

Installation Procedure (v2.0)

Workshop: **STM32H5: Ultimate combination of performance, integration, and affordability**

Please follow all the installation steps below before the Workshop.

Workshop – Requirements

Important:

You need to have administration rights to be able to install drivers and software and to do the workshop.

System requirements:

Windows® (10 or later, 64 bits (x64)), macOS® (12 – Monterey, or 13 – Ventura), or Linux® (Ubuntu® LTS 20.04 and 22.04, and Fedora® 36). Please see the STM32CubeIDE installation guide for more details, it can be found at:

https://www.st.com/resource/en/user_manual/um2563-stm32cubeide-installation-guide-stmicroelectronics.pdf

Minimum Hardware Requirements:

- One USB port (used for the debugger)
- One USB Type-A to Type-C Cable
- 4 GB of system memory (RAM)
- 7 GB of available disk space

STM32H5 Workshop - Installation Procedure – Introduction:

The following Software/Tools/Libraries are needed for the Workshop:

1. **STM32CubeIDE**: version 1.13.1 minimum required, if you have a previous version you will need to install a new version as explained in this installation procedure.
 - o [Page 4](#)
2. **STM32CubeH5**: version 1.1.1 minimum required, if you have a previous version you will need to install a new one as explained in this installation procedure.
 - o [Page 12](#)
3. **STM32CubeProgrammer**: version 2.14.0 minimum required, if you have a previous version you will need to install a new version as explained in this installation procedure.
 - o [Page 17](#)
4. **Serial Terminal application**: like PuTTY (<https://www.putty.org>)

Notes:

- 1- **Some of the versions of the software and libraries on the ST website might have newer versions than the version seen in the document, please use the latest version from the links provided in the installation procedure below.**
- 2- **The instructions and screenshots are specific to tools versions specified above, the layout and appearance might change with version but the procedural steps for the workshop would remain the same.**
- 3- **The instructions and screenshots are specific to a Windows® based system.**
- 4- **The look of the website may change but the links provided in this document remain the same.**

The installation procedure can take several hours for downloading and installing based on the speed of the internet connection and performance of the computer system.

Questions and support ahead of the workshop

1. If you have issues during the software download and install, contact ST by entering an Online Support Request for workshops at <https://ols.st.com/s/newcase?o=ws> to help resolve the issue.
2. In the Workshop/Event Description field, select:
“STM32H5: Ultimate combination of performance, integration, and affordability”
3. To ensure your request is quickly routed to the correct support team, please indicate the Workshop Request Type, either Technical or Non-Technical, that best describes your question.

[STM32H5 Workshop - Installation Procedure](#)

For the Workshop installation please follow the steps below:

1- STM32CubeIDE: STM32Cube initialization code generator

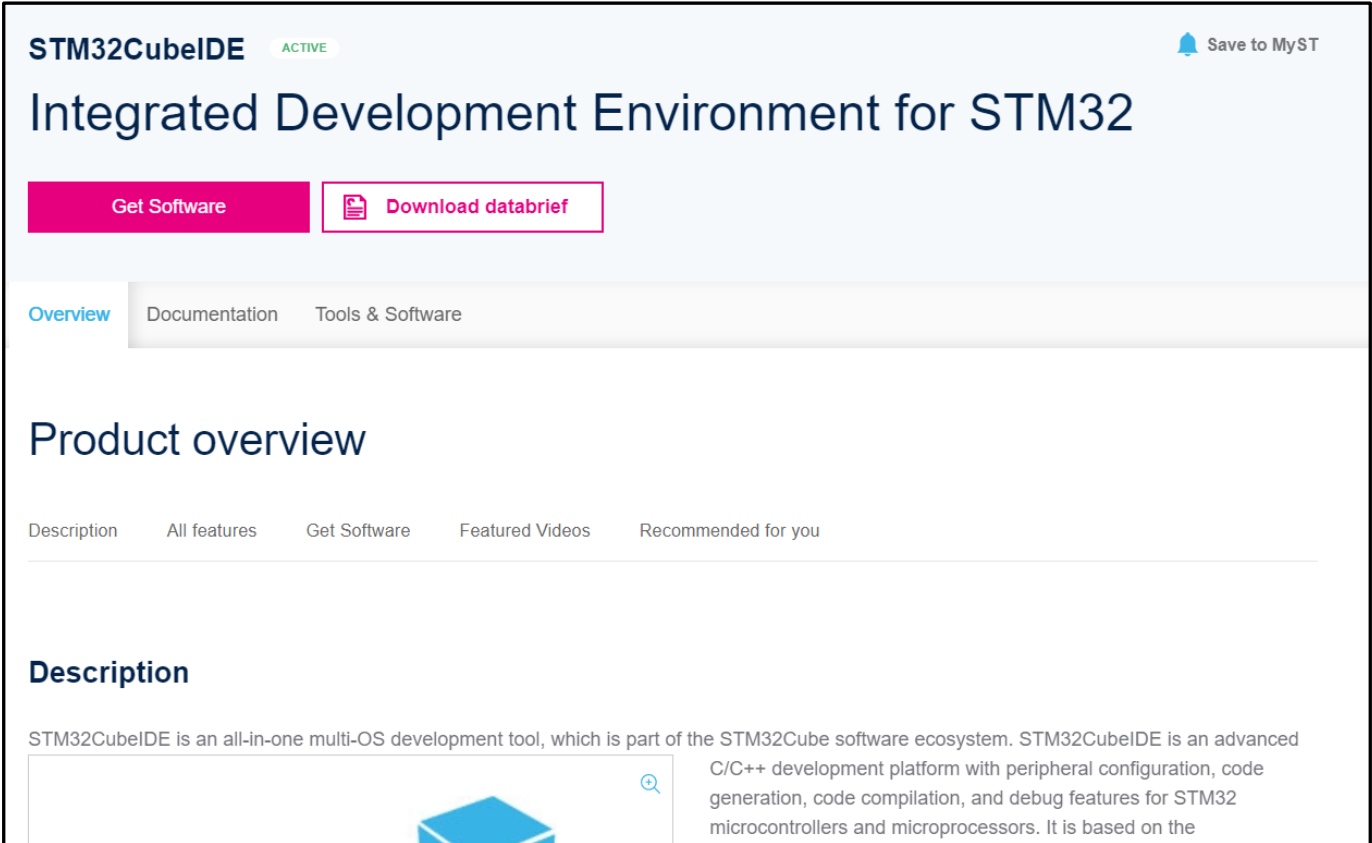
Click Link: [STM32CubeIDE](#)

Minimum version to be installed: 1.13.1

Or use Direct Install Link:

<https://www.st.com/en/development-tools/stm32cubeide.html>

In the web browser, a similar page as follows will come up:

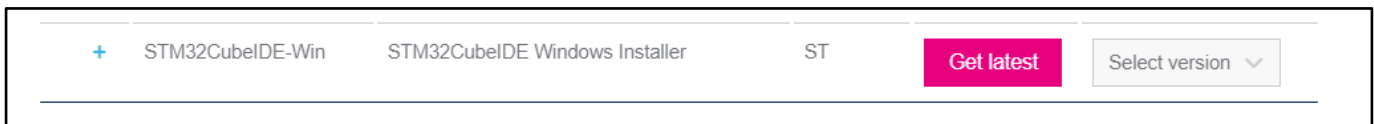


The screenshot shows the STM32CubeIDE product page. At the top left, it says "STM32CubeIDE" with a green "ACTIVE" tag. To the right is a "Save to MyST" button. The main heading is "Integrated Development Environment for STM32". Below this are two buttons: "Get Software" (pink) and "Download databrief" (white with pink border). A navigation bar contains "Overview" (selected), "Documentation", and "Tools & Software". The section is titled "Product overview" with sub-tabs for "Description", "All features", "Get Software", "Featured Videos", and "Recommended for you". The "Description" tab is active, showing the text: "STM32CubeIDE is an all-in-one multi-OS development tool, which is part of the STM32Cube software ecosystem. STM32CubeIDE is an advanced C/C++ development platform with peripheral configuration, code generation, code compilation, and debug features for STM32 microcontrollers and microprocessors. It is based on the".

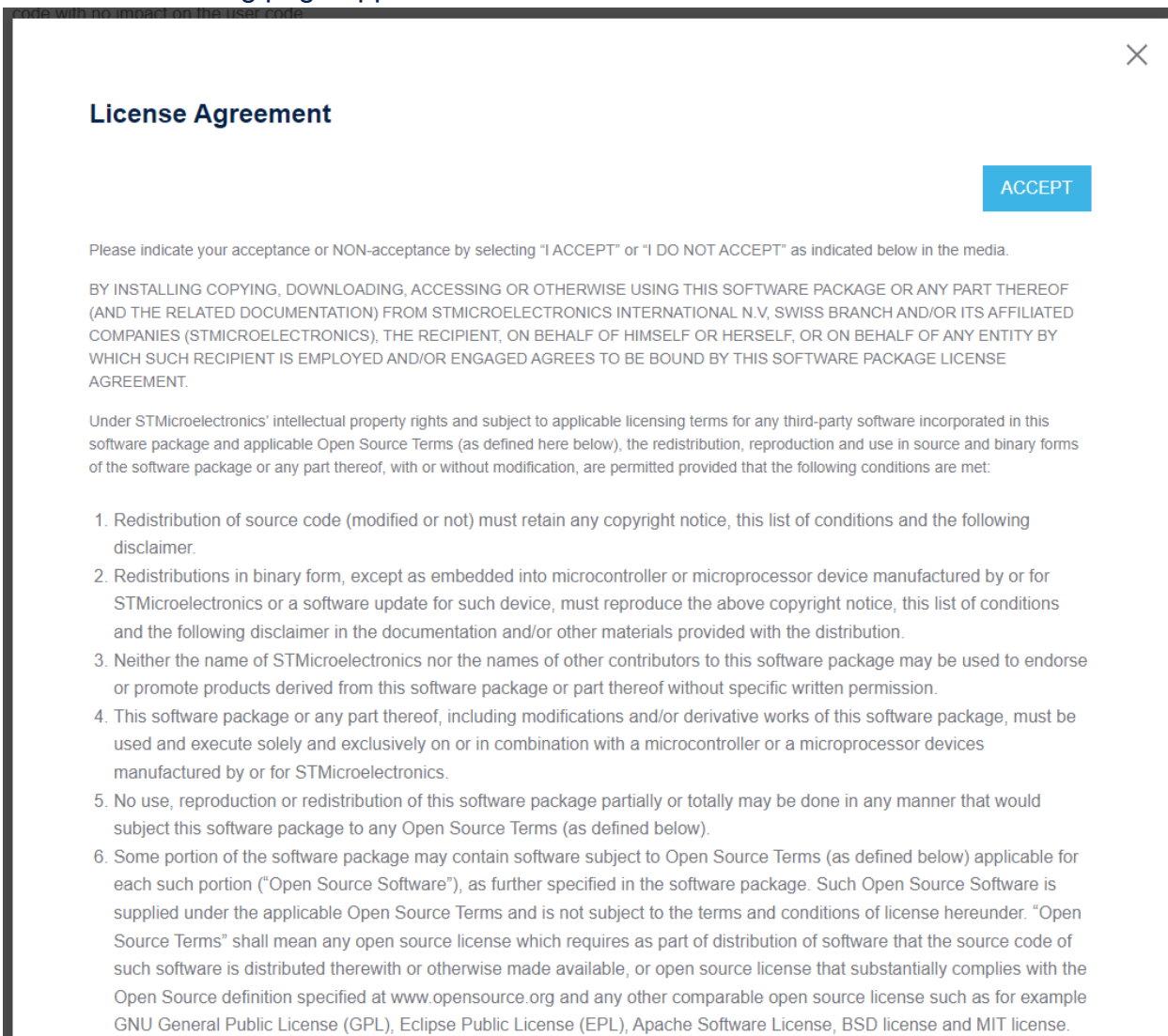


Click on “Get Software” button:

