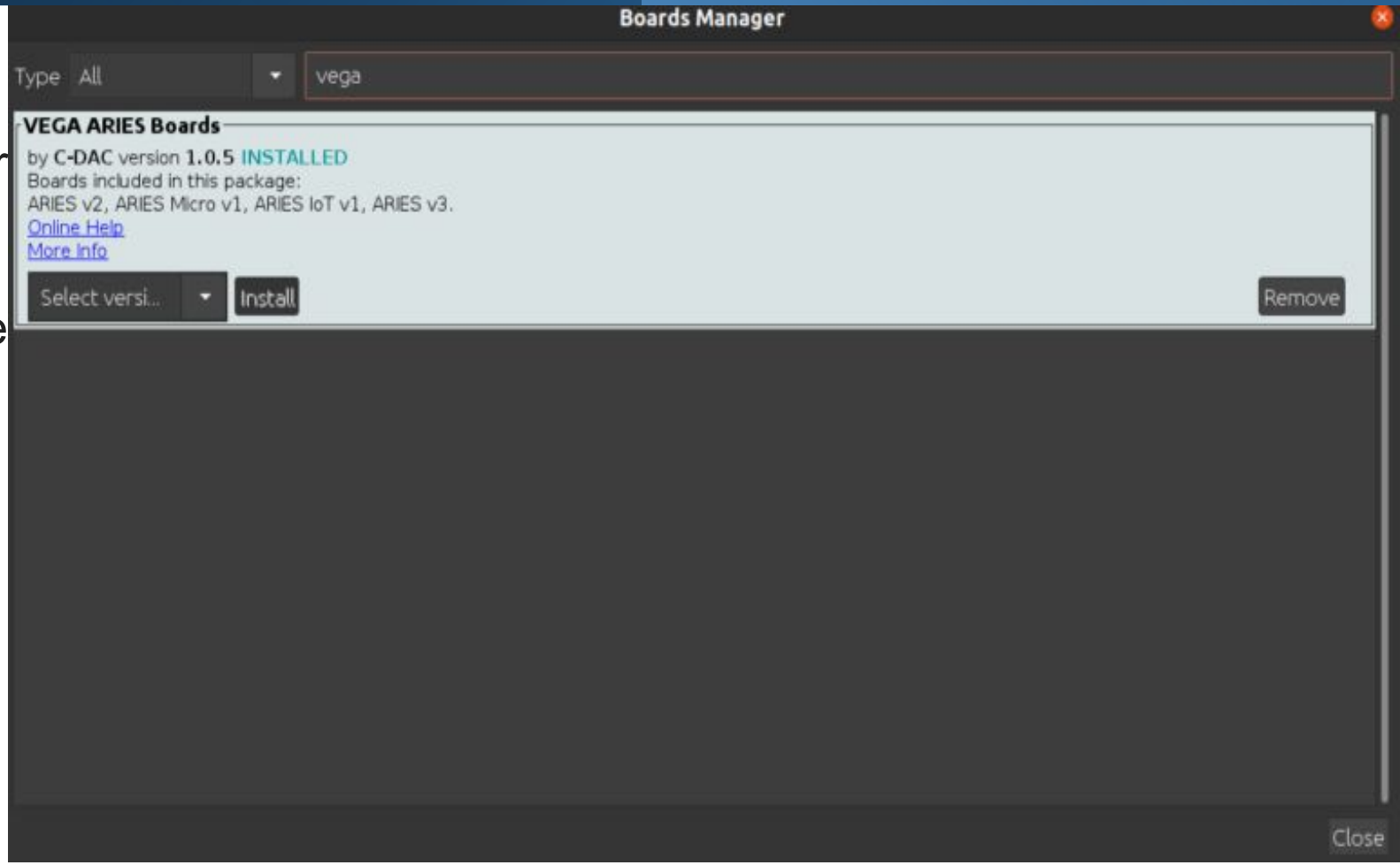


ARIES V 3.0 Arduino Setup

Open