Tutorial 02: Using the System Workbench IDE

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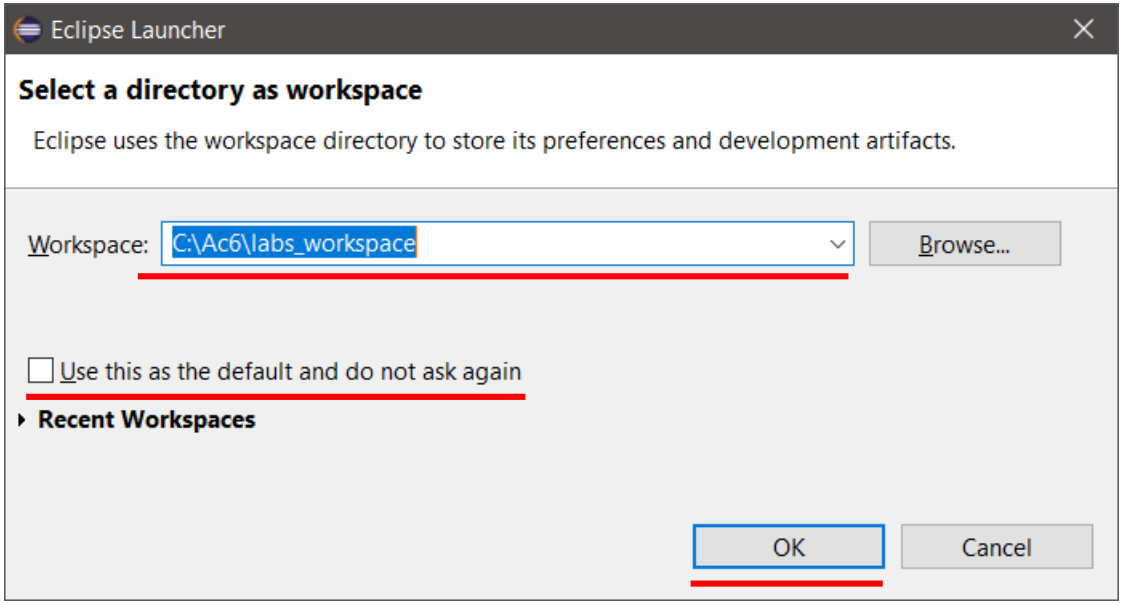
Creating a New Project on System Workbench

- This document shows step-by-step how to create a new project on System Workbench for STM32 IDE.
- Follow the tutorial exactly as it is shown here. Otherwise, you can face compilation errors with your code.

Creating a New Project on System Workbench

- The first time you open the System Workbench IDE, you will have to select a folder where all your projects will be located.



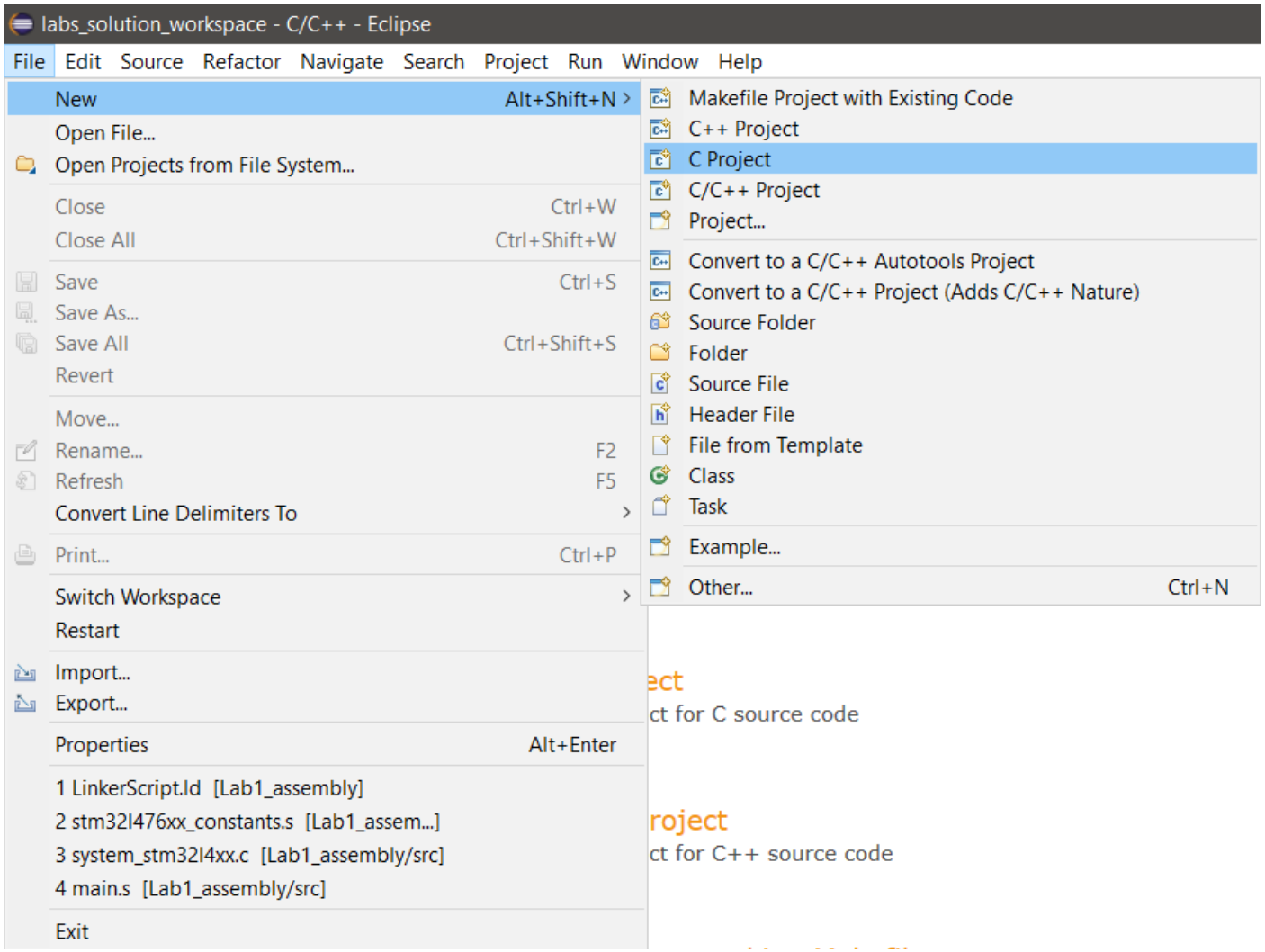
Important: Your workspace folder CANNOT contain any spaces in its name! Otherwise, you will face compilation errors.