Click on “Get Latest” for the target operating system (shown below is for Windows):



When the following page appears:



License Agreement

ACCEPT

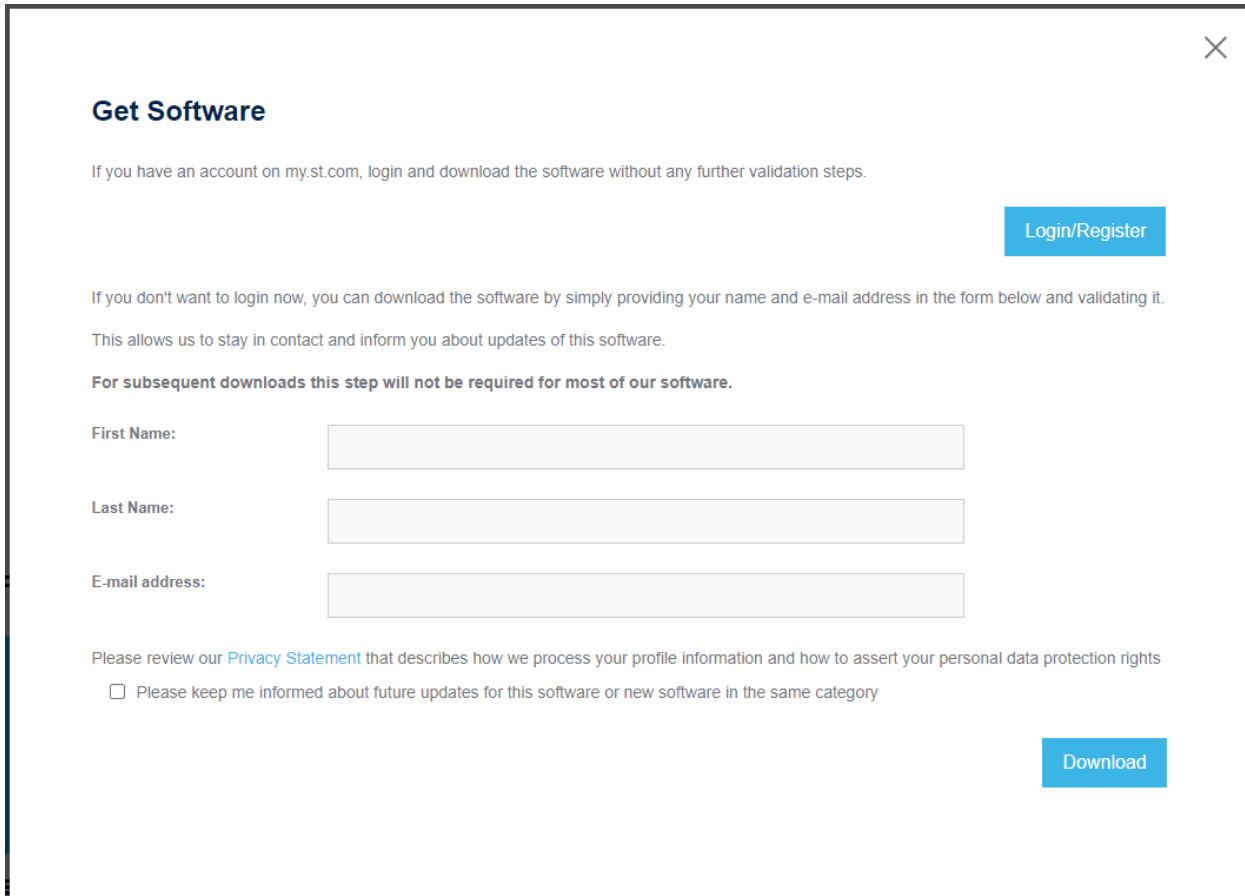
Please indicate your acceptance or NON-acceptance by selecting "I ACCEPT" or "I DO NOT ACCEPT" as indicated below in the media.

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Click on: 



Get Software

If you have an account on my.st.com, login and download the software without any further validation steps.

[Login/Register](#)

If you don't want to login now, you can download the software by simply providing your name and e-mail address in the form below and validating it. This allows us to stay in contact and inform you about updates of this software.

For subsequent downloads this step will not be required for most of our software.

First Name:

Last Name:


E-mail address:

Please review our [Privacy Statement](#) that describes how we process your profile information and how to assert your personal data protection rights

Please keep me informed about future updates for this software or new software in the same category

[Download](#)

There are 3 ways of getting the software:

If you have an ST account, click on: 

If you don't have one, create one by clicking on: 

If you don't have an account and don't want to create one, fill in the information below:

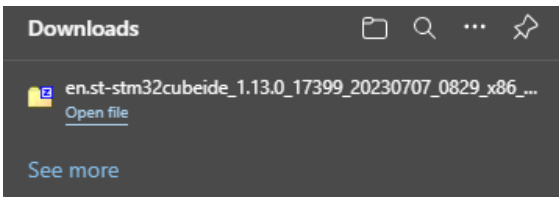
First Name:	<input type="text"/>
Last Name:	<input type="text"/>
E-mail address:	<input type="text"/>

Please review our [Privacy Statement](#) that describes how we process your profile information and how to assert your personal data protection rights

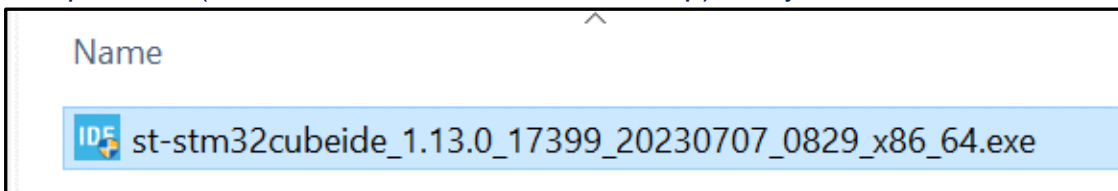
The software will automatically download in your browser.

Get Software

If not click “Get Software”

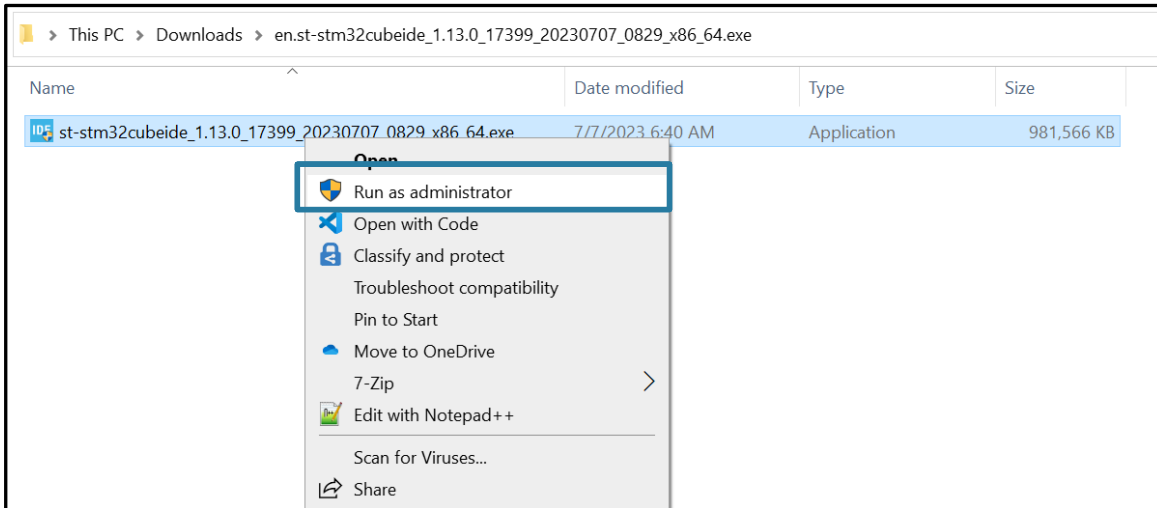


Unzip the file (en.st-stm32cubeide_x.x.x_xxxx.zip) and you will see this:

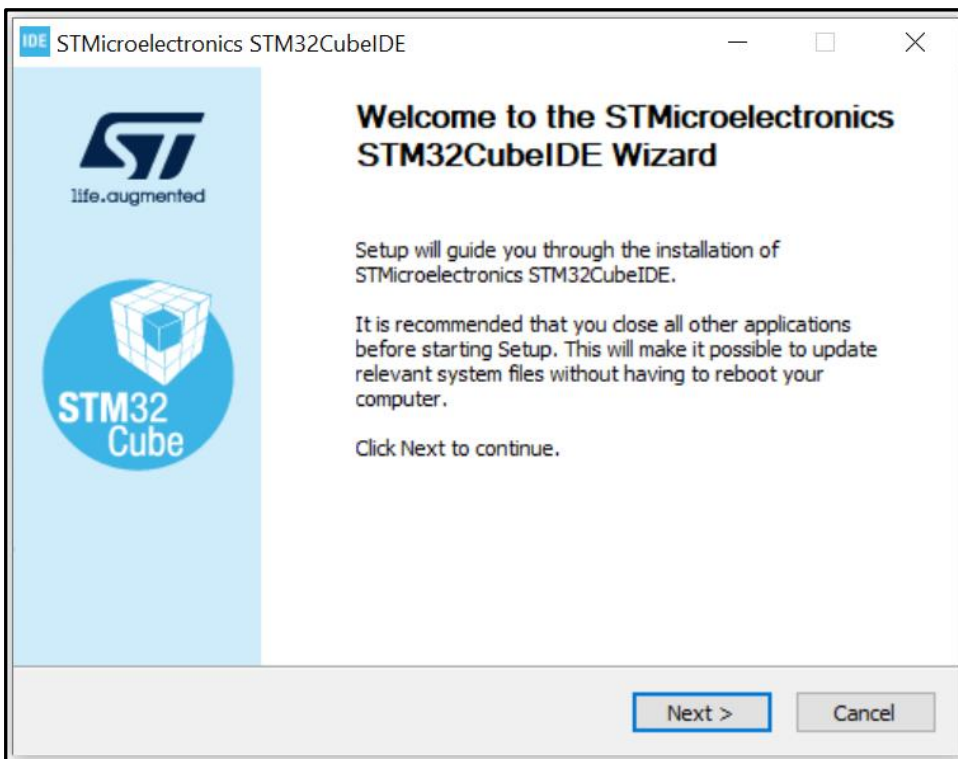


Note: you may see a newer version in your case than the screenshot above.