Tools->Boards->Board manager

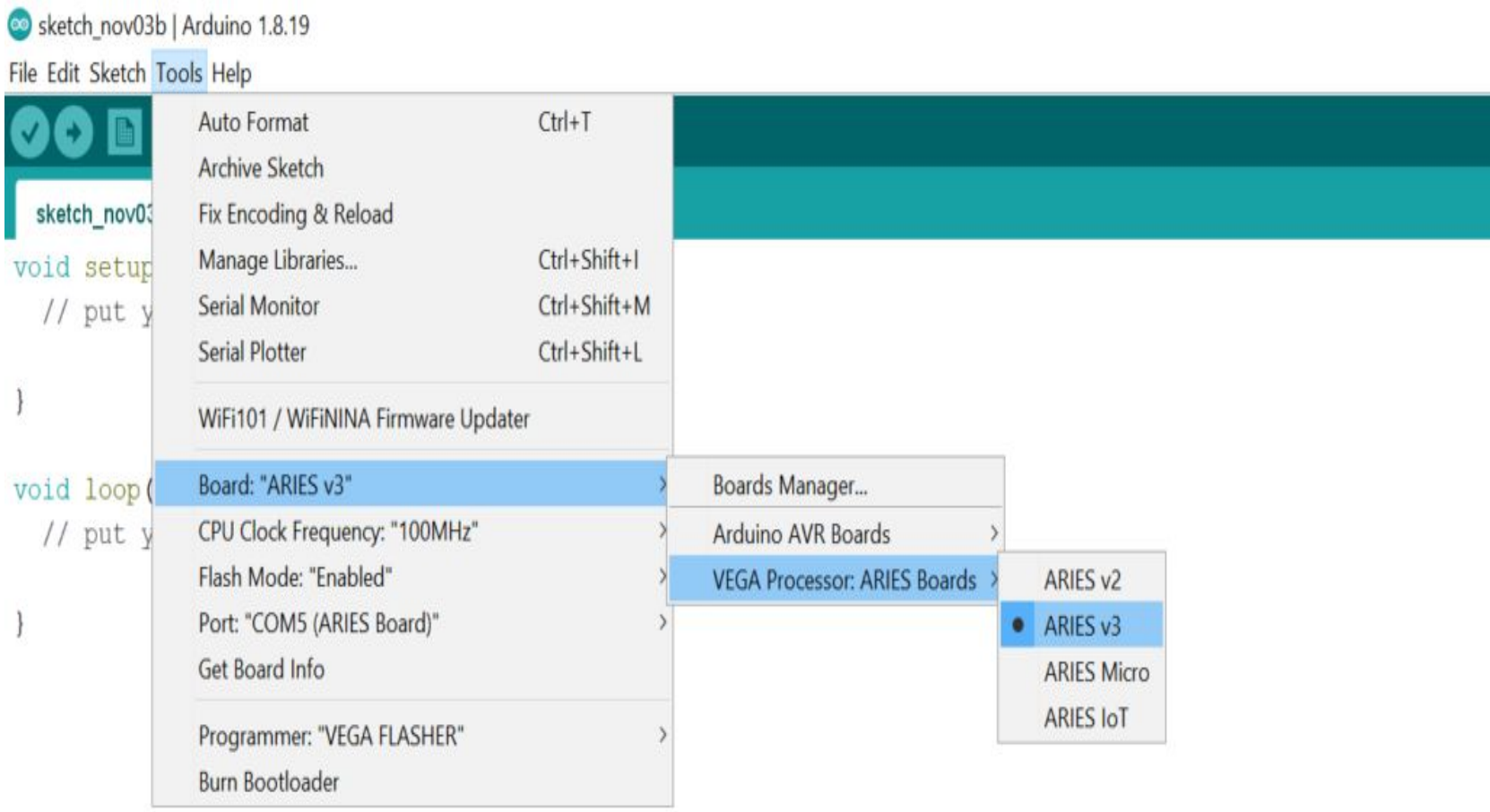
Search for “vega”