It is recommended to create a folder in your C:\ unit.

- If you don't want to always the folder every time you open the IDE, you can check the box **`Use this as the default and do not ask again`**.
- Click on the OK button to open the IDE.

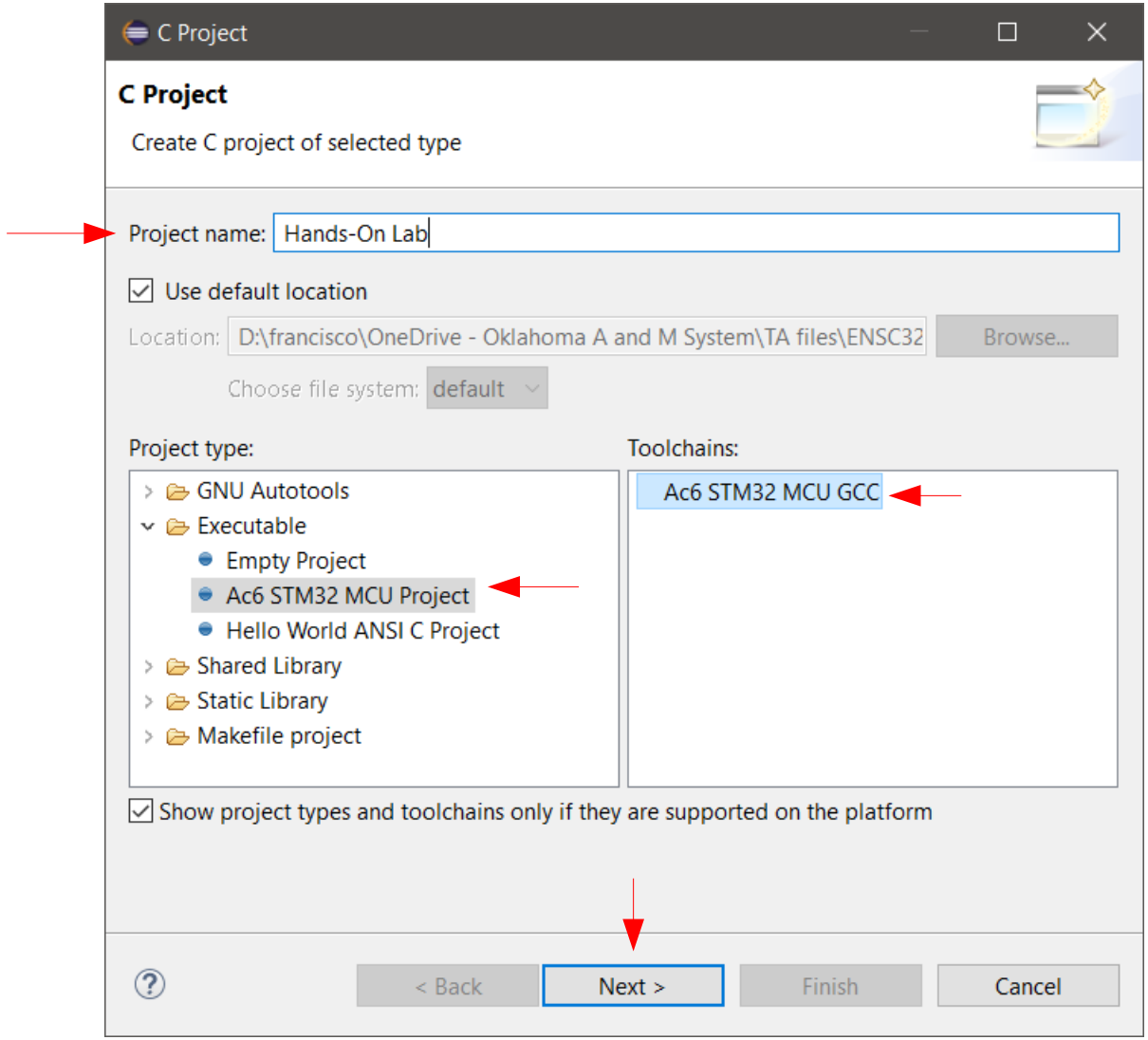
Creating a New Project on System Workbench

- Once the IDE has opened, you need to select **`File → New → C Project`**.



