



ARM Processors Interfacing

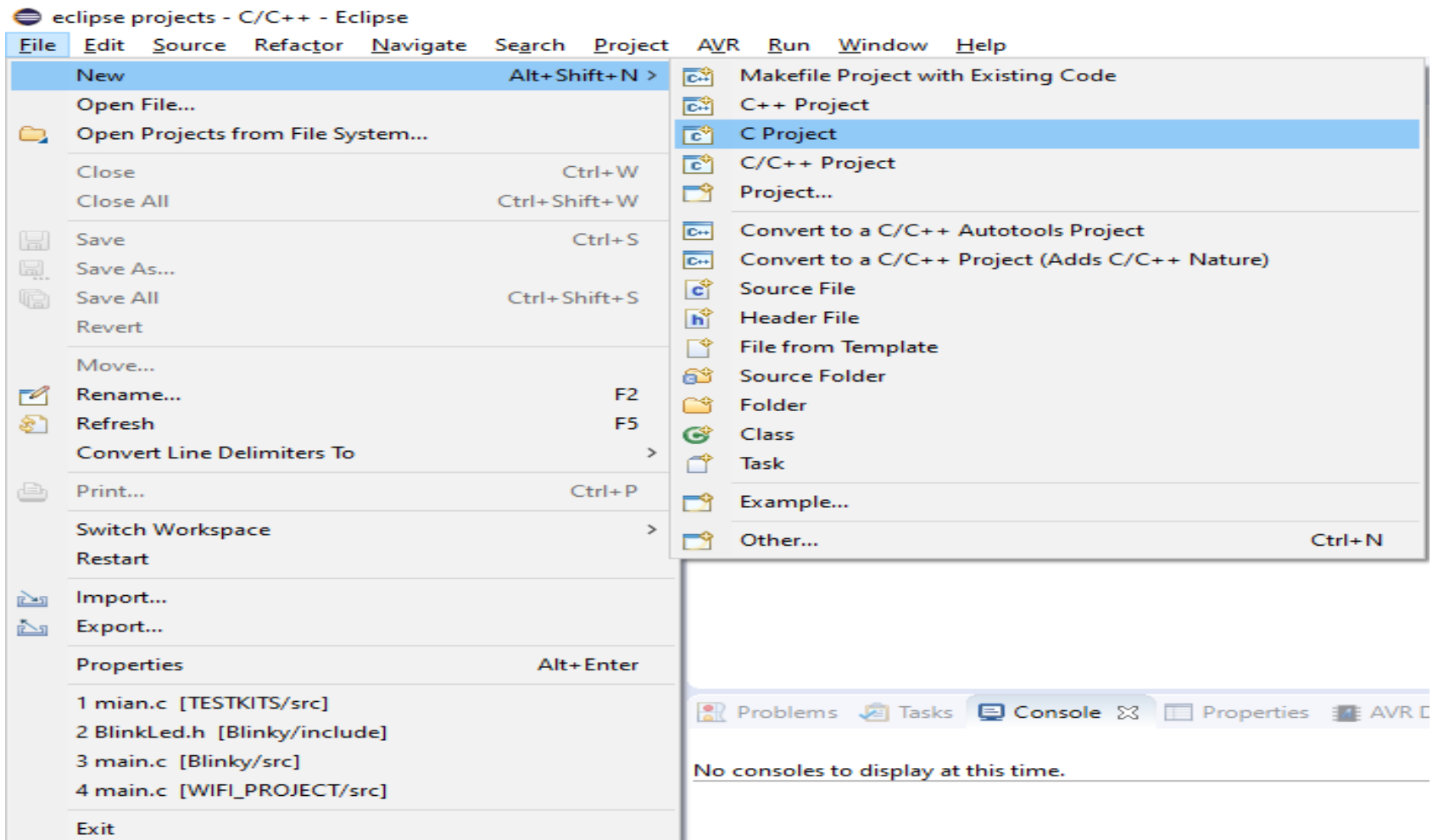
Lecture one

Create New Project

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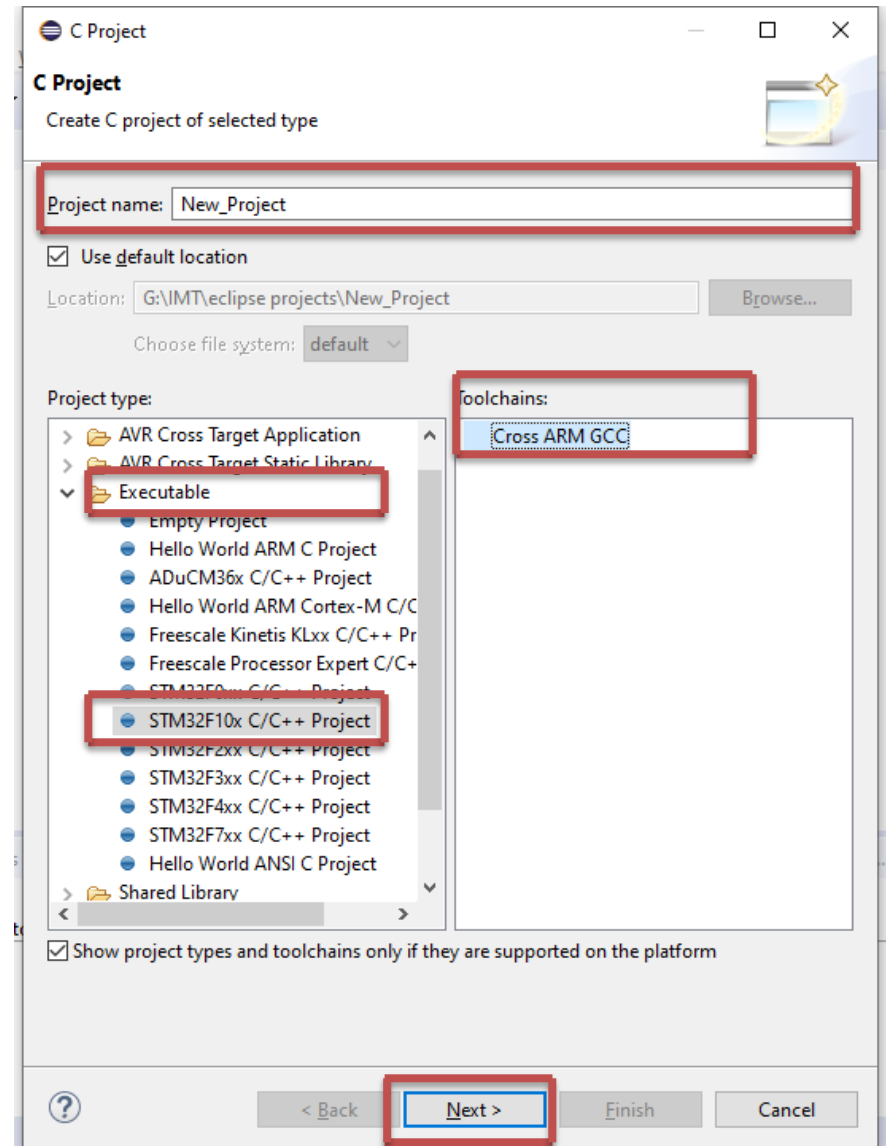
# New Project Creation

1- Open **IMT SDK** and then choose **File** → **New** → **C Project** .



## New Project Creation

2- From **Executable** choose **STM32F10x C/C++ Project**, choose the tool chain **Cross ARM GCC** and then choose **Project name** then Press **Next** .