Install “**VEGA ARIES Boards**” with late version



ARIES V 3.0 Arduino Setup

Select Tools->Board->VEGA Processor: ARIES Boards->**ARIES Vx.0 e.g V3.0**

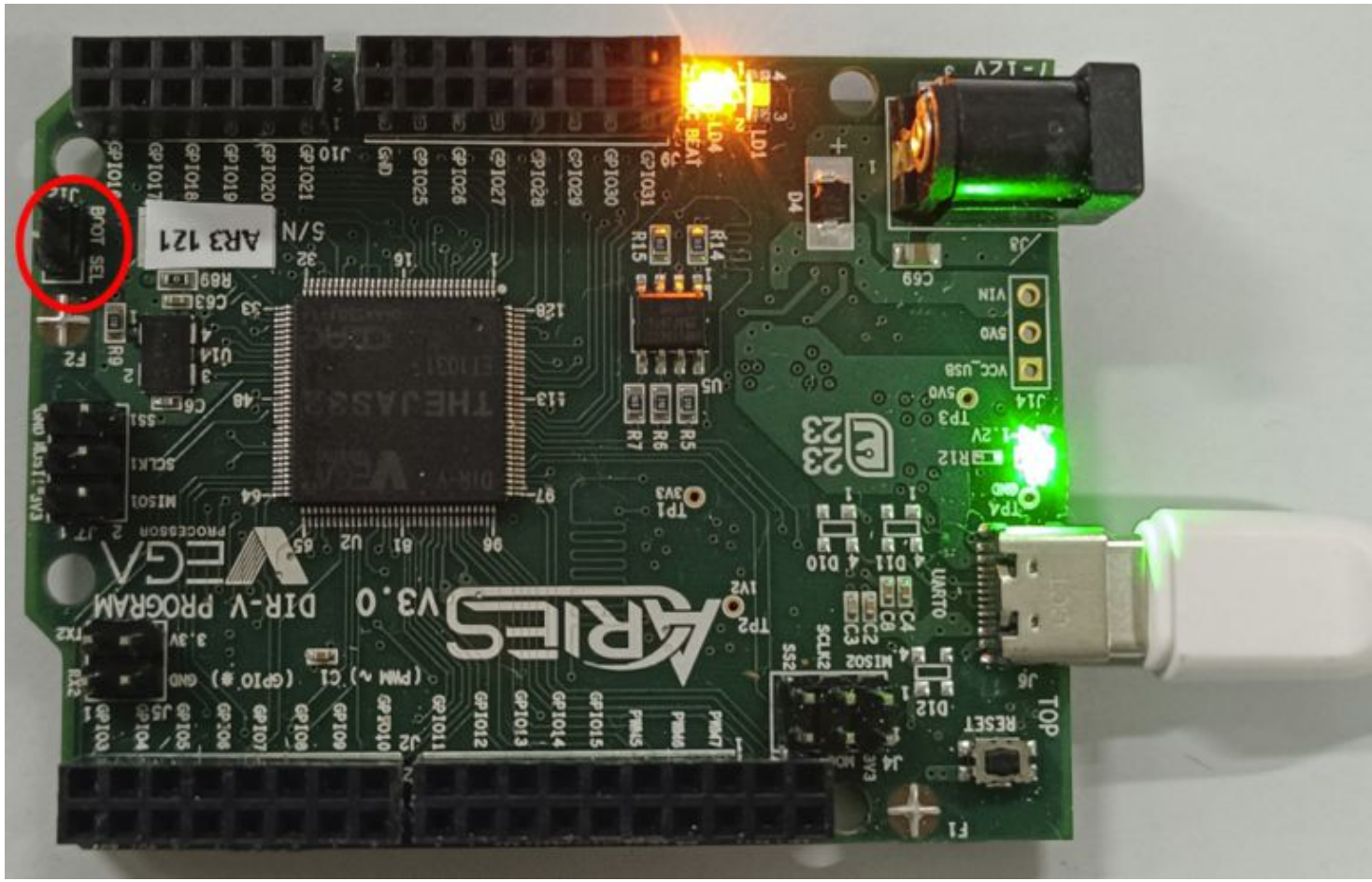


ARIES V 3.0 Arduino Setup

Check your ARIES board whether the **BOOT SEL** pin is shorted using a jumper or not.