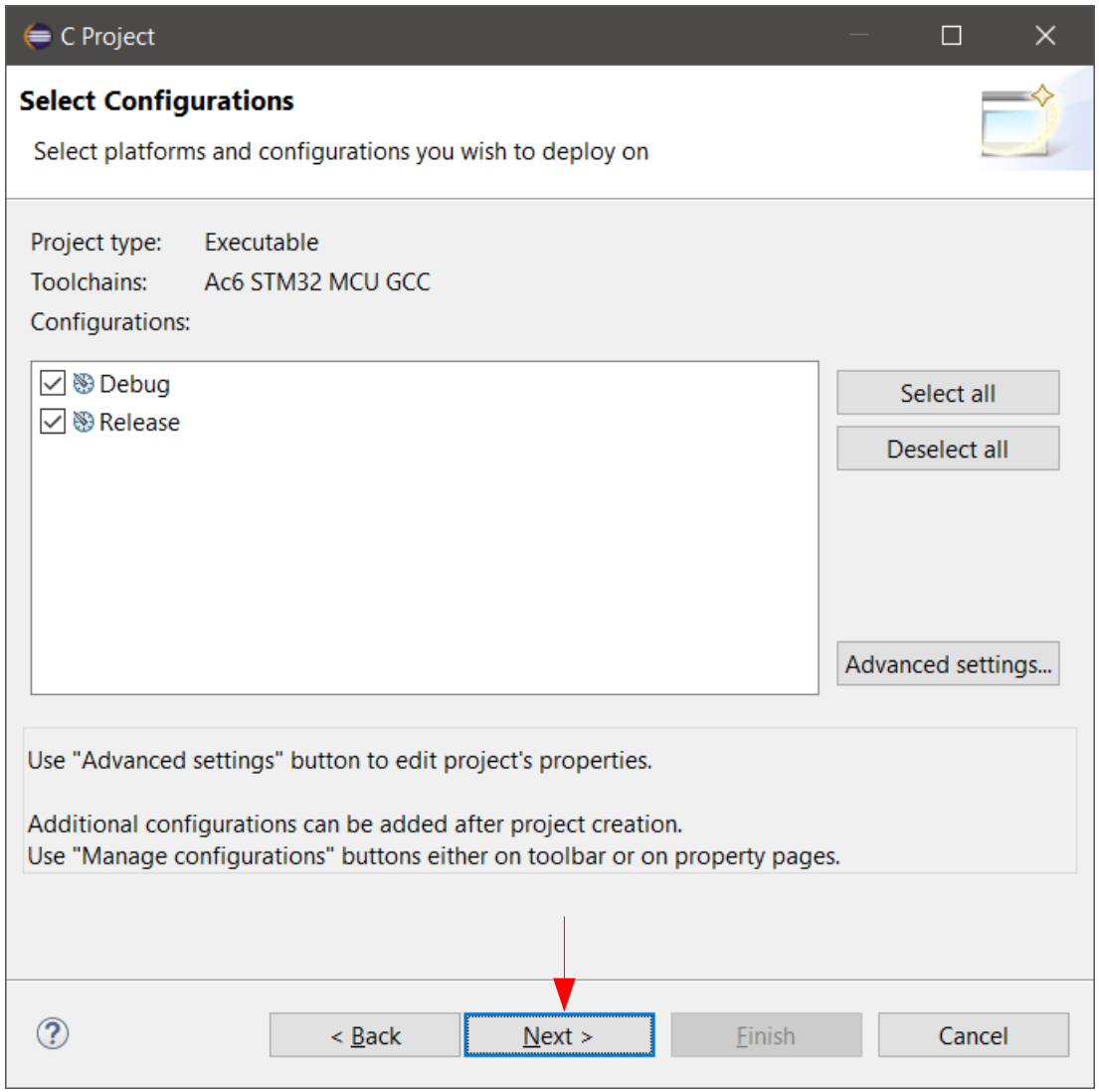
Creating a New Project on System Workbench

- On the new window, give a name for your project, select **`Ac6 STM32 MCU Project`** → **`Ac6 STM32 MCU GCC`**, and click on **`Next`**.



Creating a New Project on System Workbench

- On the window called **`Select Configurations`**, do not change anything, and just click on the **`Next`** button.



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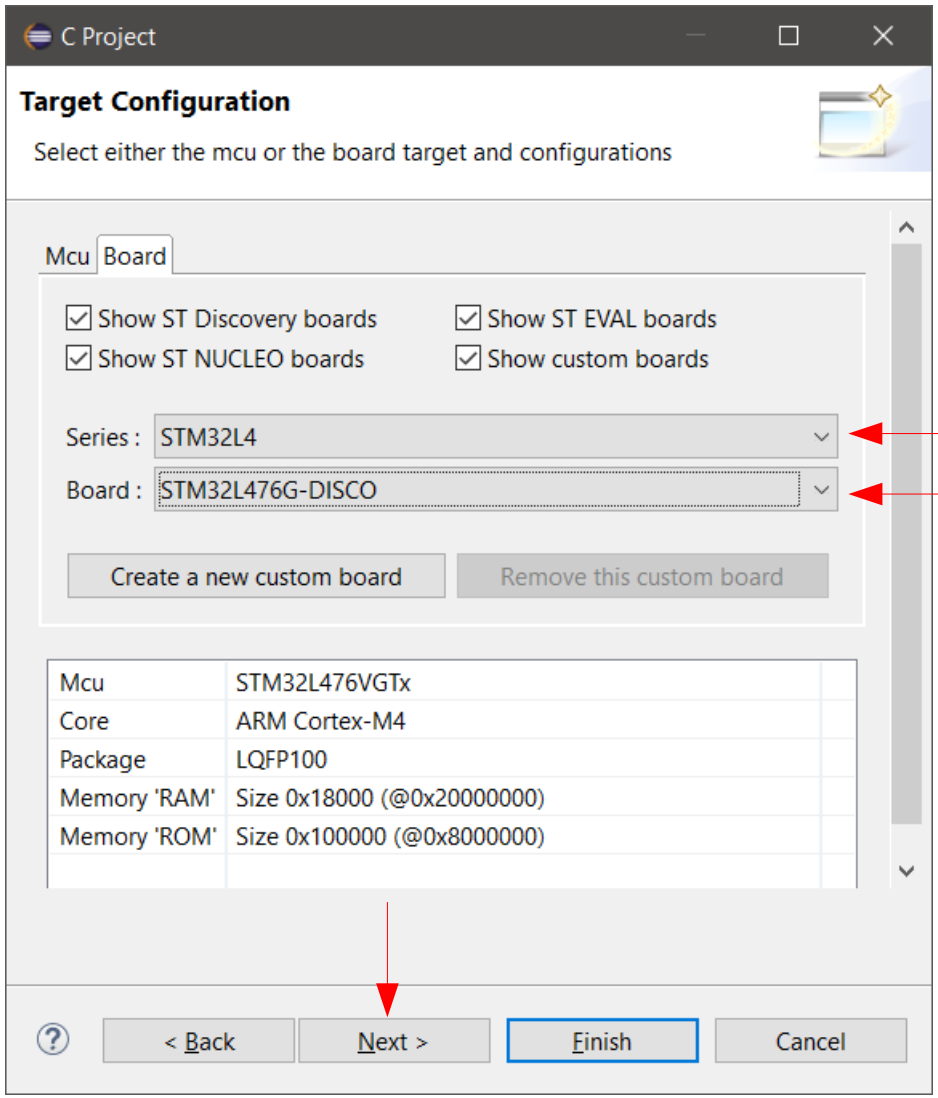
- On the window called **`Target Configuration`**, make sure everything is identical to the picture below, and click on **`Next`**:



DON'T click on Finish at this point!