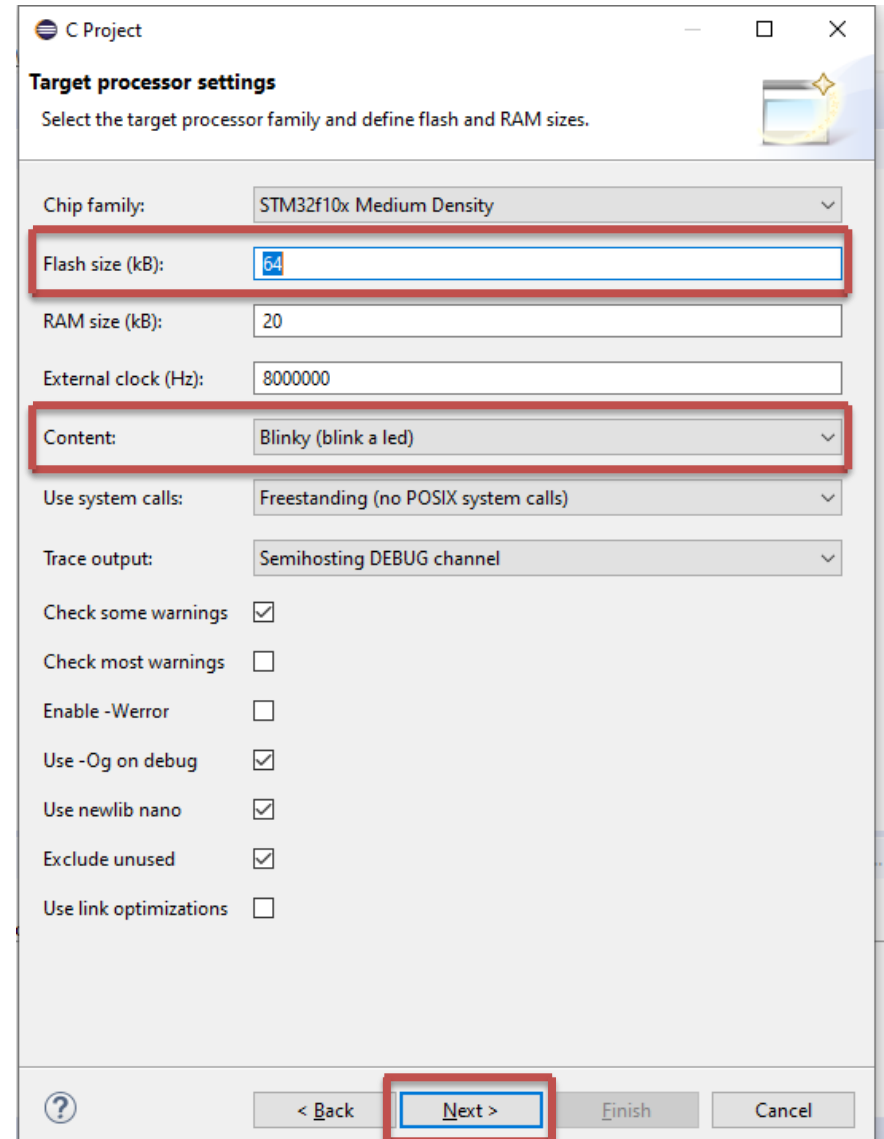


## New Project Creation

3- Change **Flash Size** From **128** to **64kB** because our STM is 64kB.