If
BOOT-SEL jumper (J12) is shorted :
a)Select **Flash Mode -> Enabled**
b)Select Tools -> **Programmer** -> VEGA FLASHER
Else
a)Select Flash Mode -> **Disabled**
b)Select Tools -> **Programmer** -> VEGA XMODEM

Here the **BOOT SEL** pin is shorted, so we have enabled the flash mode and selected VEGA FLASHER from programmer option.



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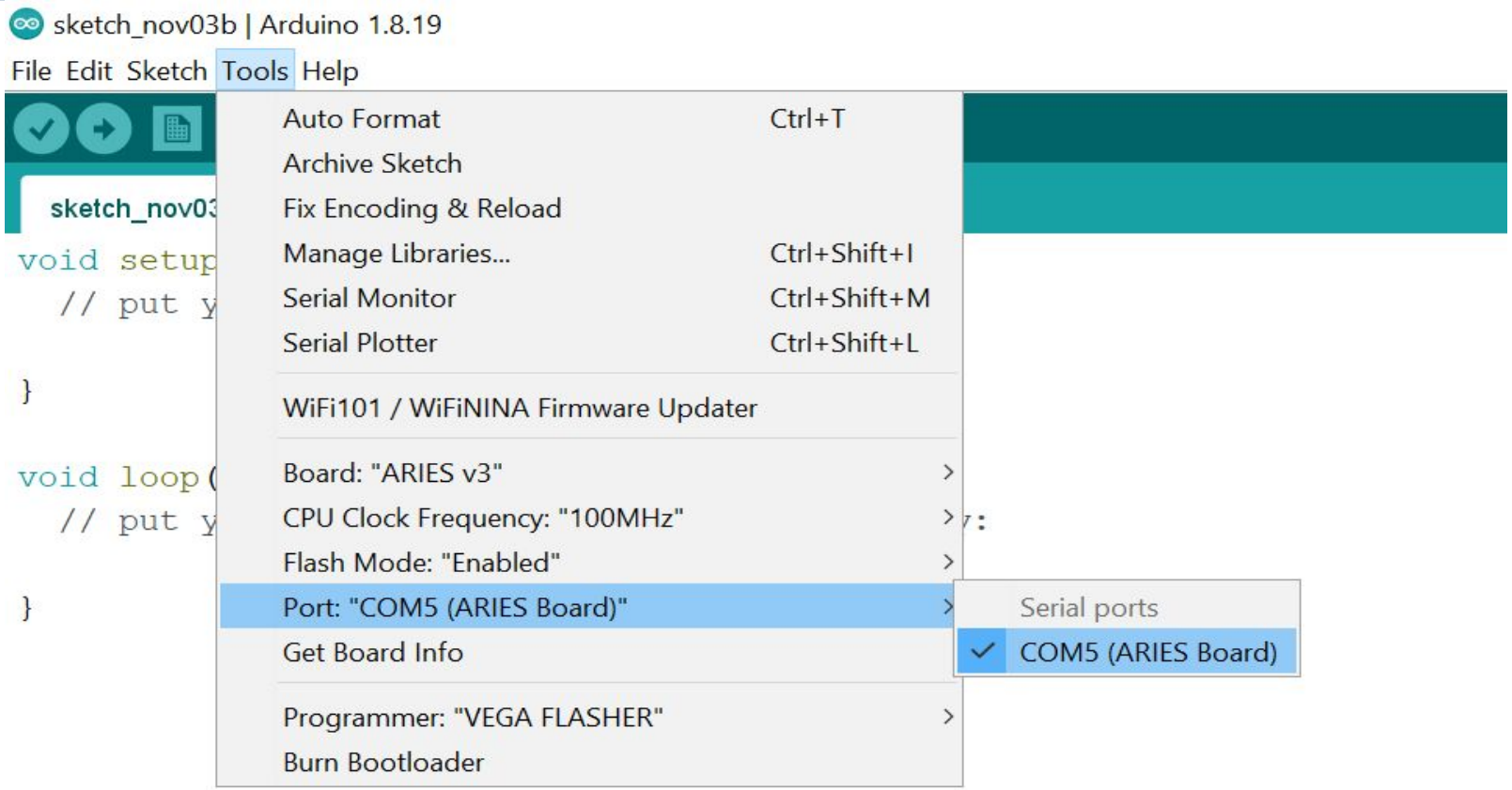
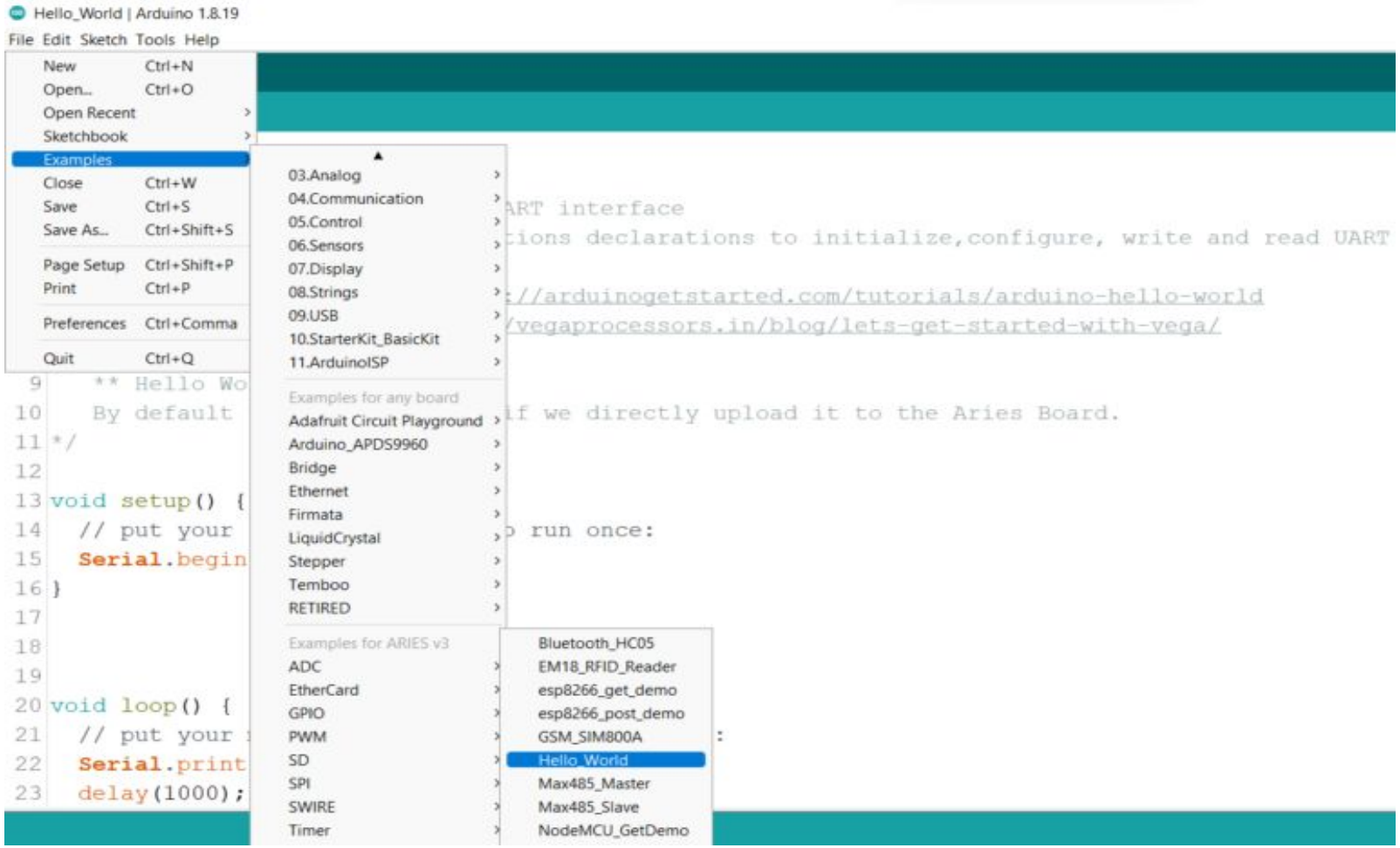
Connect the **ARIES** board to **PC**

Select Tools -> **Port** -> **COM*** (ARIES Board)