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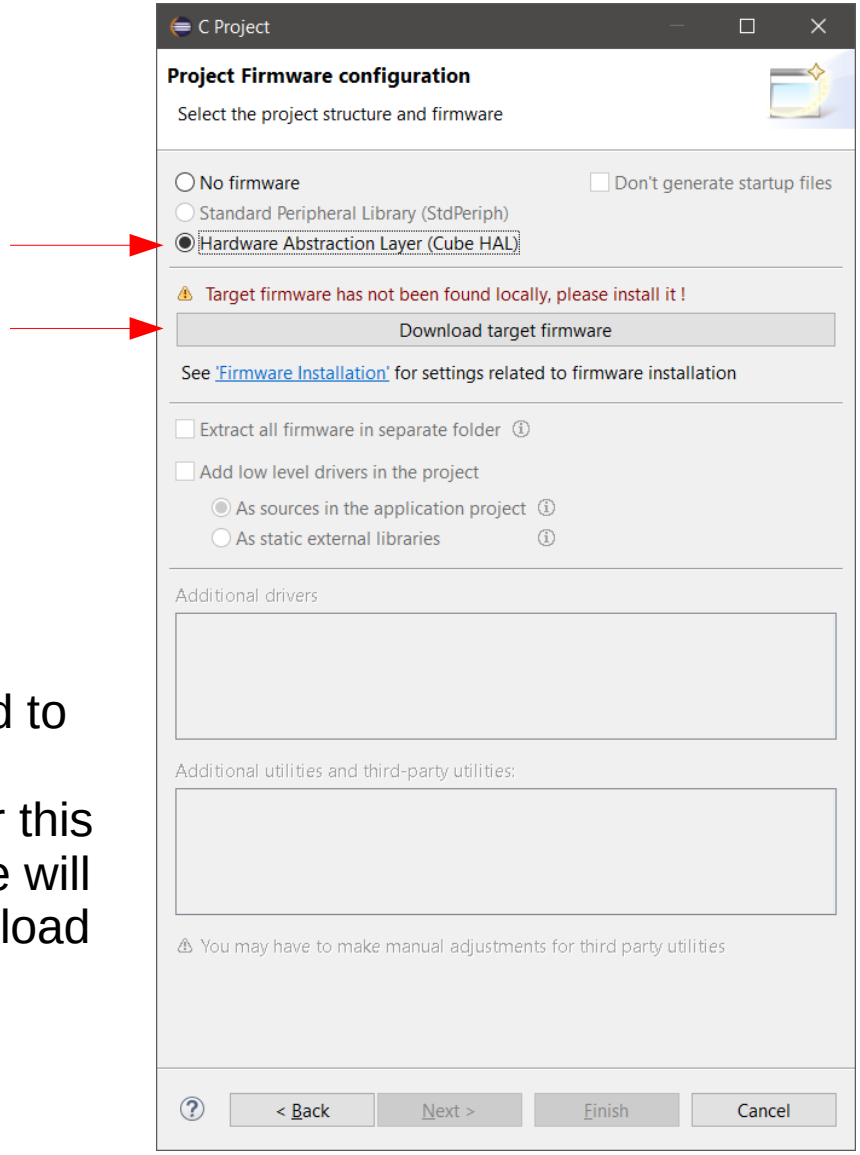
- On **`Project Firmware Configuration`**, select **`Hardware Abstraction Layer (Cube HAL)`**, and click on **`Download target firmware`**.



Note: you only need to download the target firmware once. After this first download, there will be no need to download again.