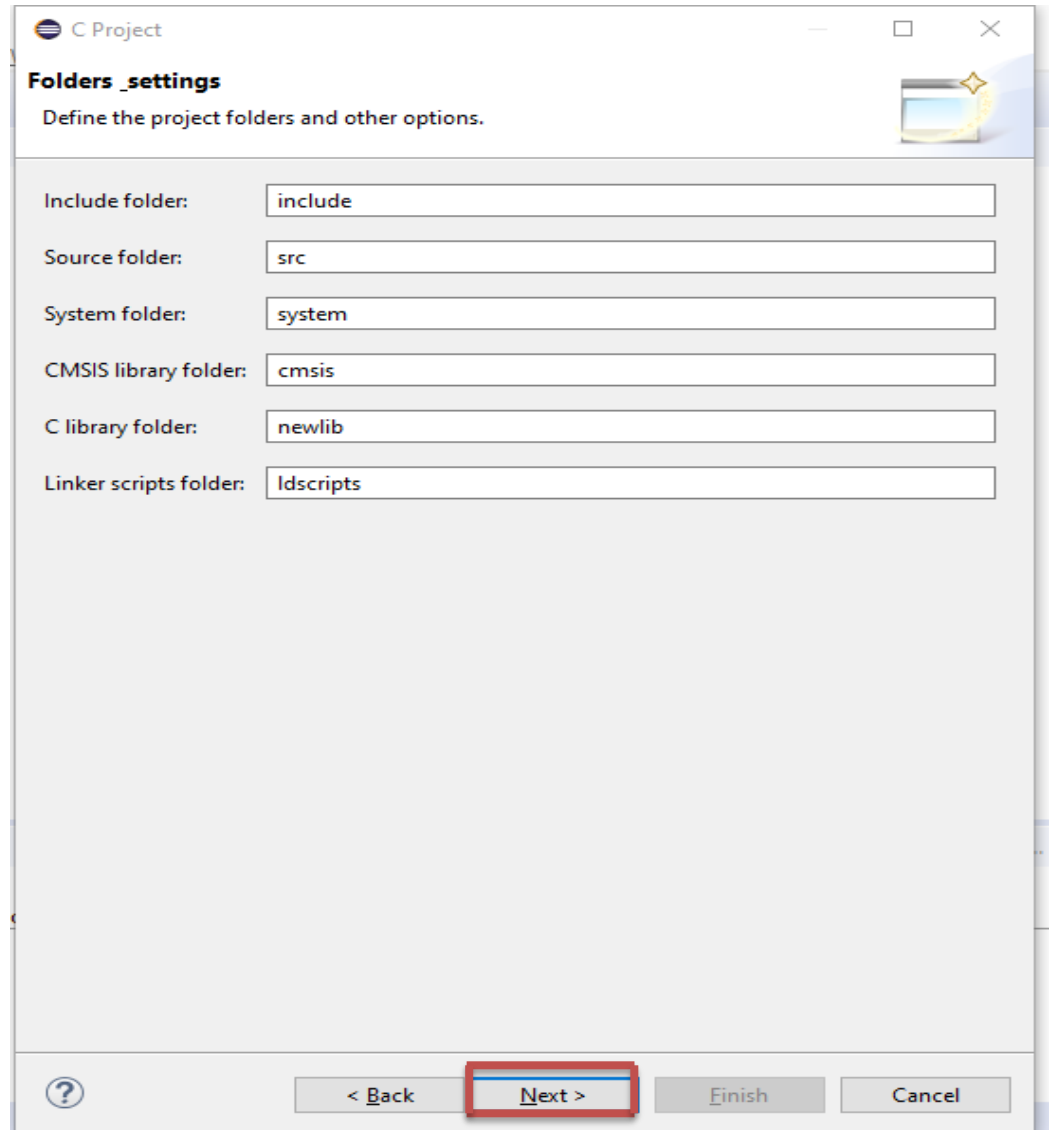
4- In the content, you can either choose empty project to write your code from scratch, or to choose **Blinky** project ( **blink a led** ) to run a code example for led blinking.

5- Press **Next**

The image shows a 'C Project' dialog box with the title bar 'C Project'. The main section is titled 'Target processor settings' with a subtitle 'Select the target processor family and define flash and RAM sizes.' The settings are as follows: 'Chip family' is a dropdown menu set to 'STM32f10x Medium Density'; 'Flash size (kB)' is a text box containing '64', highlighted with a red rectangle; 'RAM size (kB)' is a text box containing '20'; 'External clock (Hz)' is a text box containing '8000000'; 'Content' is a dropdown menu set to 'Blinky (blink a led)', highlighted with a red rectangle; 'Use system calls' is a dropdown menu set to 'Freestanding (no POSIX system calls)'; 'Trace output' is a dropdown menu set to 'Semihosting DEBUG channel'. Below these are several checkboxes: 'Check some warnings' (checked), 'Check most warnings' (unchecked), 'Enable -Werror' (unchecked), 'Use -Og on debug' (checked), 'Use newlib nano' (checked), 'Exclude unused' (checked), and 'Use link optimizations' (unchecked). At the bottom, there are four buttons: a help button with a question mark, '< Back' (disabled), 'Next >' (highlighted with a red rectangle), and 'Finish' (disabled). A 'Cancel' button is also present on the far right.

## New Project Creation

4- Press **Next** .