ARIES V 3.0 Arduino Setup

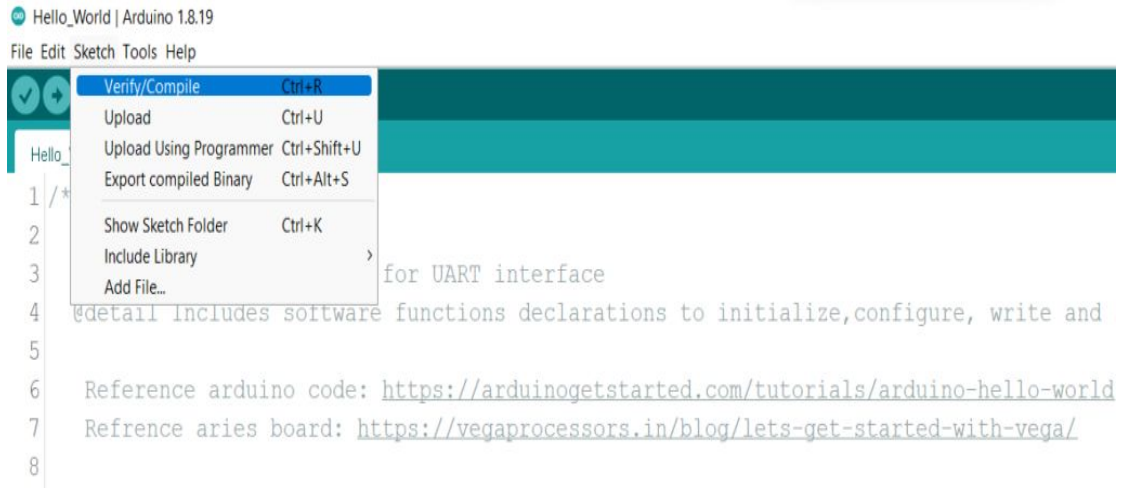
Open **File** -> Examples -> “**Examples for ARIES v3** -> UART -> Hello World”