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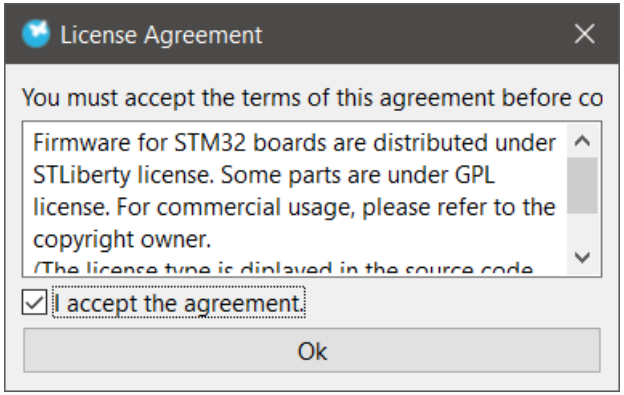
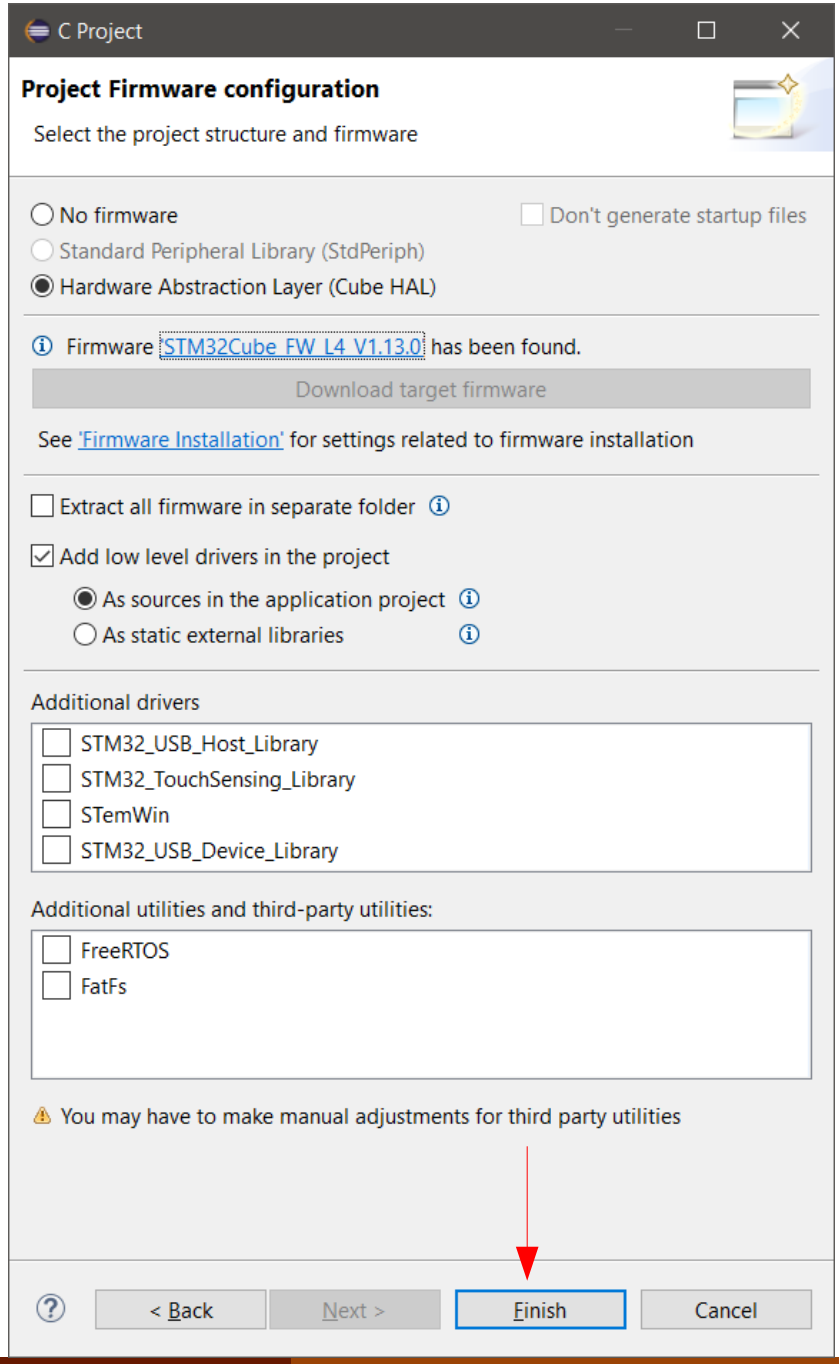
- A **`License Agreement`** will pop-up, check **`I accept the agreement`**, and click on **`OK`**.



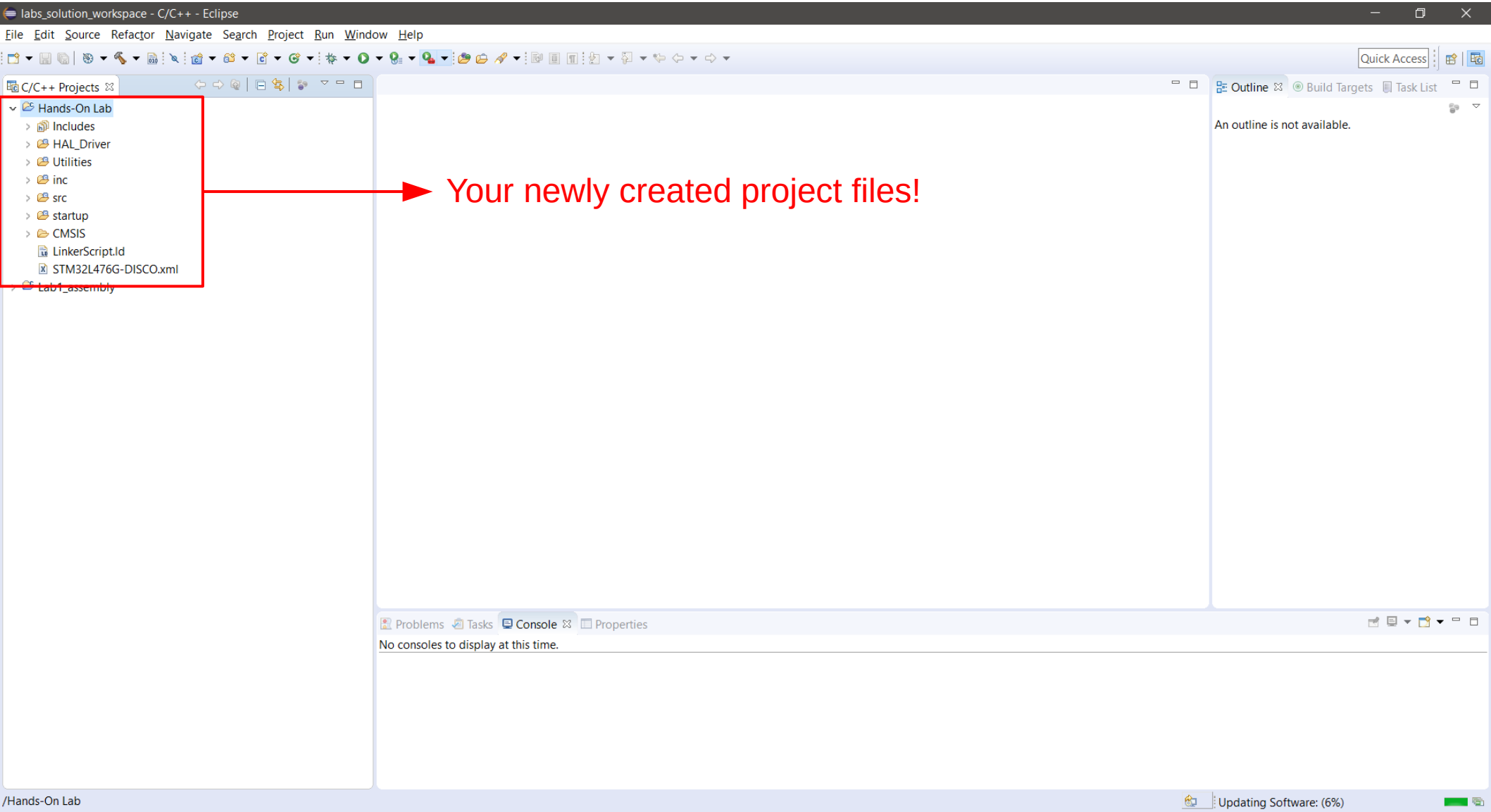
Creating a New Project on System Workbench

- Once the download is completed, you can click on **`Finish`**.
- Do not change the other configurations!