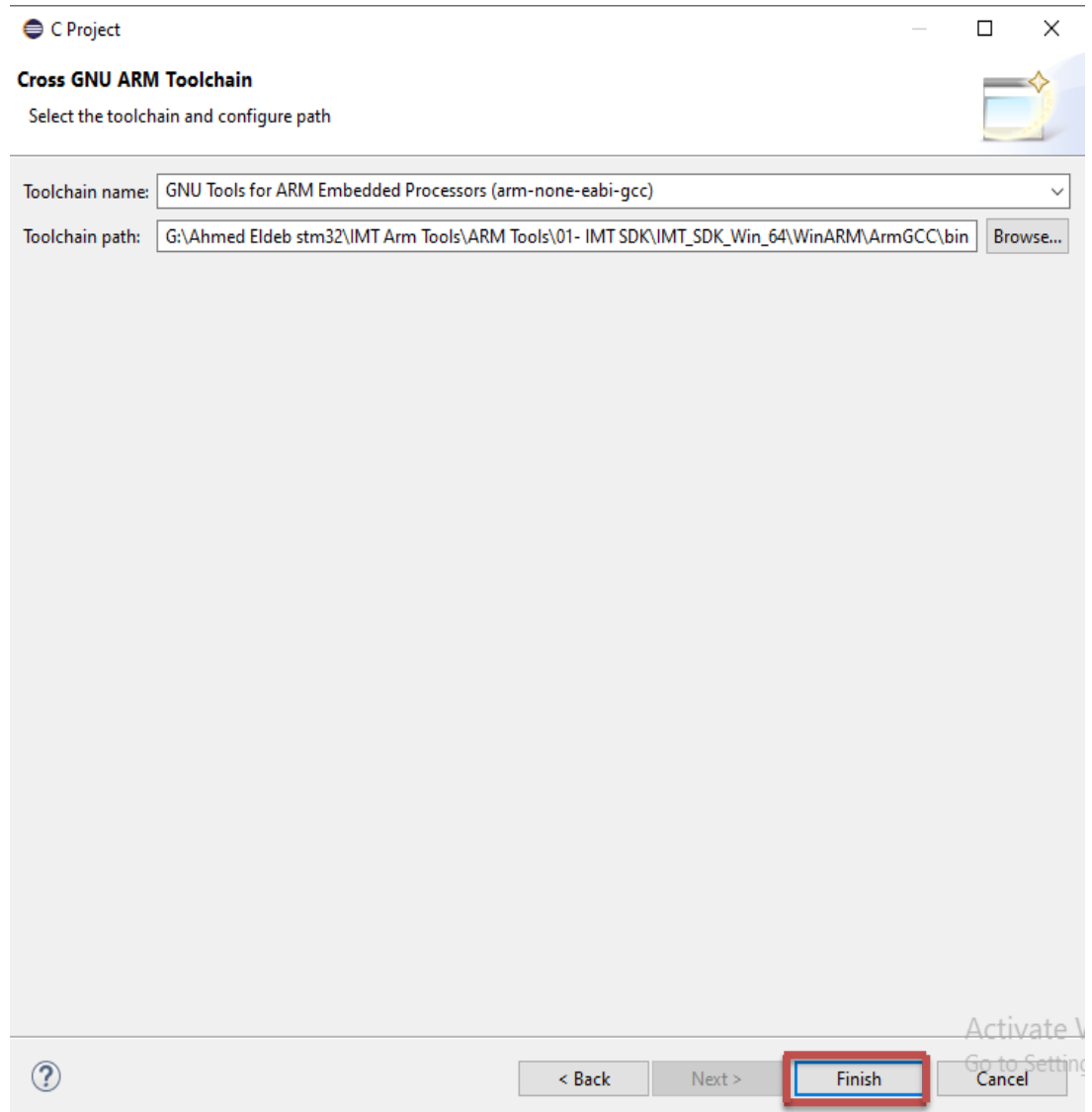
The image shows a Windows-style dialog box titled "C Project". The main heading is "Folders \_settings" with a subtitle "Define the project folders and other options." Below this, there are six text input fields, each with a label to its left: "Include folder:" (containing "include"), "Source folder:" (containing "src"), "System folder:" (containing "system"), "CMSIS library folder:" (containing "cmsis"), "C library folder:" (containing "newlib"), and "Linker scripts folder:" (containing "ldscripts"). At the bottom of the dialog, there is a row of four buttons: a help button with a question mark icon, a "< Back" button, a "Next >" button (which is highlighted with a red rectangular border), and an "Finish" button. To the right of the "Finish" button is a "Cancel" button.