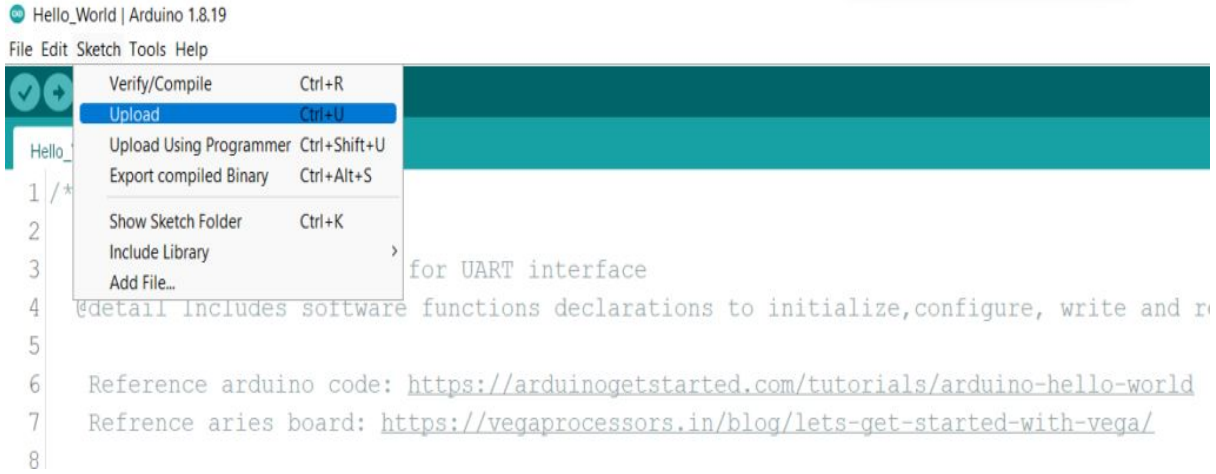


ARIES V 3.0 Arduino Setup

Click the **Sketch** -> **Verify** button to compile the program

Click the **Sketch** -> Upload button to upload the program



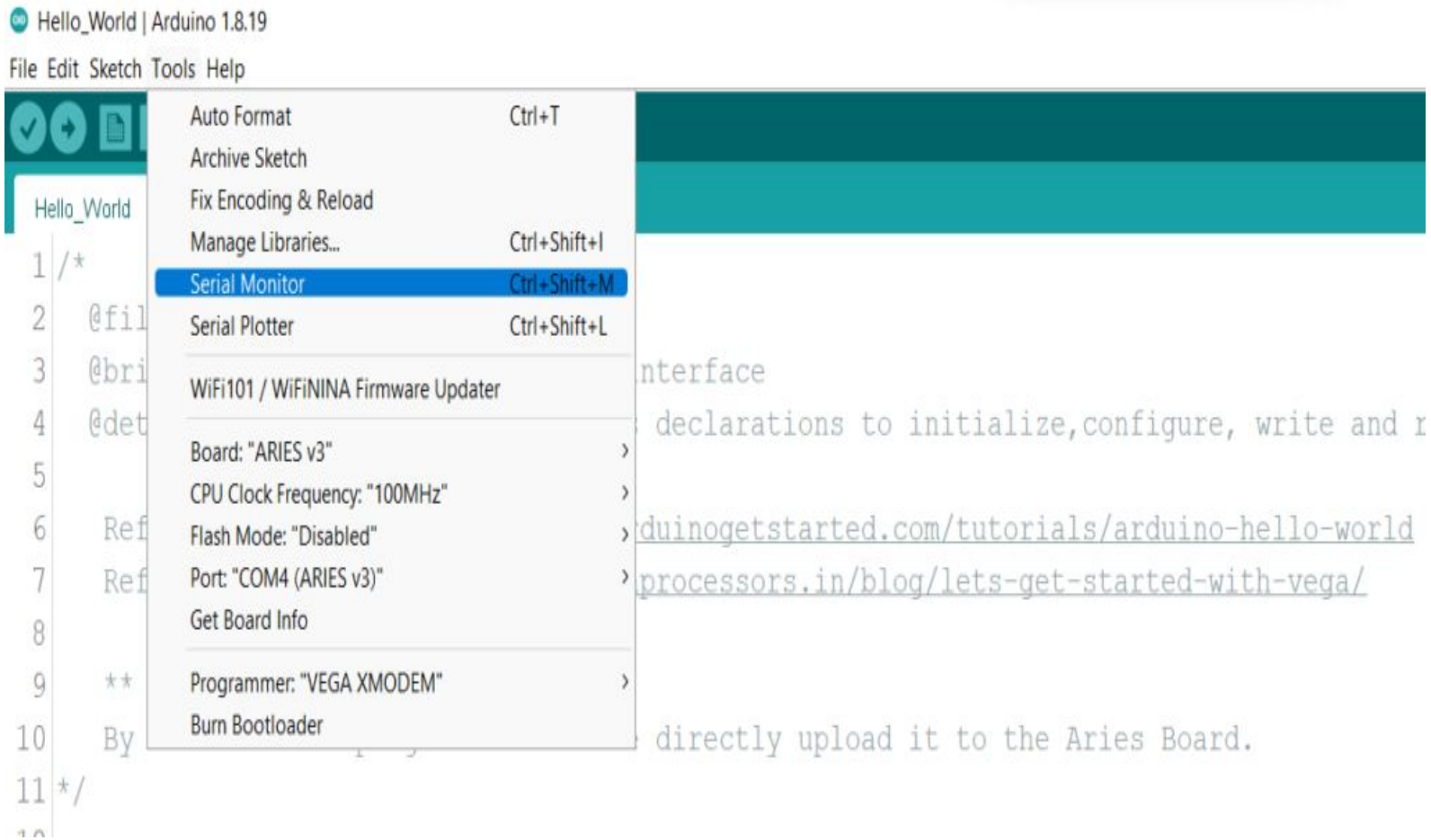


ARIES V 3.0 Arduino Setup

Note: If you are using Arduino IDE version 2.0.0 or above, then Click the Sketch -> **Upload** using Programmer button to upload the program

Open **Tools** -> **Serial monitor**

Select 115200 baud in Serial Monitor



Thank You!!