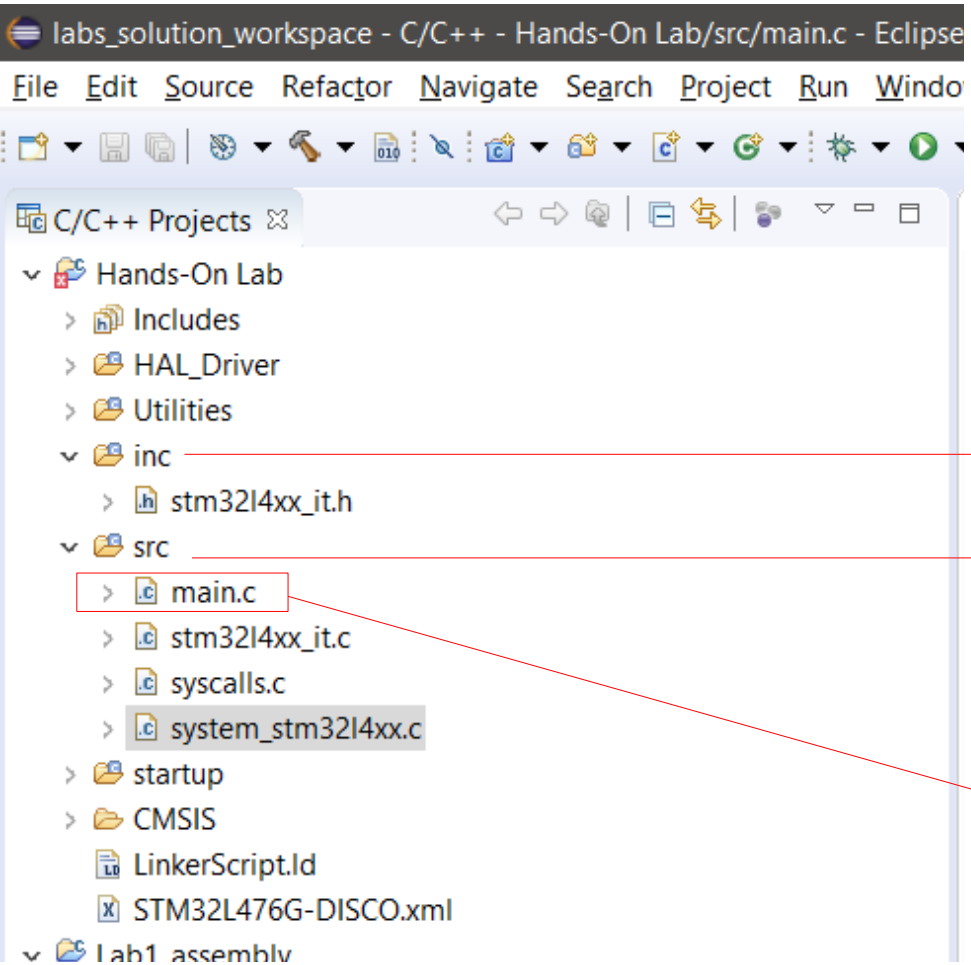


Creating a New Project on System Workbench

- Now, your project is created and you will have access to all code files on the panel on the left in the IDE.



Creating a New Project on System Workbench



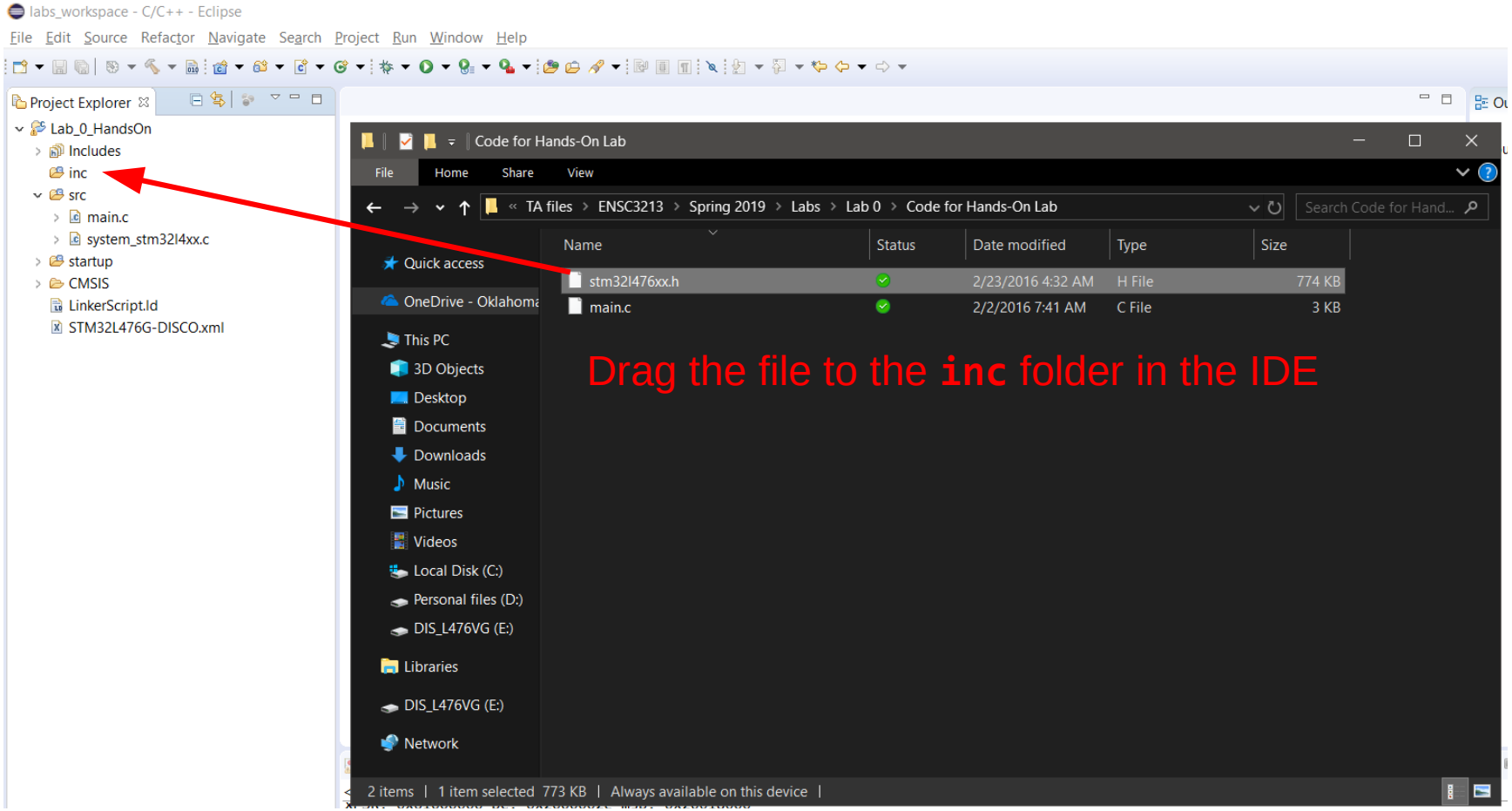
The **`inc`** folder will contain all our **`.h`** files.

