Keil ᵤVision 5 Setup

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Go to keil.com and click on download

Click on Product download

Click on MKD-ARM

Enter Information & Submit

Click MDK527.EXE & it will start downloading

- Install downloaded file and run Keil

- After successful installation you will need to add Device specific Files to create a new project in keil. For that go to the pack Installer window. Search STM32F446re in search bar, select STM32F446RETx & install Keil::STM32F4xx_DFP pack.

- To create a new project, in the menu bar click on Select Project→ New Uvision project.

- Create a new folder for your project and give your project a name. In The Figure below, the project is named as "HelloWorld" and saved in "New Folder".

- Click on Save.
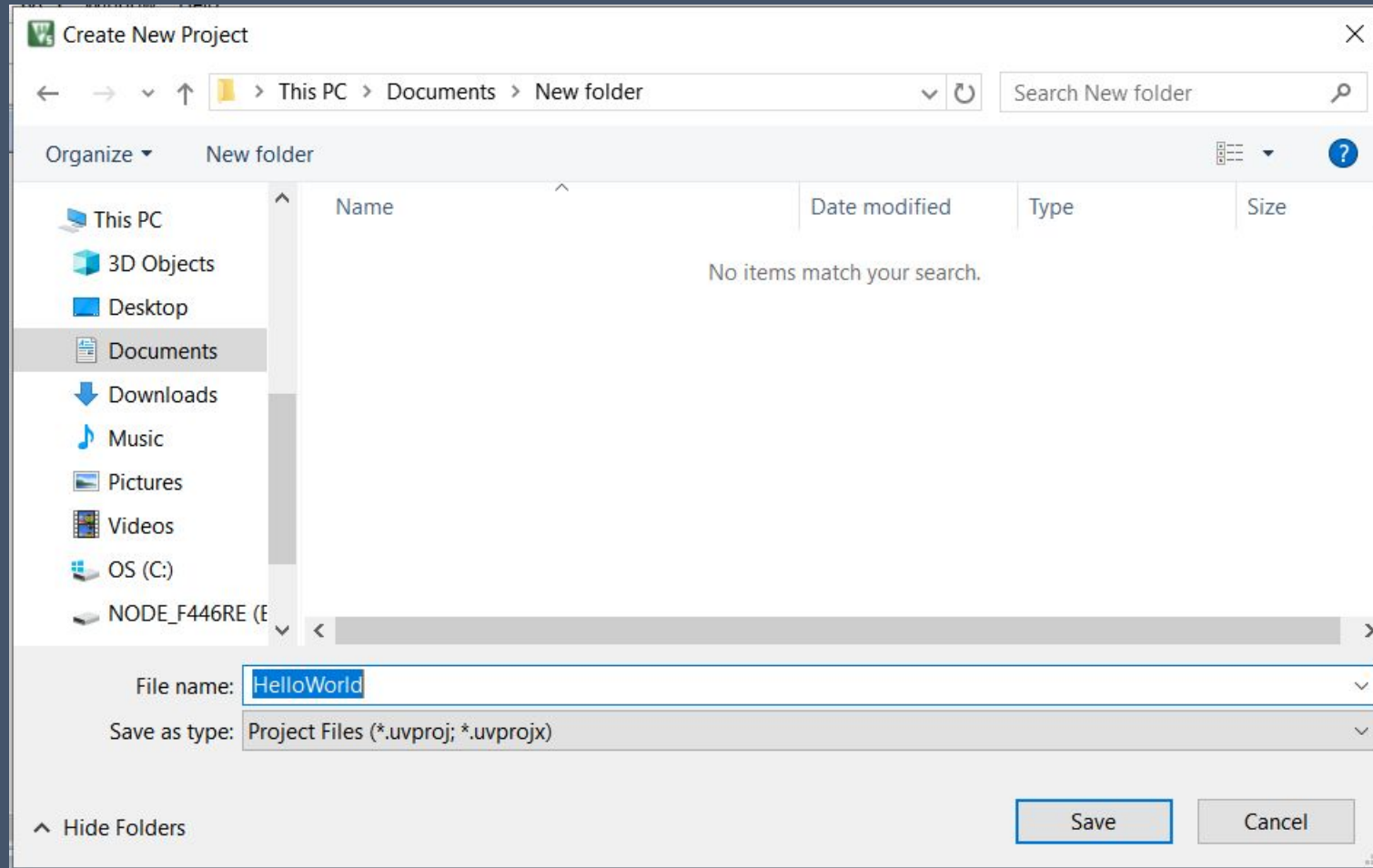
◻ Once the project is saved you will get a screen requiring you to choose a target. Locate STMicroelectronics and find STM32F446RETx. Click on OK