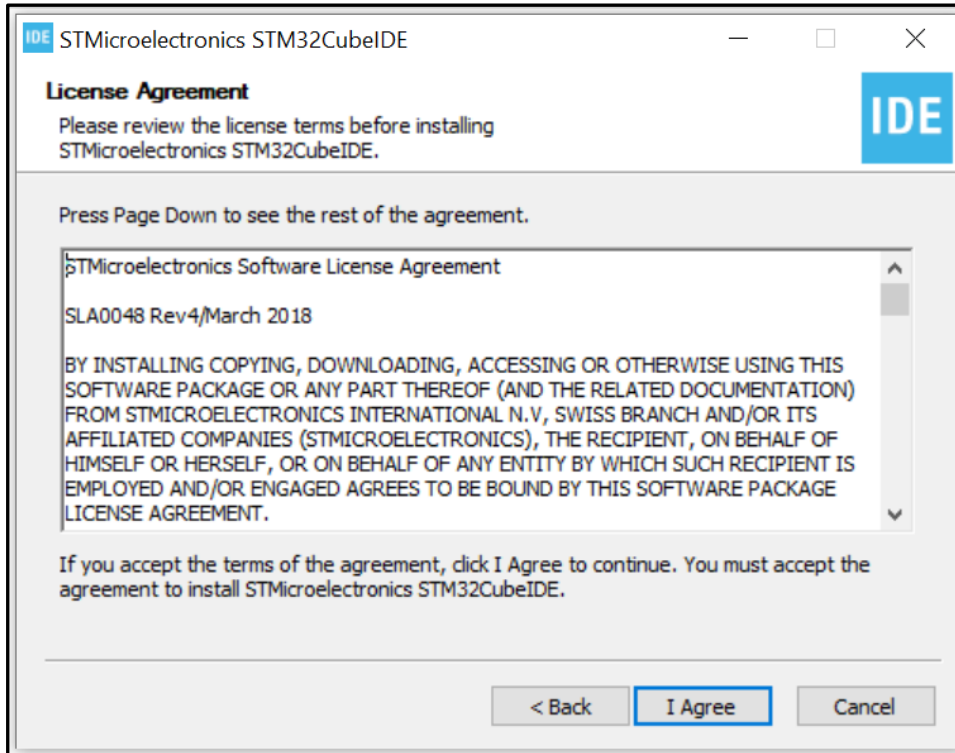
Right Click on 'st-stm32cubeide_x.x.x_yyy_x86_64.exe' (x.x.x is the version number) and click on 'Run as administrator':



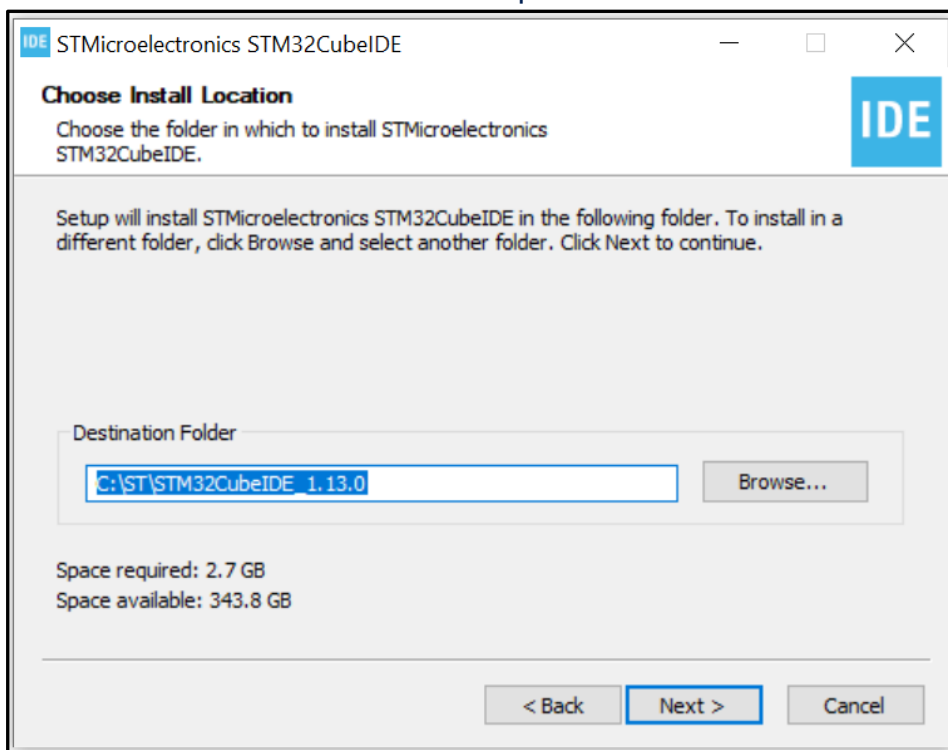
Press "Next":



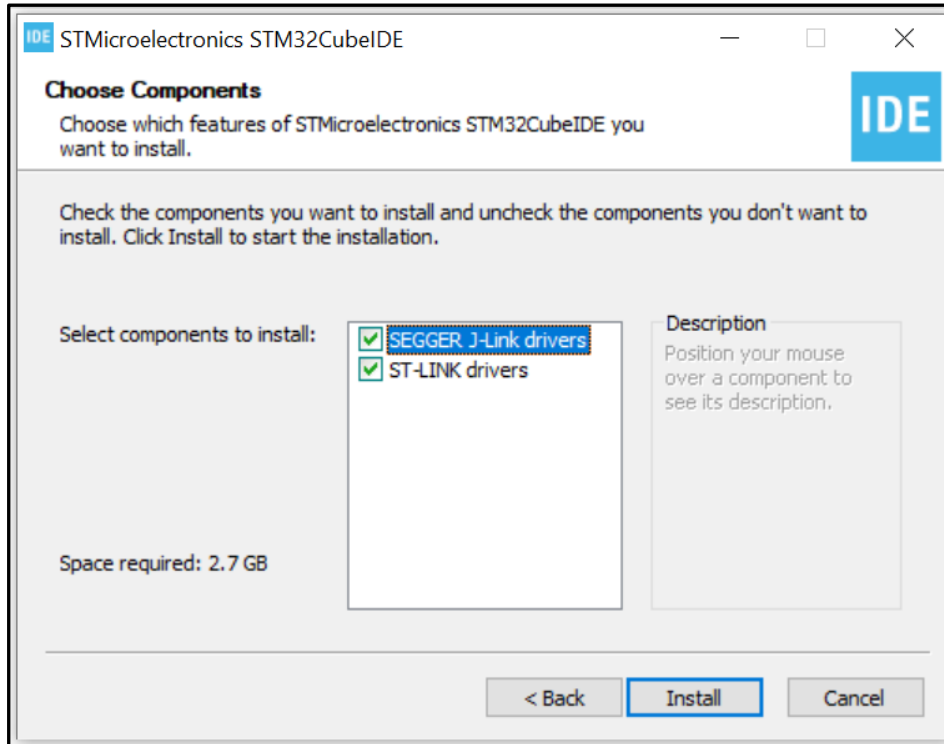
Press “I agree”:



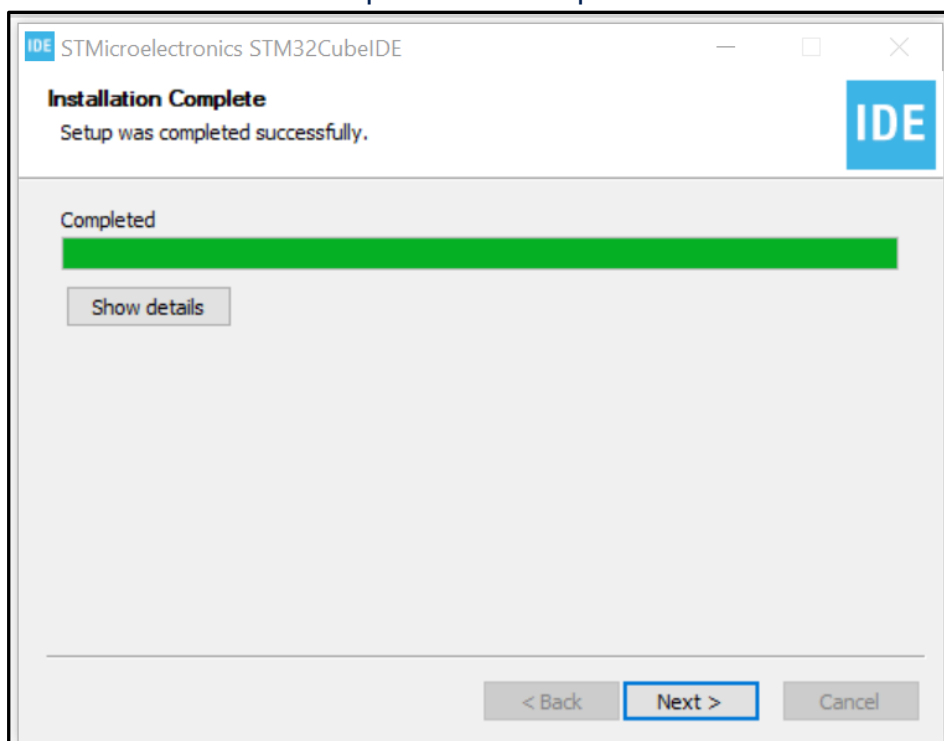
Use the default Destination Folder - press “Next”:



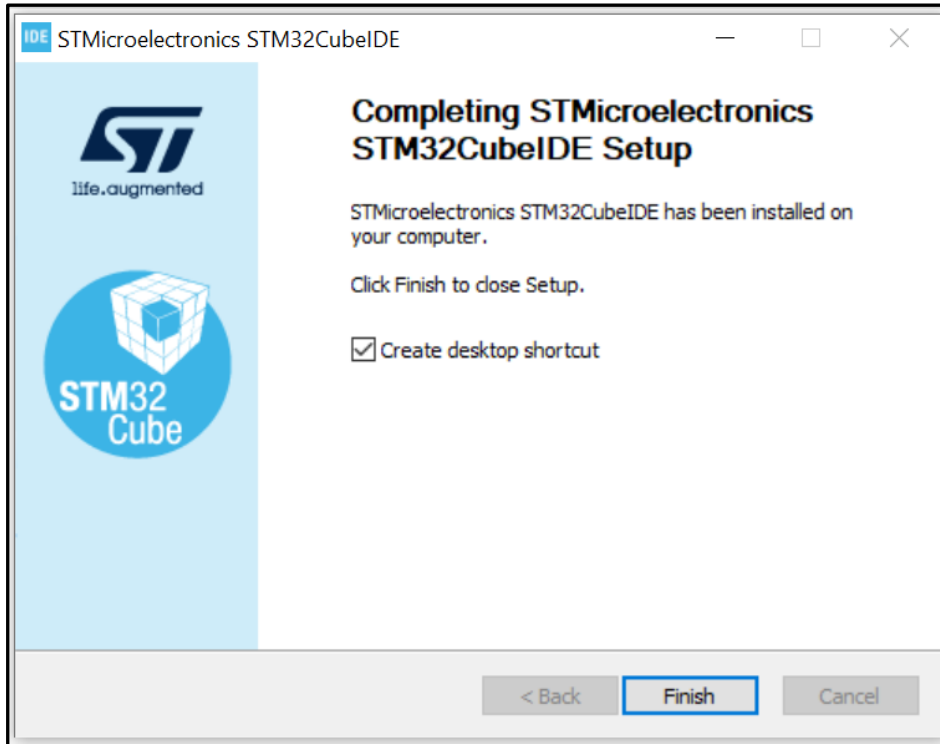
Press: "Install"



Wait for the install to complete and then press "Next":

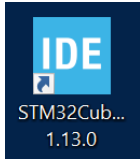


Press "Finish"