The **`src`** folder will contain all our **`.c`** files and **`.s`** files.

Our **`main.c`** will be created inside the **`src`** folder.

Creating a New Project on System Workbench

- The final step is to move the given file **`stm32l476xx.h`** to the **`inc`** folder. You can do this by clicking and dragging the file.



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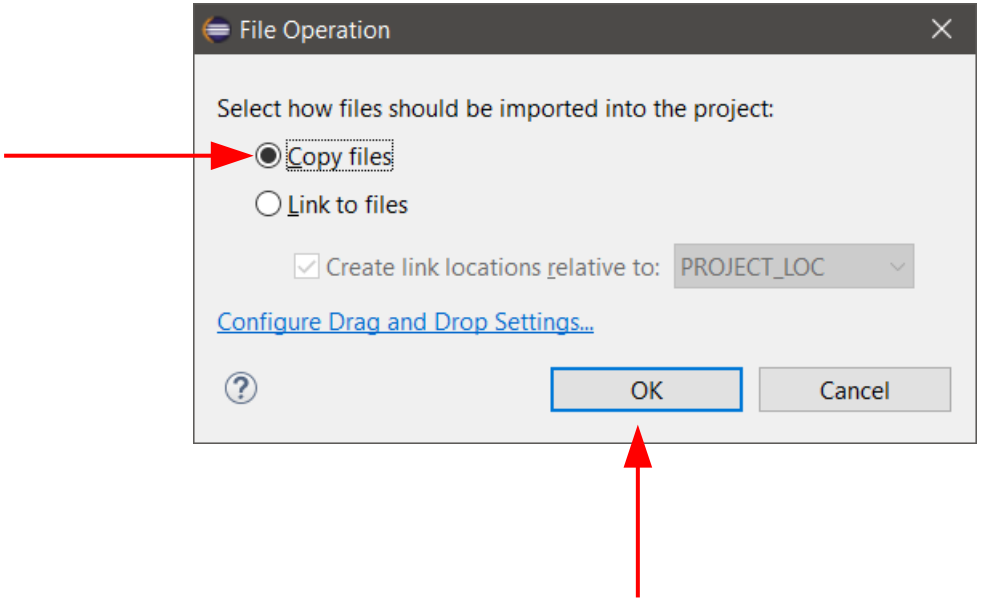
- The IDE will ask if you want to copy or link the file. Click on **`Copy files`** and, then, on **`OK`**.