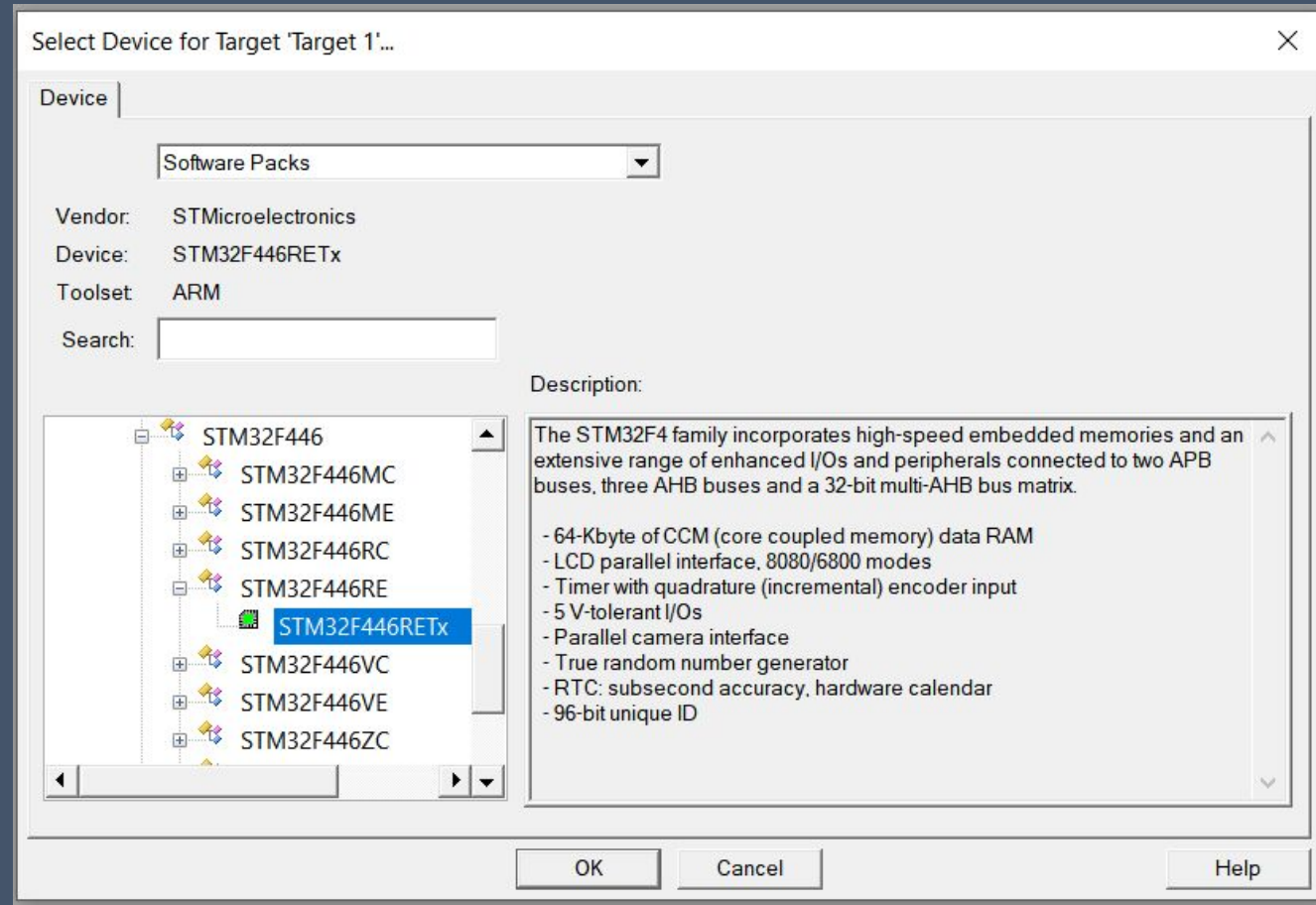
- Selecting the run-time environment.
  Find CMSIS → Core and Device → Startup and click those checkboxes (Fig. A).
  Then click OK you will get Fig. B.
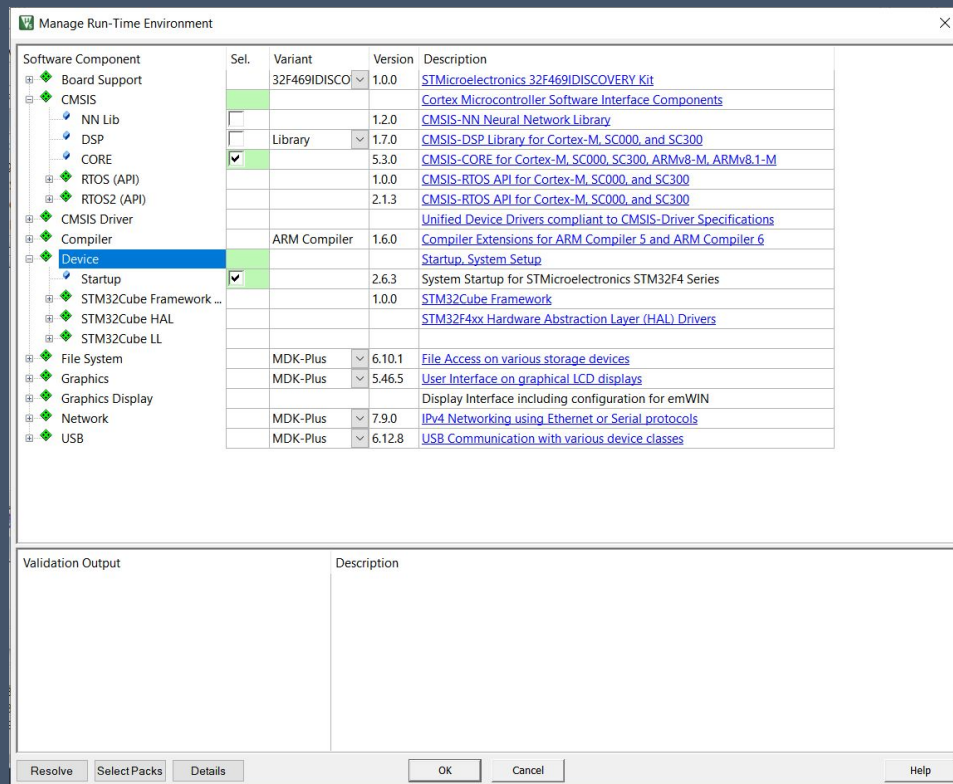
Fig. A
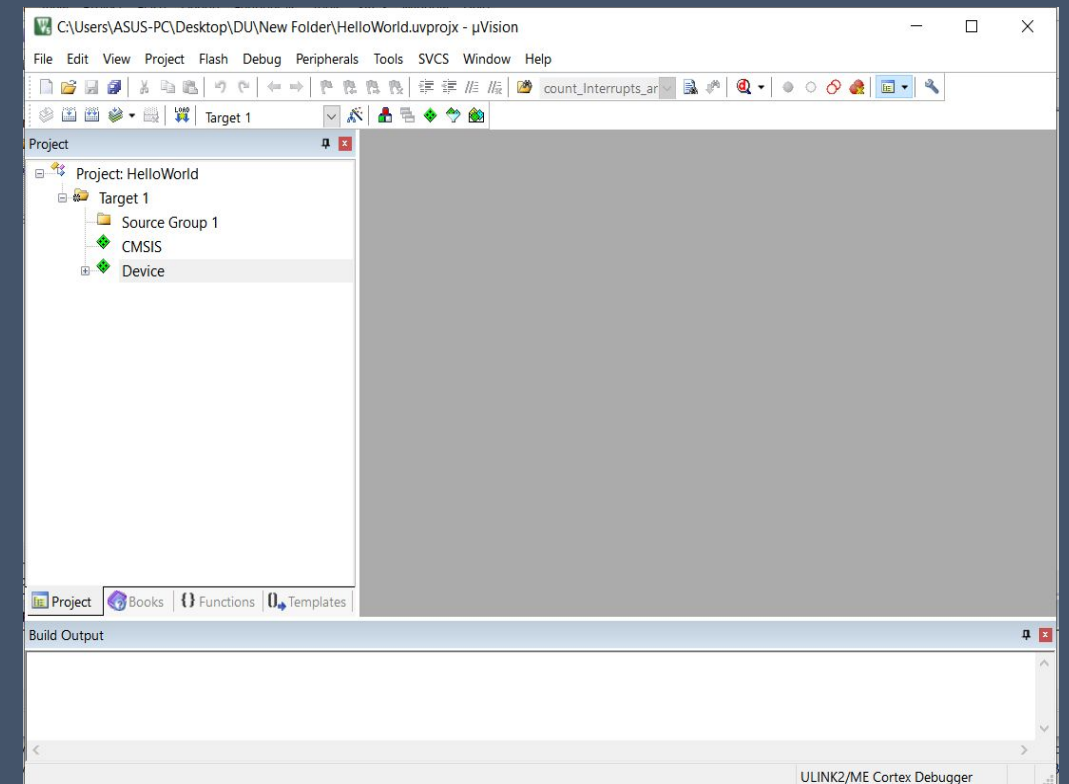
Fig. B