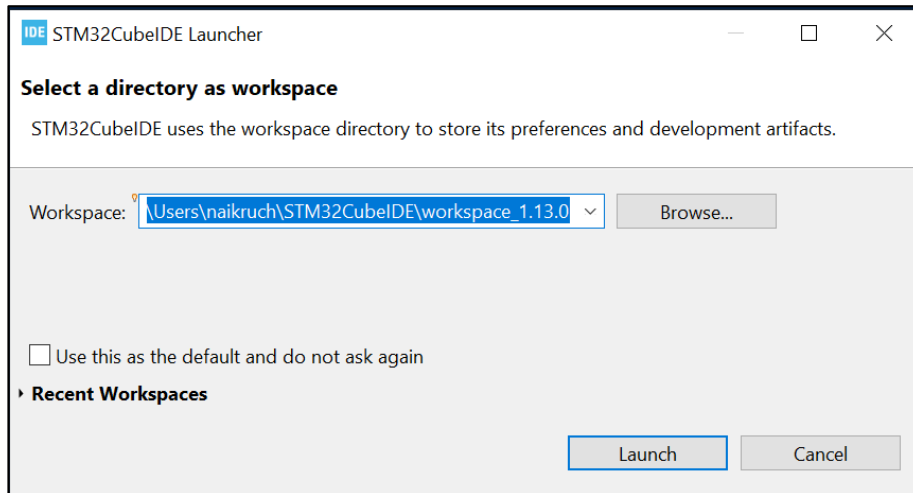


2- STM32CubeH5: Install STM32Cube MCU Package for STM32H5 series

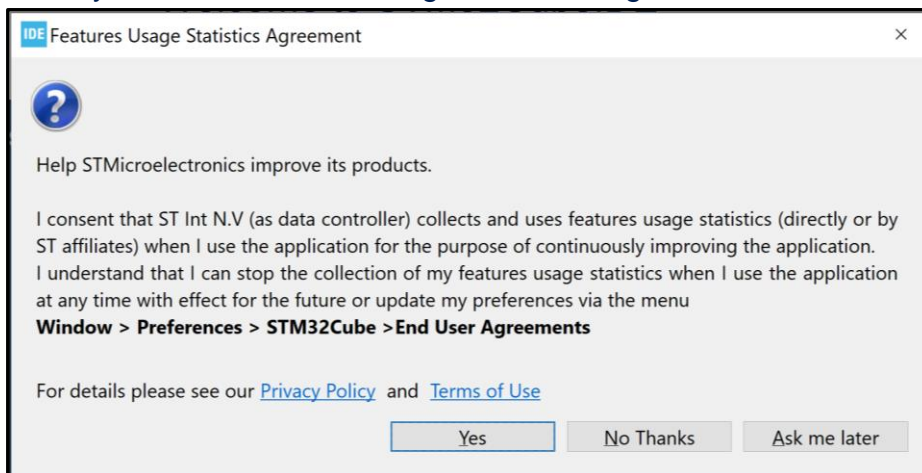
Double click on STM32CubeIDE icon or look for it in your Start Menu:



Click Launch:




Make your choice for the Usage Statistics Agreement:

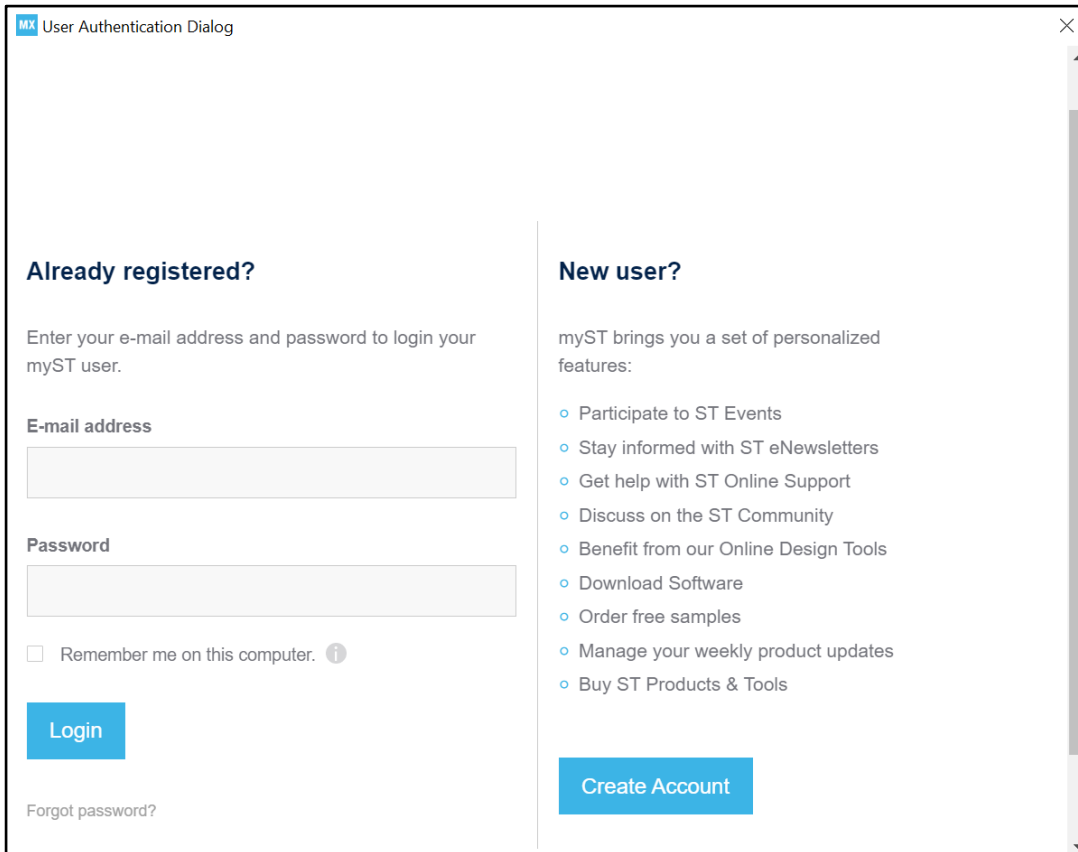


Note: Before installing the package, make sure you are logged-in to the STM32CubeIDE with your “myST” account. Follow the instructions below to log-in correctly.

Click on “myST”:

File Edit Source Refactor Navigate Search Project Run Window Help 

Follow the instructions in the prompt (shown below) to login to your myST user.



The screenshot shows a 'User Authentication Dialog' window with two main sections: 'Already registered?' and 'New user?'. The 'Already registered?' section includes a text prompt 'Enter your e-mail address and password to login your myST user.', input fields for 'E-mail address' and 'Password', a 'Remember me on this computer.' checkbox, a 'Login' button, and a 'Forgot password?' link. The 'New user?' section includes a text prompt 'myST brings you a set of personalized features:', a list of features with radio buttons, and a 'Create Account' button.

Already registered?

Enter your e-mail address and password to login your myST user.

E-mail address

Password

Remember me on this computer. ⓘ

Login

[Forgot password?](#)

New user?

myST brings you a set of personalized features:

- Participate to ST Events
- Stay informed with ST eNewsletters
- Get help with ST Online Support
- Discuss on the ST Community
- Benefit from our Online Design Tools
- Download Software
- Order free samples
- Manage your weekly product updates
- Buy ST Products & Tools

Create Account

If you do not already have the myST account, click on “Create Account”:

Create Account

Enter the details as instructed by the prompt.

Accept the “Terms of Use” at the end of the prompt and click on “Register”.

Please review our [Privacy Statement](#) that describes how we process your profile information and how to assert your personal data protection rights

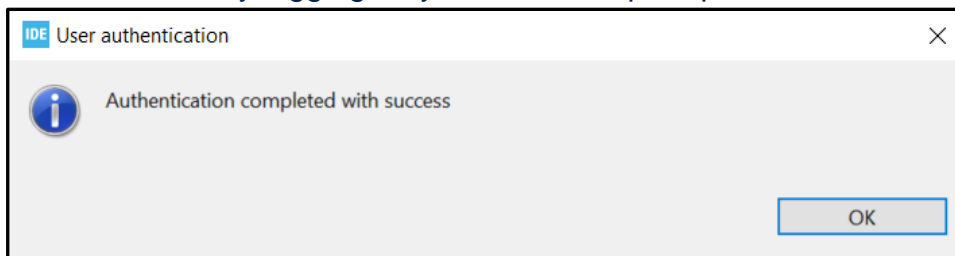
I accept the [Terms of Use](#) *

Feedback

Register

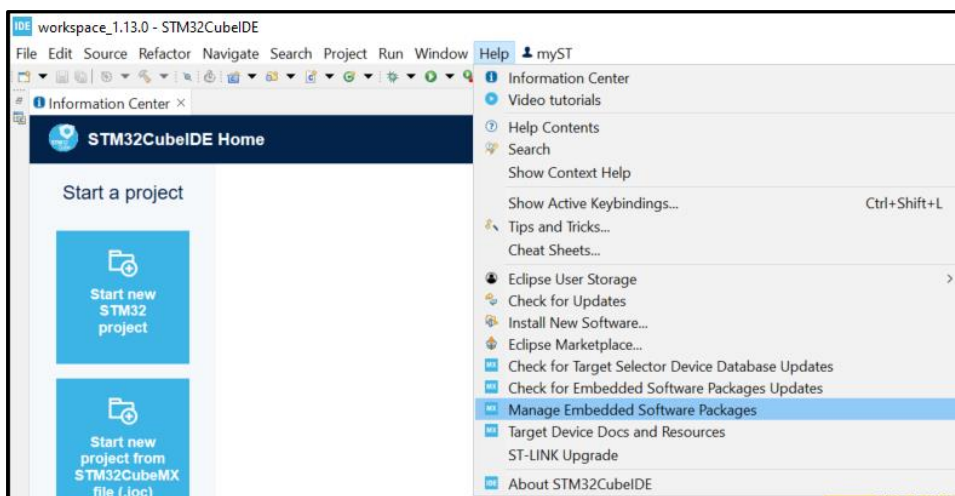
Follow the instructions above to login with the newly created credentials.

After successfully logging-in, you can see a prompt as shown below:



Press 'OK' and we are ready to proceed further with the firmware package installation.

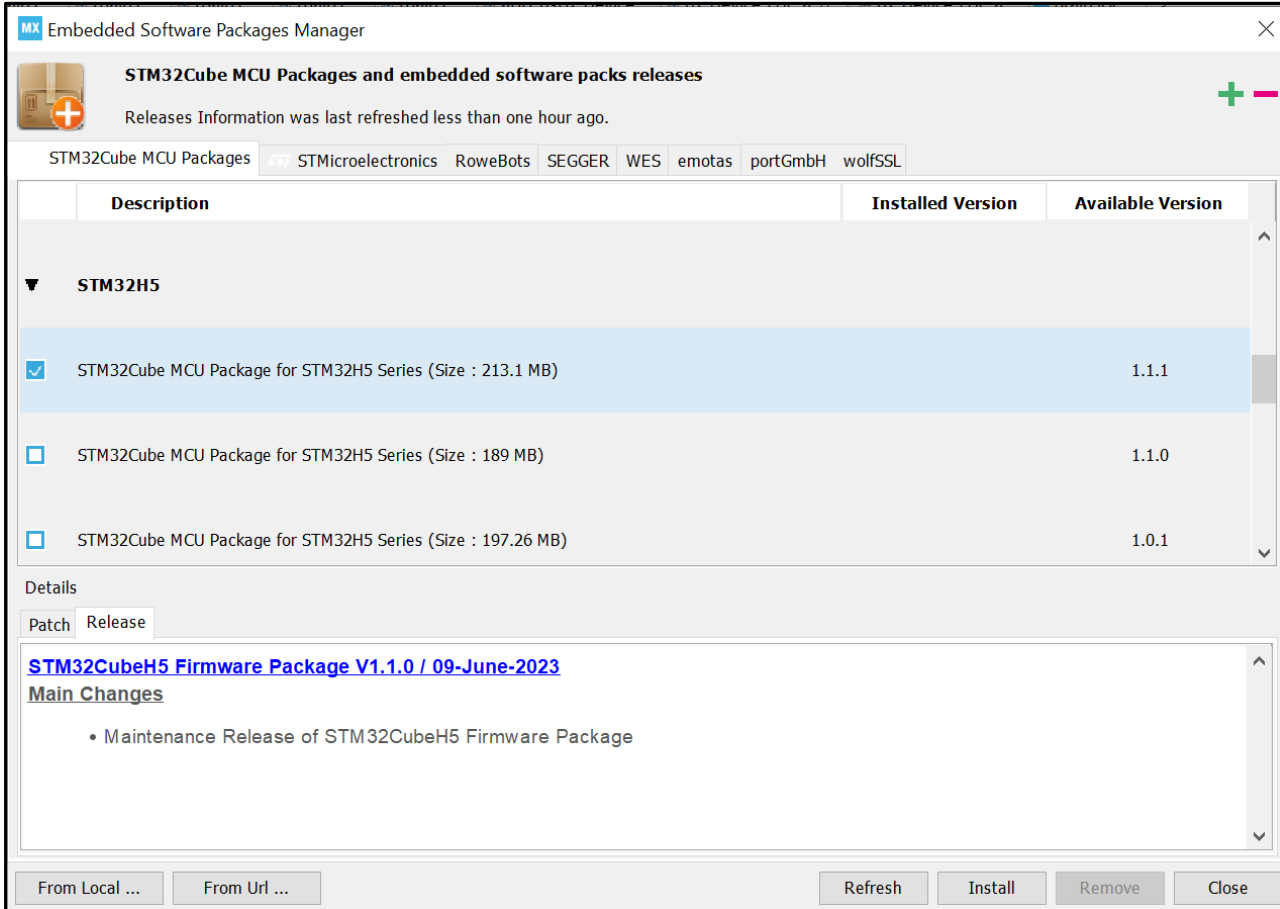
Once you are logged in, follow the instructions below to install the STM32CubeH5 Package. From STM32CubeIDE: Help -> Manage embedded software packages:



Click on "Refresh":



Under STM32H5, expand then check the **latest** STM32 MCU Package for STM32H5 and click “Install”:



The screenshot shows the 'Embedded Software Packages Manager' window. The title bar reads 'MX Embedded Software Packages Manager'. The main content area is titled 'STM32Cube MCU Packages and embedded software packs releases' and includes a sub-header 'Releases Information was last refreshed less than one hour ago.' Below this, there are several tabs: 'STM32Cube MCU Packages', 'STMicroelectronics', 'RoweBots', 'SEGGER', 'WES', 'emotas', 'portGmbH', and 'wolfSSL'. The 'STM32Cube MCU Packages' tab is active, displaying a table with the following columns: 'Description', 'Installed Version', and 'Available Version'. Under the 'STM32H5' category, three packages are listed:

Description	Installed Version	Available Version
<input checked="" type="checkbox"/> STM32Cube MCU Package for STM32H5 Series (Size : 213.1 MB)		1.1.1
<input type="checkbox"/> STM32Cube MCU Package for STM32H5 Series (Size : 189 MB)		1.1.0
<input type="checkbox"/> STM32Cube MCU Package for STM32H5 Series (Size : 197.26 MB)		1.0.1

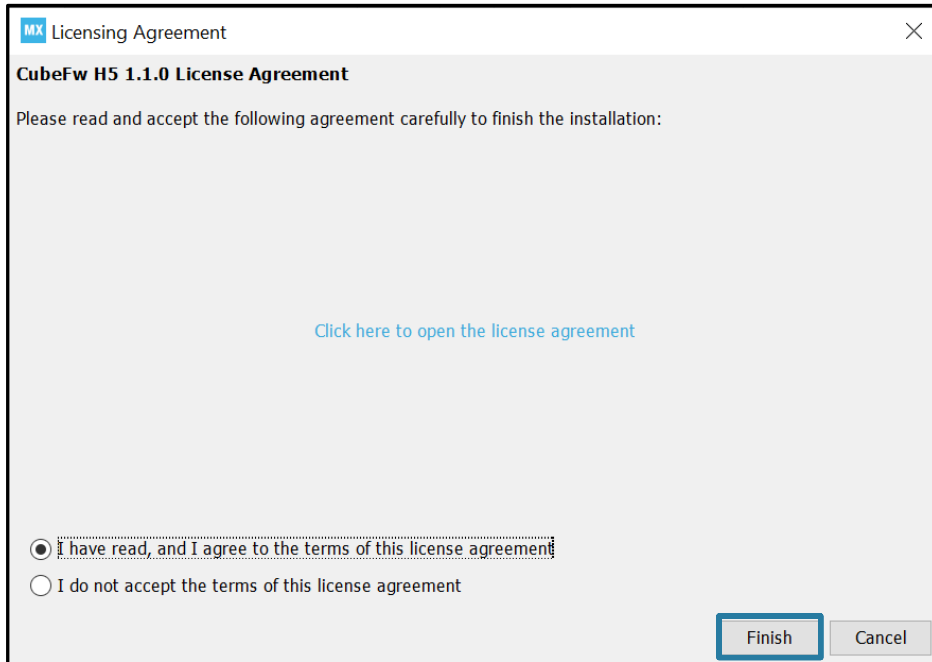
Below the table, there is a 'Details' section with tabs for 'Patch' and 'Release'. The 'Release' tab is selected, showing the following information:

[STM32CubeH5 Firmware Package V1.1.0 / 09-June-2023](#)
Main Changes

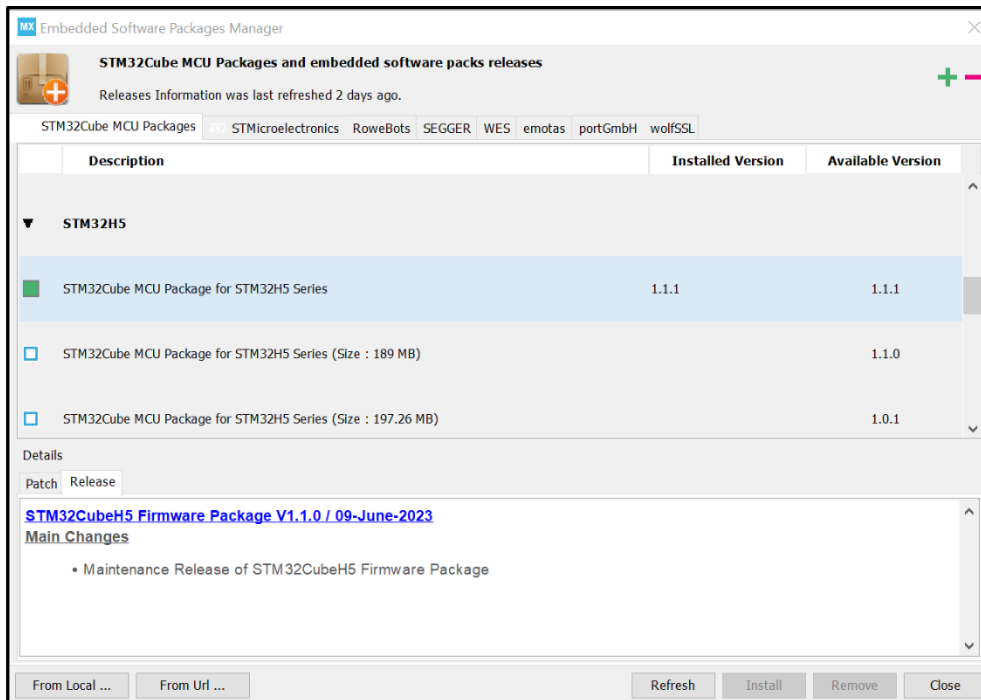
- Maintenance Release of STM32CubeH5 Firmware Package

At the bottom of the window, there are buttons for 'From Local ...', 'From Url ...', 'Refresh', 'Install', 'Remove', and 'Close'.

Agree on the terms of this license agreement, by selecting “I have read, and I agree to the terms of this license agreement” and then press Finish.



Once installed it should look like this and you can press “Close”:



Note: In your system it might show a newer version depending on the latest version available

3 - STM32CubeProg: STM32CubeProgrammer software for programming STM32 products

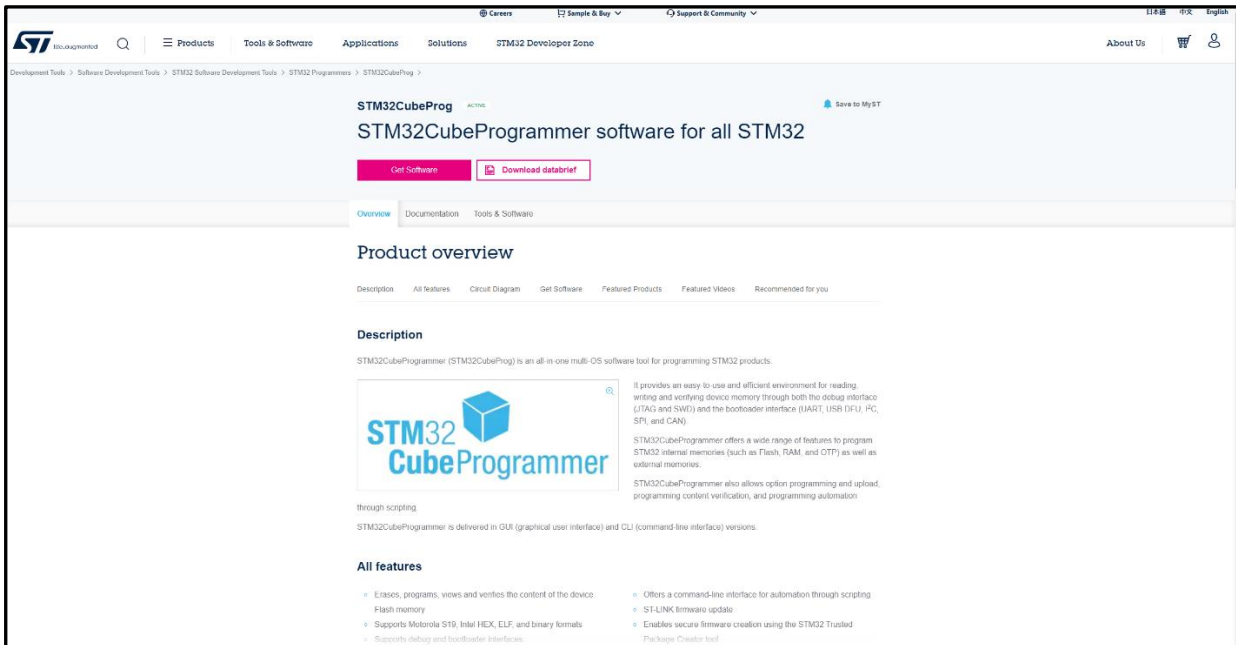
Click Link: [STM32CubeProg](#)

Minimum version required: 2.14.0

Direct Install Link:

https://www.st.com/content/st_com/en/products/development-tools/software-development-tools/stm32-software-development-tools/stm32-programmers/stm32cubeprog.html

Note to Mac users, please check Appendix A on [page 27](#).



