











Getting Start with STM32 using STM32CubeIDE and HAL

Preparation Before The Short Course

1 Market Part List

No	Component	Qty	Images
1	MCU Training Board STM32F103C8T6, <i>Micro USB</i> a.k.a: Bluepill If financially allowed, buy 2 units.	1	
2	ST-LINK V2	1	
3	micro USB to USB cable Programming cable (Optional)	1	
4	KY-009 RGB Full Color LED SMD Module for Arduino	1	
5	Resistor 0.25 W, any value from 220~470 Ohm (in pack of 10 pcs) – any value from this range	1 pack	
5	Resistor 0.25 W, any value from 2k ~ 10k Ohm (in pack of 10 pcs) – any value from this range	1 pack	
6	Momentary pushbutton, 4 pins. If financially allowed, buy a few units.	2	
7	breadboard, MB102	1	

8	Male to Male 20mm length, (normally in bundle of 40pcs or less) Dupont Jumper Wire	1 set	
9	Male to Female 20mm length, (normally in bundle of 40pcs or less) Dupont Jumper Wire	1 set	
10	USB to UART Converter CH340 or CP2102 (either one would work) If financially allowed, buy 2 units.	1	
12	OLED 0.96", 128x64 I2C (optional – we might be able to look at OLED)	1	
13	Personal laptop OS - Window 10 or 11	1	

Note:

1. All self-purchased market parts belong to the participants.
2. These market components are currently available in the market.
3. The cost may vary depending on personal purchases.
4. If financially allowed, consider purchasing spare units, such as MCU, USB to UART Converter and OLED.
5. Not a must but it would be much convenient if you could equip your toolbox with a digital multimeter, wire cutter, screw drivers, tweezers, etc. All within your personal budget.

2 Installing STM32CubeIDE

Please download and install the IDE before attending the short course. It might save some time. If you are not too sure, installation could be done in class too. Will take a couple of minutes.

1. It is free and can be downloaded from (or google it!)
https://www.st.com/content/st_com/en/stm32-mcu-developer-zone/software-development-tools.html
2. Choose Windows version (I use Windows)
3. Follow the instruction. Register your name and email. Once registered, check your email. Click the link to download the software.
4. Unzip and then install STM32CubeIDE.
5. Official guide by STM32

- Getting start video – by STM32 website
- https://www.st.com/content/st_com/en/stm32cubeide.html

Friendly suggestion:

1. You could simply click 'ok' and accept all options along the installation.
2. Alternatively, when being prompted to enter the local folder for workspace, Suggestion: create a specific folder in your computer as the workspace for all projects.

Example:

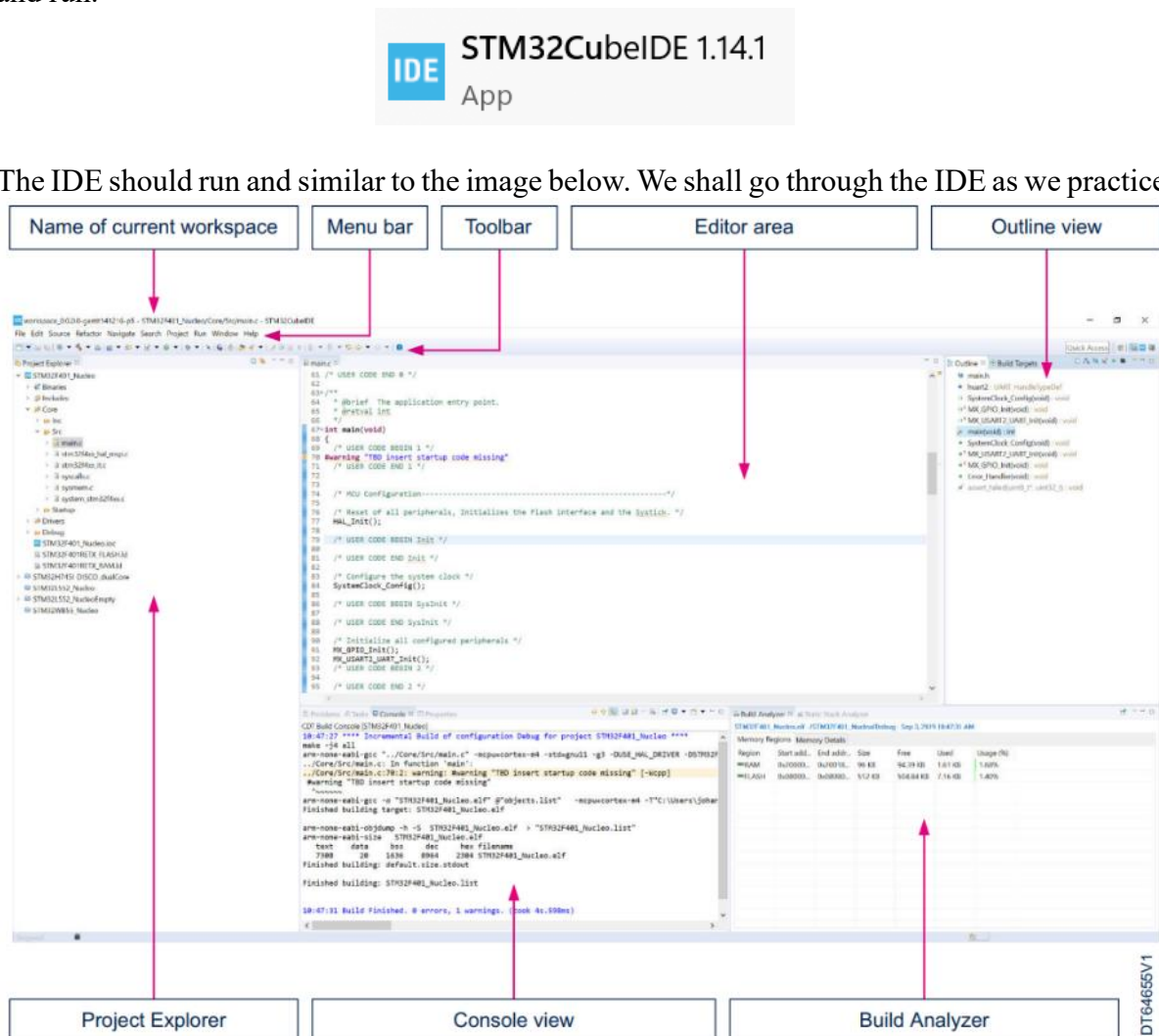
D:\STM32CubeIDE\workspace\

Because C-drive is app and os. D drive is my working drive.

2.1 First Glance

We will explore this IDE in this training.

Once installed, search for “STM32CubeIDE 1.14.1”. (Your version might be different!). Click and run.



Source: UM2609 – User Manual - STM32CubeIDE user guide

2.2 ST reference

<https://wiki.st.com/stm32mcu/wiki/Category:STM32CubeIDE>

No worry about it. We would know the operations as soon as we create a new project.