Field Label	Value
Include folder:	include
Source folder:	src
System folder:	system
CMSIS library folder:	cmsis
C library folder:	newlib
Linker scripts folder:	ldscripts

Buttons: ? < Back **Next >** Finish Cancel

## New Project Creation

5- Press **Finish** .



C Project

**Cross GNU ARM Toolchain**  
Select the toolchain and configure path

Toolchain name: GNU Tools for ARM Embedded Processors (arm-none-eabi-gcc)

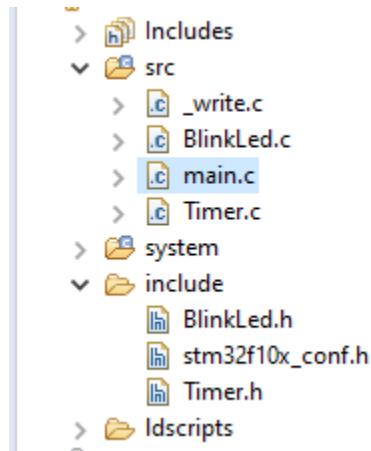
Toolchain path: G:\Ahmed Eldeb stm32\IMT Arm Tools\ARM Tools\01- IMT SDK\IMT\_SDK\_Win\_64\WinARM\ArmGCC\bin Browse...

? < Back Next > **Finish** Cancel

Activate...  
Go to Settings

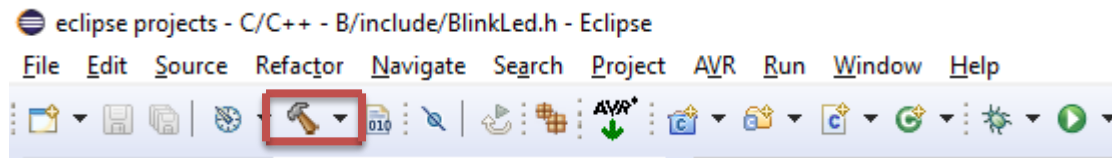
## New Project Creation

6- we have two main folders **src** and **Include** the **src** folder has all source files in the project and **include** folder has all header files in the project.



## Project Build

**8- Now start to build your new project by pressing on build icon in the tool bar.**

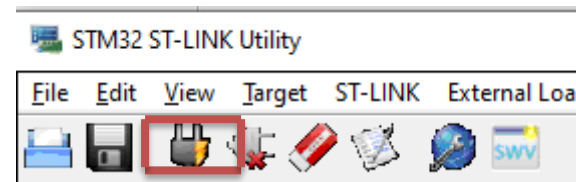




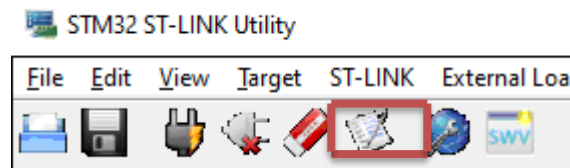
## Burn Hex File

9- After project building, open **ST-Link Utility as administrator** and Choose **File** then **Open File** and Go to your **Project Path Directory** then open it and open **Debug** folder then choose the hex file **Project.hex**

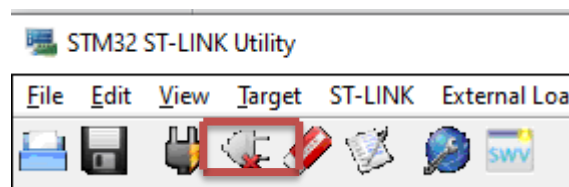
10- then Connect to the target .



12- Start to burn your code on the chip.



13- then disconnect from the target.



The End ...





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