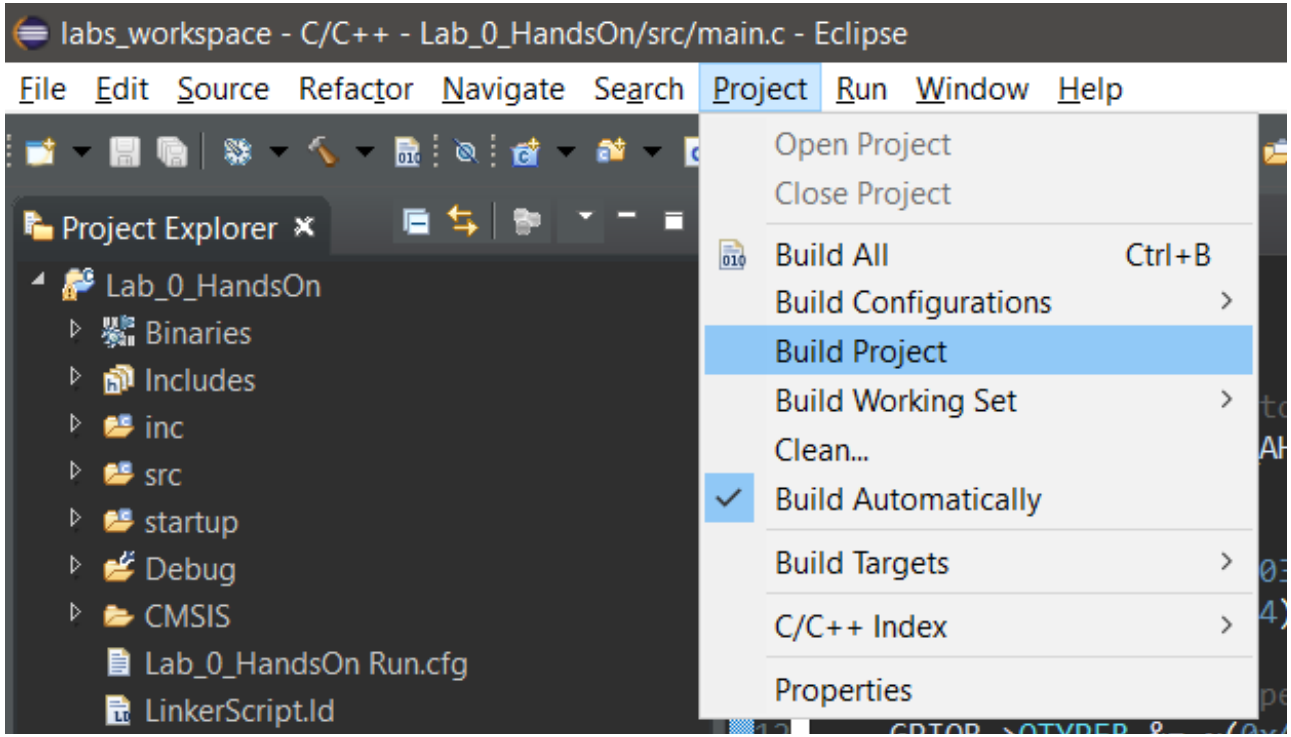


Creating a New Project on System Workbench

- Now, you can double click on the file **`main.c`** and start writing your code! Finally!

Compiling your code on System Workbench

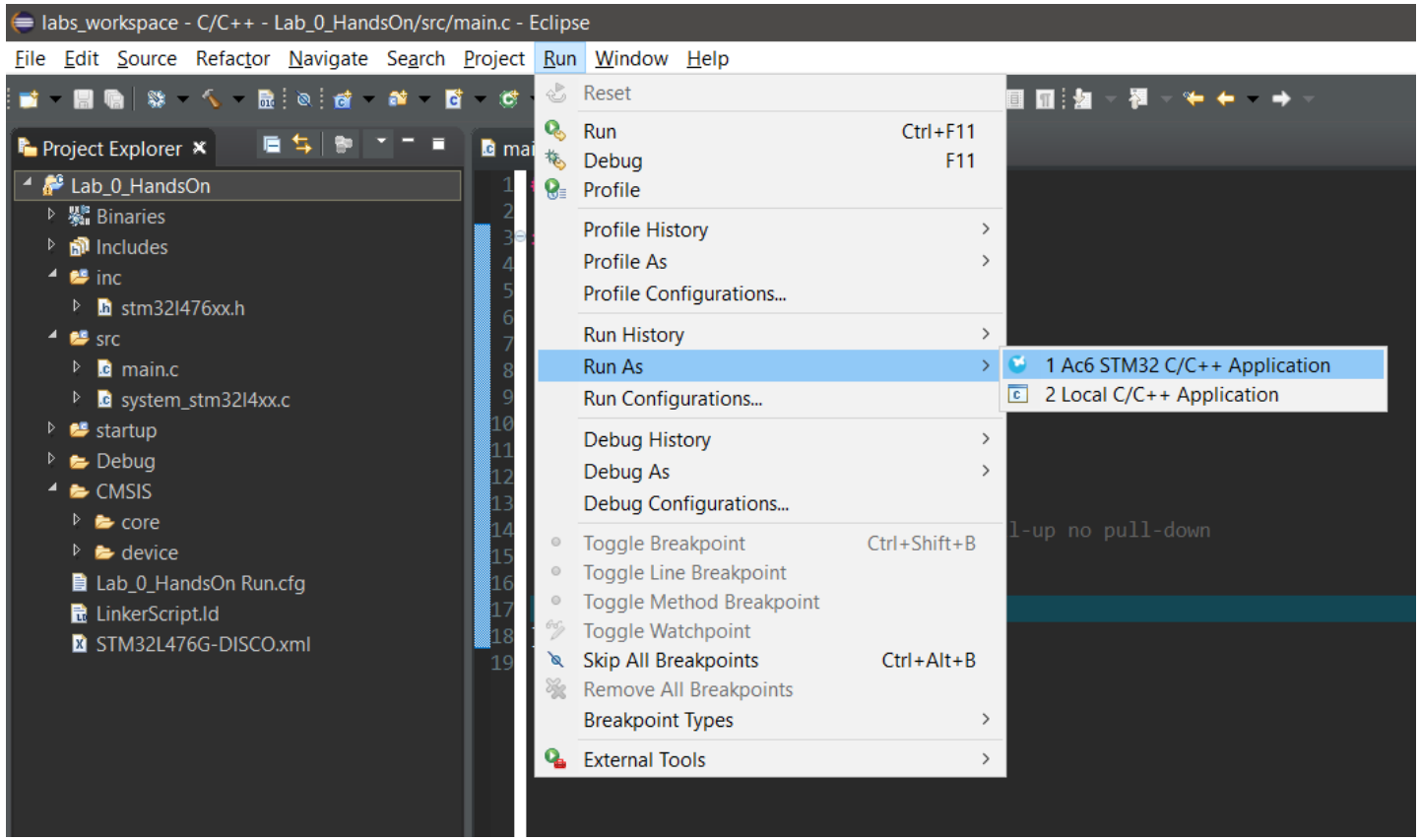
- After you're done writing your code, you will need to **compile** it, and **upload** it to the development kit.
  - To compile, go to **`Project → Build Project`**.



  - If everything is correct with your code, you will see the message **`Build Finished`** and no errors in the **`Console`** window.

Uploading your code using System Workbench

- To upload your newly compiled code, go to **`Run → Run As → Ac6 STM32 C/C++ Application`**.
- This will upload your compiled code and reset the development kit.



Uploading your code using System Workbench

- When uploading, the application may ask for permission to use the network. Make sure you allow access.