The screenshot shows the product page for STM32CubeProg on the ST website. The page title is "STM32CubeProg" and the subtitle is "STM32CubeProgrammer software for all STM32". There are two main buttons: "Get Software" and "Download databrief". The page is divided into sections: "Product overview", "Description", and "All features". The "Description" section includes a video player for "STM32 Cube Programmer" and text describing the software's capabilities. The "All features" section lists several key features:

- Erases, programs, views and verifies the content of the device Flash memory
- Supports Motorola S10, Intel HEX, ELF, and binary formats
- Supports various and bootable interfaces
- Provides an easy-to-use and efficient environment for reading, writing and verifying device memory through both the debug interface (JTAG and SWD) and the bootloader interface (UART, USB DFU, PC, SPI, and CAN)
- Offers a wide range of features to program STM32 internal memories (such as Flash, RAM, and OTP) as well as external memories
- Offers a command-line interface for automation through scripting
- Enables secure firmware creation using the STM32 Trusted Firmware (TrustZone)

Get Software

Click on:

Get Software					
Part Number ▲	General Description	Latest version	Download	All versions	
+ STM32CubePrg-Lin	STM32CubeProgrammer software for Linux	2.14.0	Get latest	Select version ▼	
+ STM32CubePrg-Mac	STM32CubeProgrammer software for Mac	2.14.0	Get latest	Select version ▼	
+ STM32CubePrg-W32	STM32CubeProgrammer software for Win32	2.14.0	Get latest	Select version ▼	
+ STM32CubePrg-W64	STM32CubeProgrammer software for Win64	2.14.0	Get latest	Select version ▼	

Please get the latest software version available that will be accessible by clicking on:

[Get latest](#)

×

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If you don't want to login now, you can download the software by simply providing your name and e-mail address in the form below and validating it.

This allows us to stay in contact and inform you about updates of this software.

For subsequent downloads this step will not be required for most of our software.

First Name:

Last Name:

E-mail address:

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Please keep me informed about future updates for this software or new software in the same category

[Download](#)

There are 3 ways of getting the software:

If you have an ST account, click on: [Login/Register](#)

If you don't have one, create one by clicking on: [Login/Register](#)

If you don't have an account and don't want to create one, fill in the information below:

First Name:

Last Name:

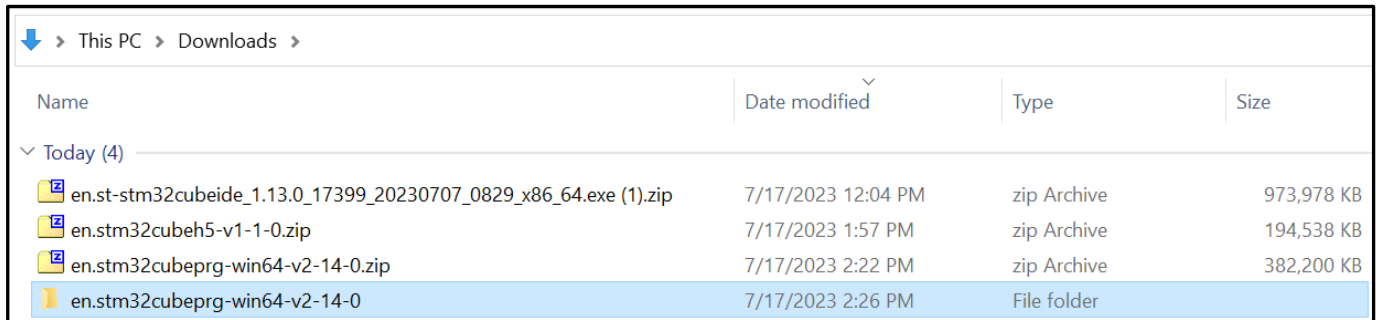
E-mail address:

Please review our [Privacy Statement](#) that describes how we process your profile information and how to assert your personal data protection rights

Download

Then click:

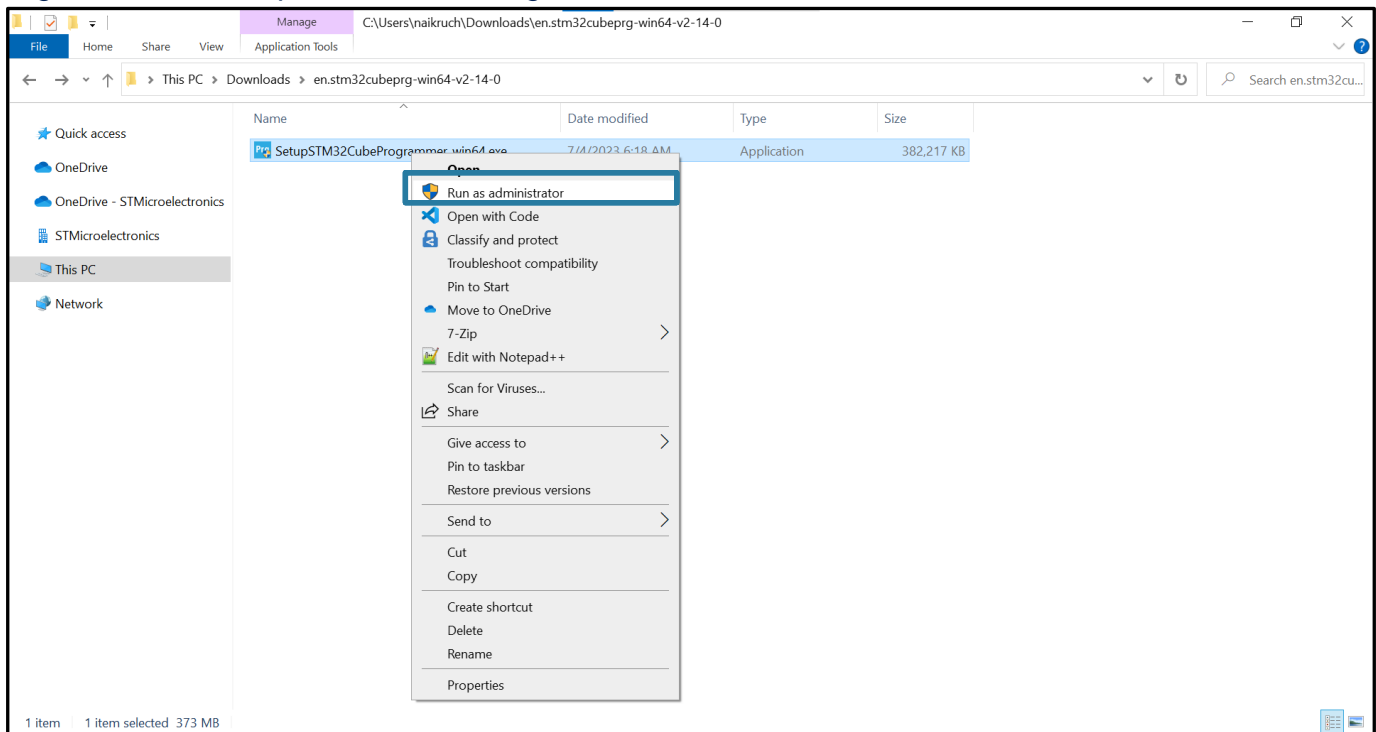
Unzip the file (en.stm32cubeprg-win64-v2-14-0.zip)



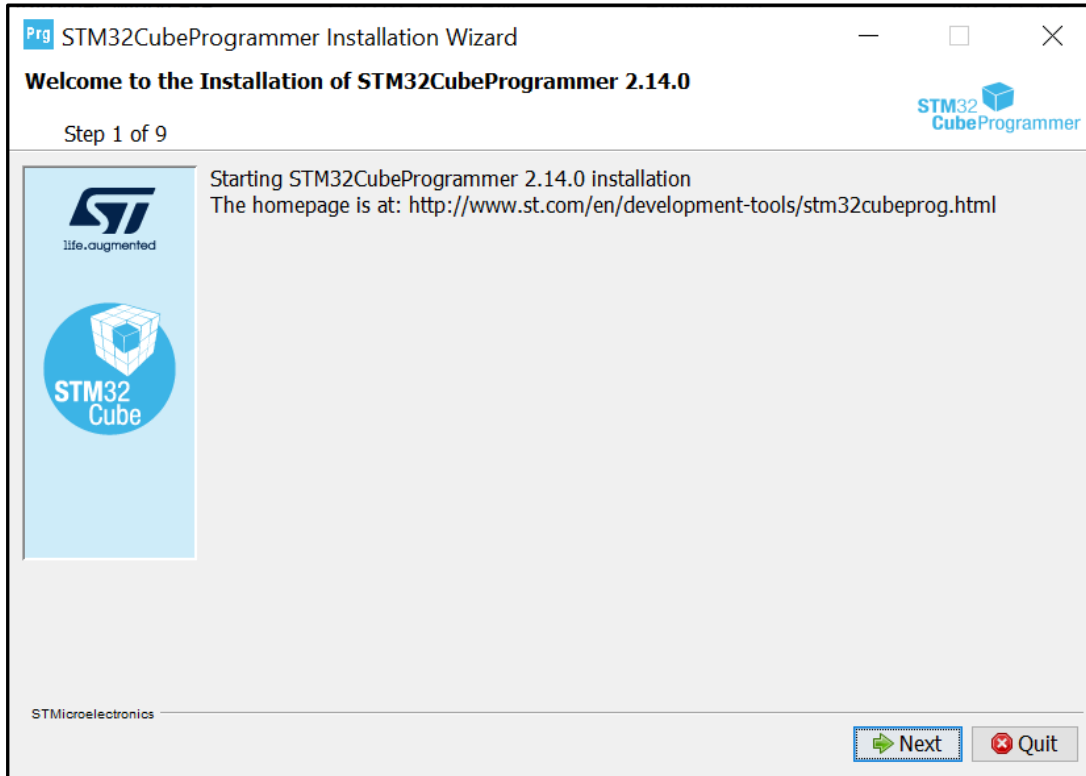
Name	Date modified	Type	Size
Today (4)			
en.st-stm32cubeide_1.13.0_17399_20230707_0829_x86_64.exe (1).zip	7/17/2023 12:04 PM	zip Archive	973,978 KB
en.stm32cube5-v1-1-0.zip	7/17/2023 1:57 PM	zip Archive	194,538 KB
en.stm32cubeprg-win64-v2-14-0.zip	7/17/2023 2:22 PM	zip Archive	382,200 KB
en.stm32cubeprg-win64-v2-14-0	7/17/2023 2:26 PM	File folder	

Note: you may see a newer version in your case than the screenshot above.

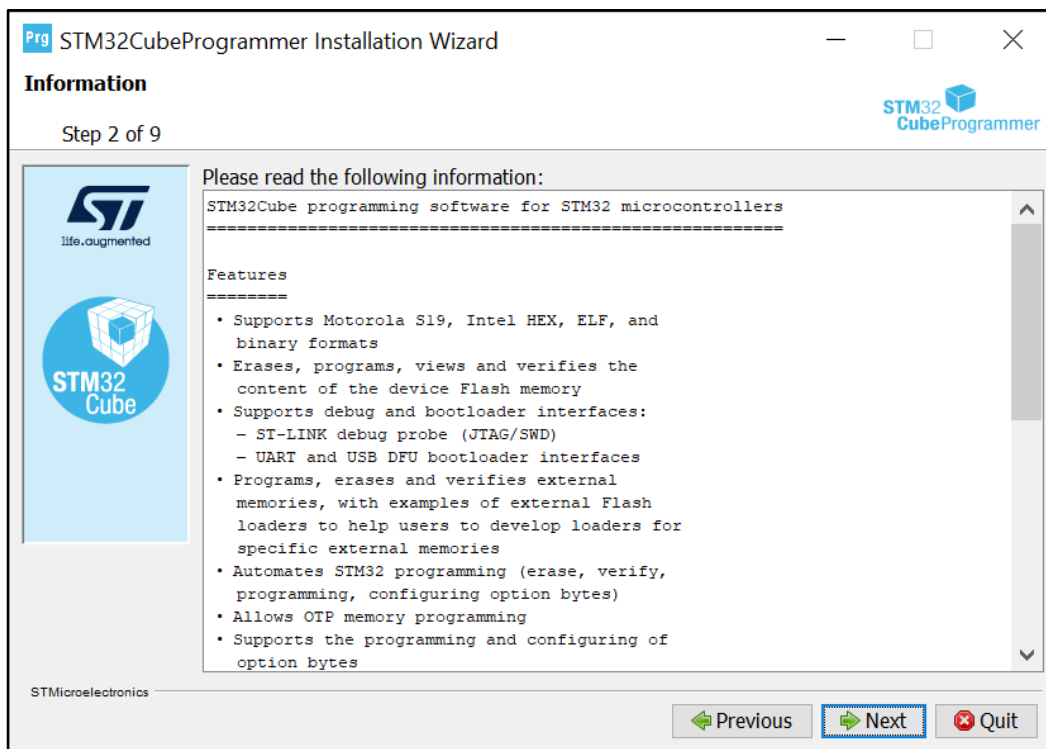
Right Click on SetupSTM32CubeProgrammer-win64.exe and Run as administrator.



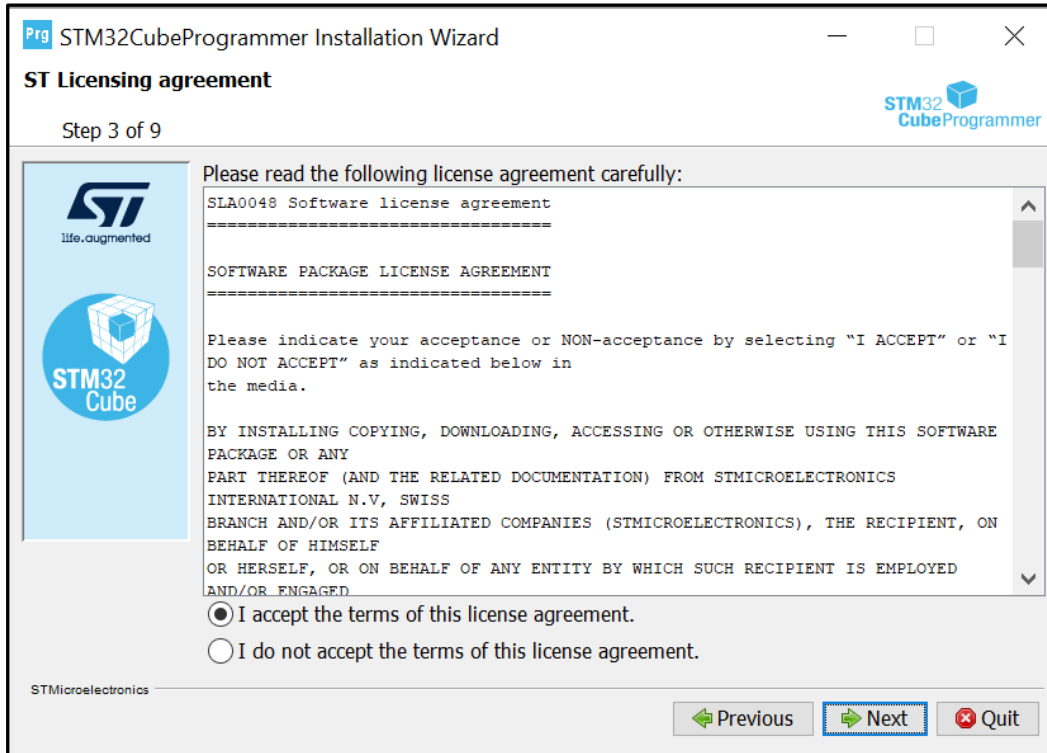
Press Next:



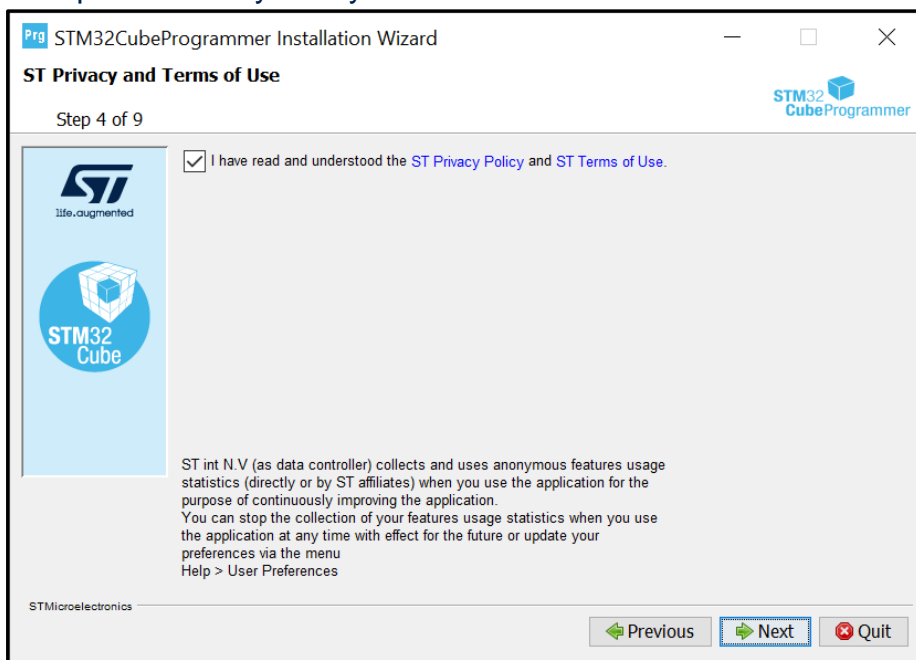
Press Next:



Accept the Terms and then click on Next:

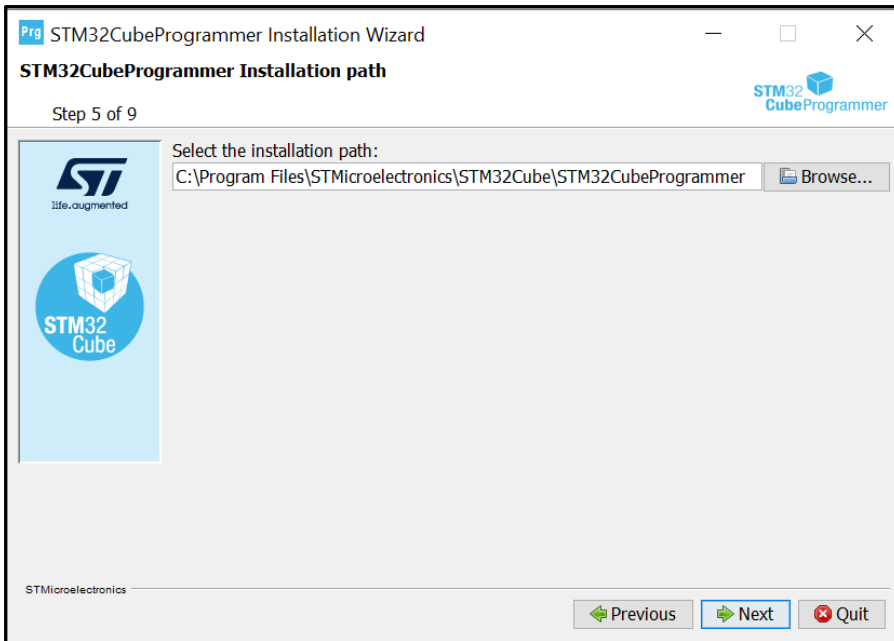


Accept the Privacy Policy and Terms of Use.

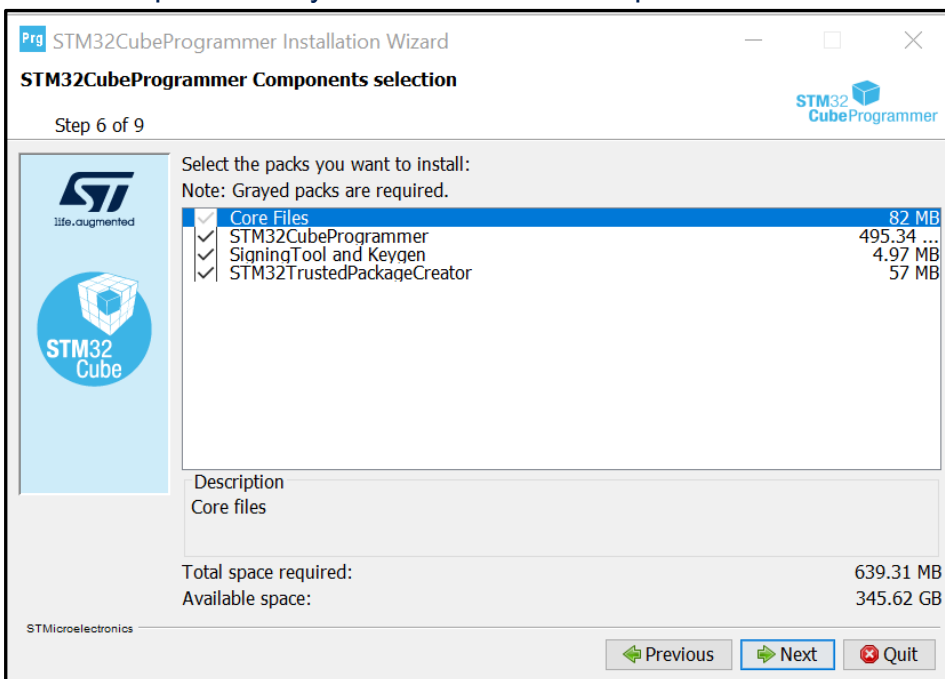


Important note: If you have a previous version, it will be overwritten if you keep the default path. So, if you want to keep your previous version you will need to install the new version in a different directory. For the workshop, be sure to use the version that we are installing here or a later one.

Once you have decided on the path then press “Next”:

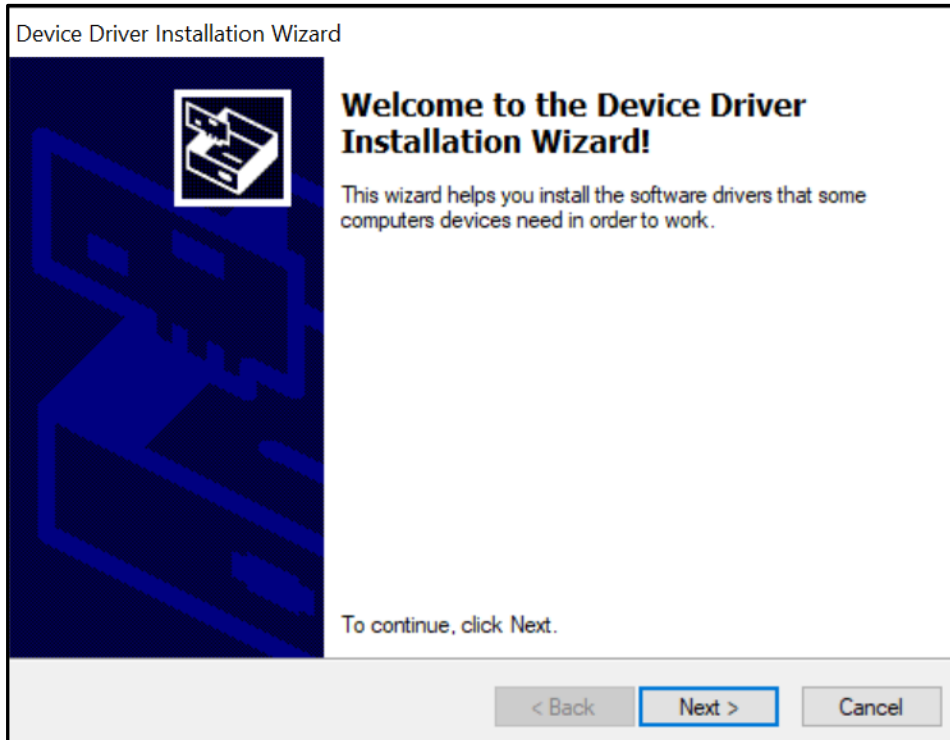


Select the packs that you want to install and press “Next”:

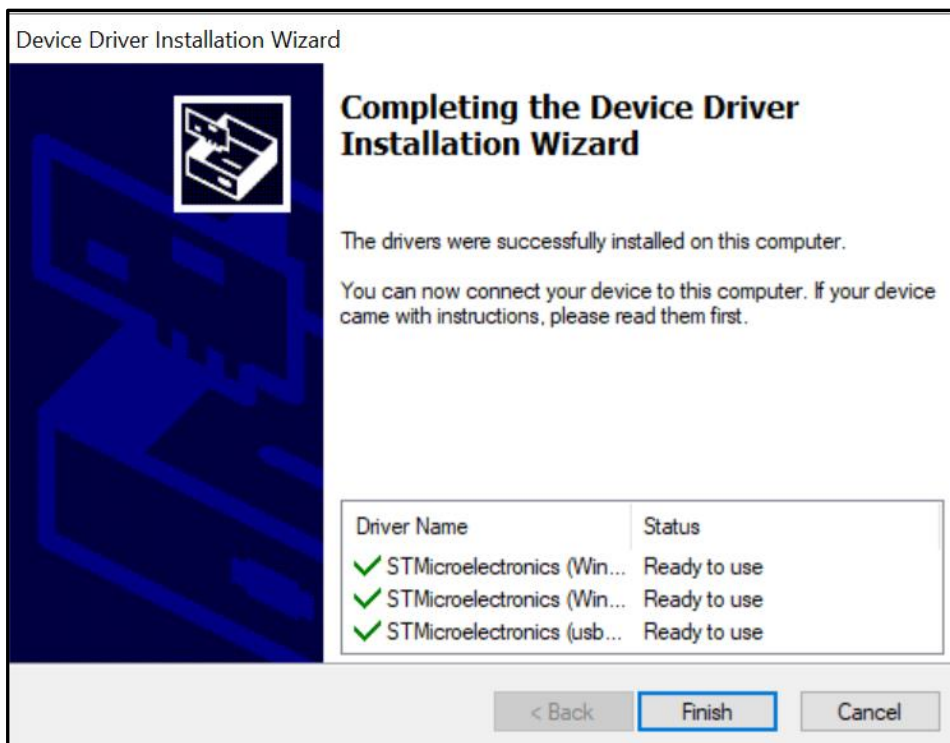


Follow those steps to install the ST-LINK Driver:

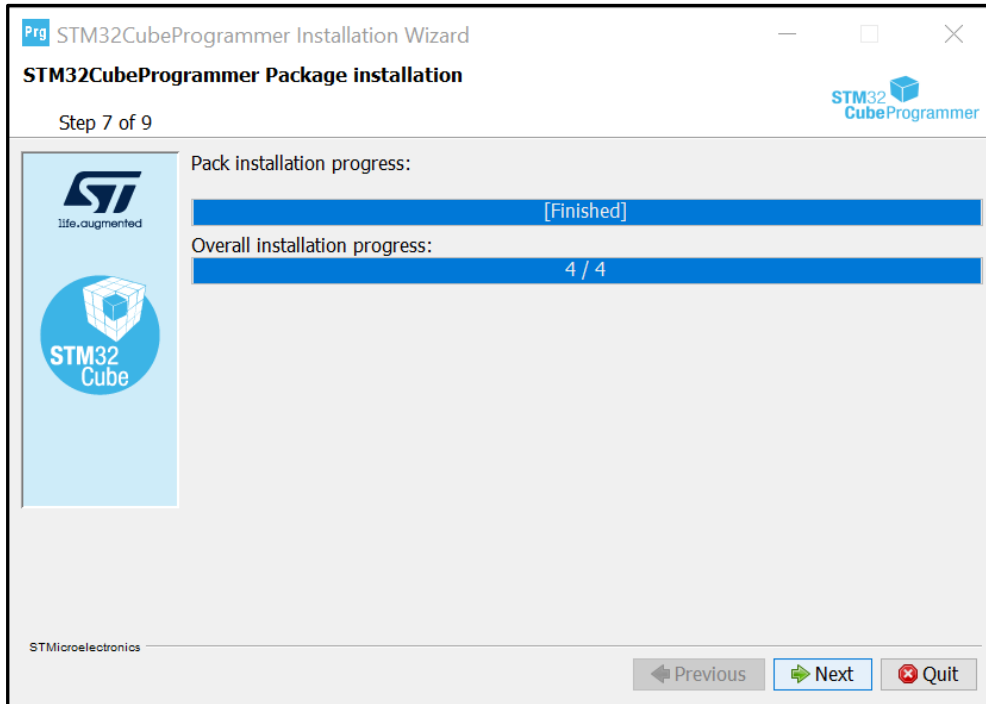
Press Next:



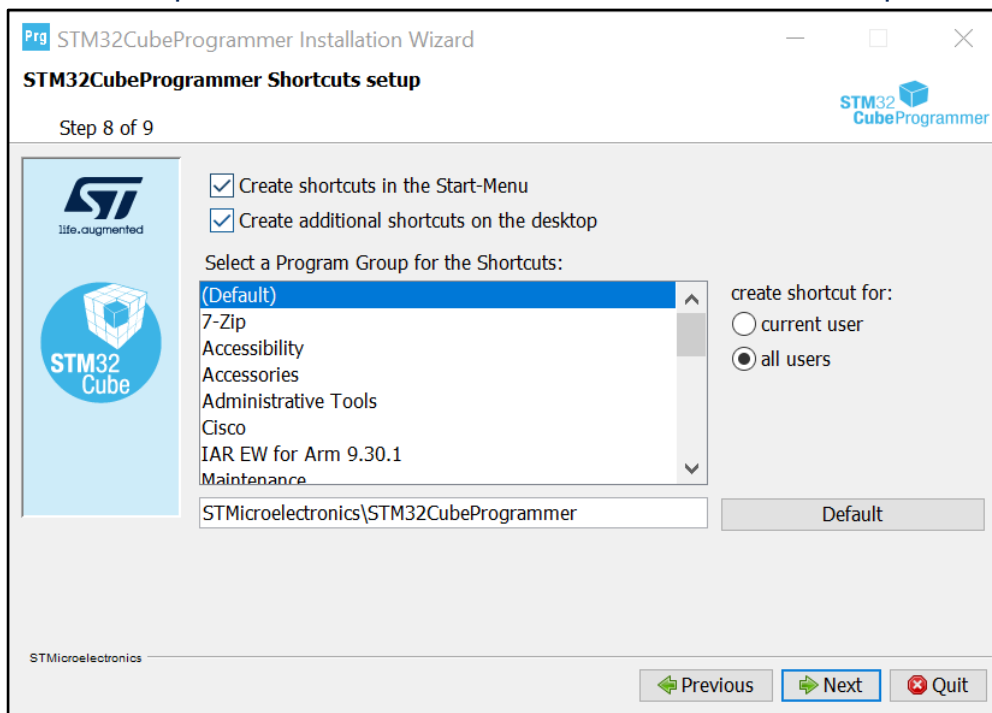
Press Finish:



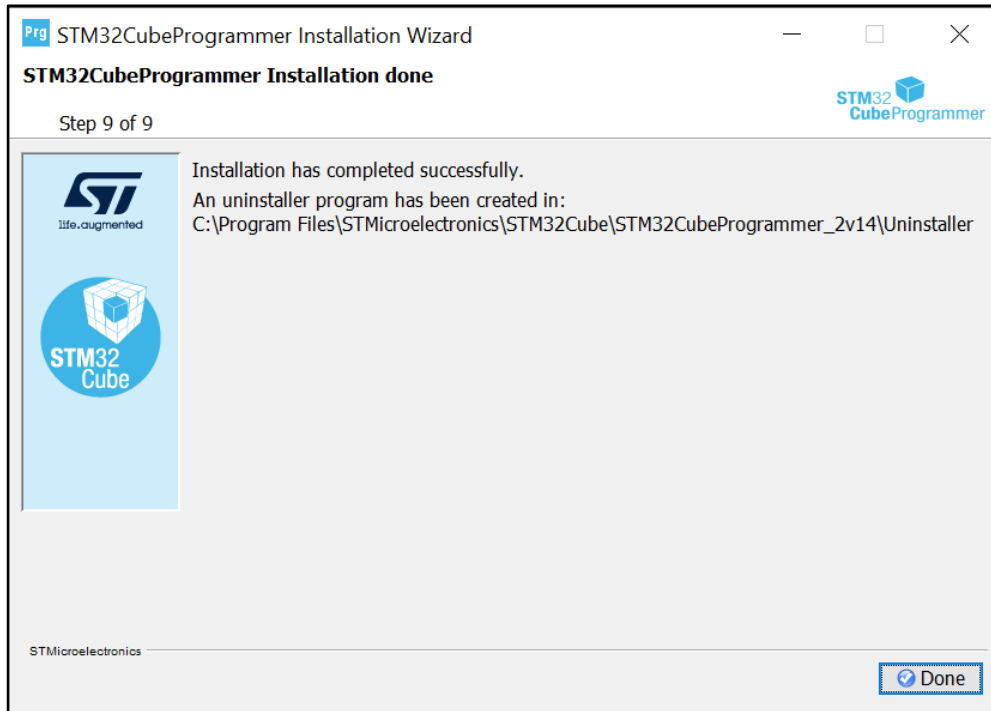
Wait for the install to complete and then press Next:



Select the options to create the shortcuts as desired and then press next:



Press Done:



Open STM32CubeProgrammer to make sure it was installed properly.

Appendix A: STM32CubeProgrammer Installation and Opening for macOS users

MacOS users might face some issues while installing or opening the already installed application for STM32CubeProgrammer. In such cases, please refer to the ST Community thread explaining the solution for similar issue, linked below:

<https://community.st.com/t5/stm32cubeprogrammer-mcu/how-to-download-stm32cubeprogrammer-on-macos-monterey-12-6/m-p/143983>

Please refer to the first solution posted by ST Employee.

Problem:

Listed below are some known issues which can be resolved by following the instructions in the linked mentioned above:

- Issue while installing the CubeProgrammer with an error “cannot be opened because the developer cannot be verified”.
 - Follow all the steps in the solution section below.
- Cannot open the installed application. To elaborate, the application tends to pop up in the “Dock” but never open.
 - Follow from step-3 in the solution section below.

Solution:

1. Install CubeProgrammer using the command:

```
sudo xattr -cr ~/SetupSTM32CubeProgrammer-macos.app
```

2. In case of using the .exe installer use this command:

```
sudo java -jar SetupSTM32CubeProgrammer-2.14.0.exe
```

Expect a popup during the installation indicating the following:

```
``
```

```
en/./././jre: No such file or directory
```

```
Continue Installation?
```

```
``
```

Press “Continue” to finish the installation of the tool.

3. Copy the jre folder from the downloaded setup package

4. Open the CubeProgrammer install folder
“../Applications/STMicroelectronics/STM32Cube/STM32CubeProgrammer”
5. Right click on STM32CubeProgrammer.app and select “Show Package Contents”
6. Paste the copied jre folder here.
7. After following the above installation steps, if CubeProgrammer couldn't be launched via GUI, please try to launch it via CLI as follows,
 - a. Navigate to the
“../Applications/STMicroelectronics/STM32Cube/STM32CubeProgrammer/STM32CubeProgrammer.app/Contents/MacOs/bin/”
 - b. Type the command;

```
java -jar STM32CubeProgrammer
```

- c. If the jre folder exists in CubeProgrammer install folder, type the following command:

```
../../../../jre/bin/java -jar STM32CubeProgrammer
```