The next step adds the necessary files to the project. You will need to add two files to your project.
A) You main c-code file B) A supporting dot-h file
- Right click on source group 1 (Fig. A)
- select Add new item to source group 1. By doing so Fig. B will appear. - select C file/ Header file
- give a name (in this case name is given as main) & click ok.
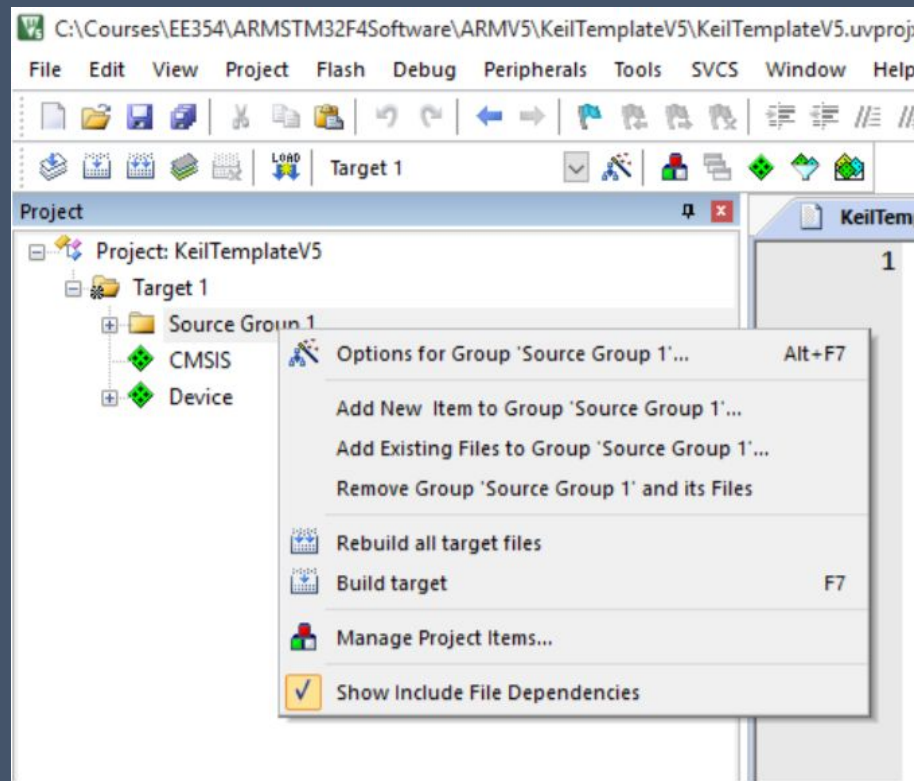
Fig. A
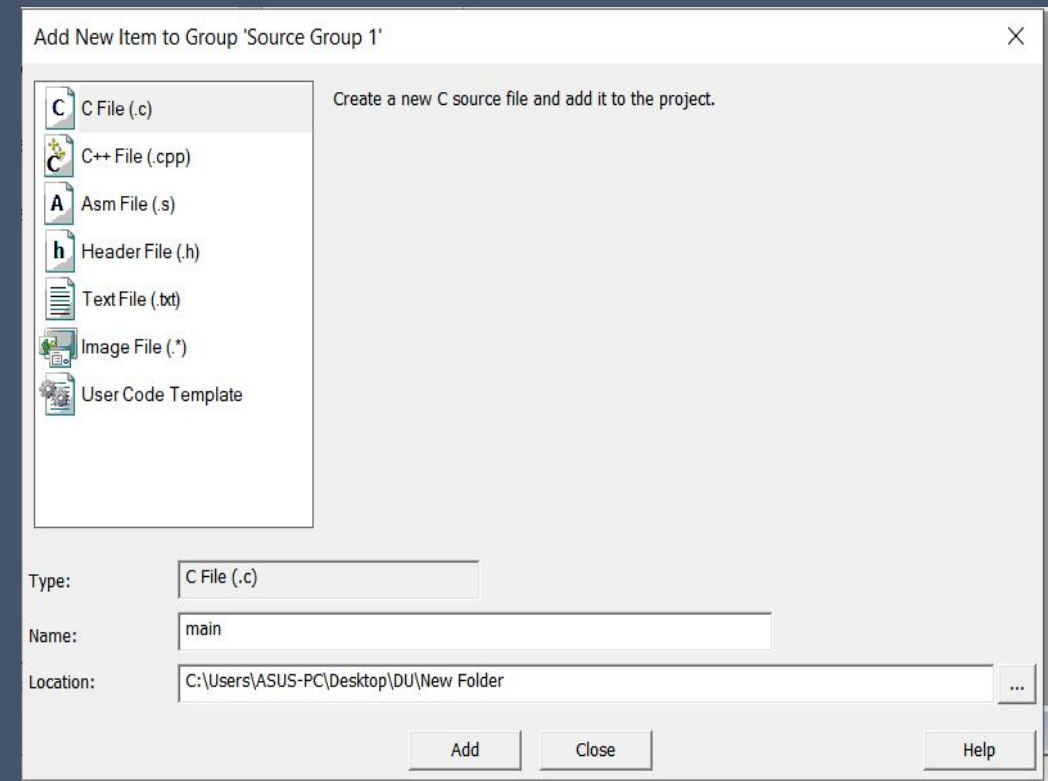
Fig. B

- At this point we are ready to enter the c-code for the project.

- Click on the newly created c file under Source Group 1 and write program.

- After entering the c-code click on Project→Build Target to save and compile your code.

- If everything is ok you will see 0 Error, 0 warning in the Build output window. (You may get a warning about needing a blank line as the last line in the code. This means a blank line with no spaces. You can add it or just ignore the warning.)
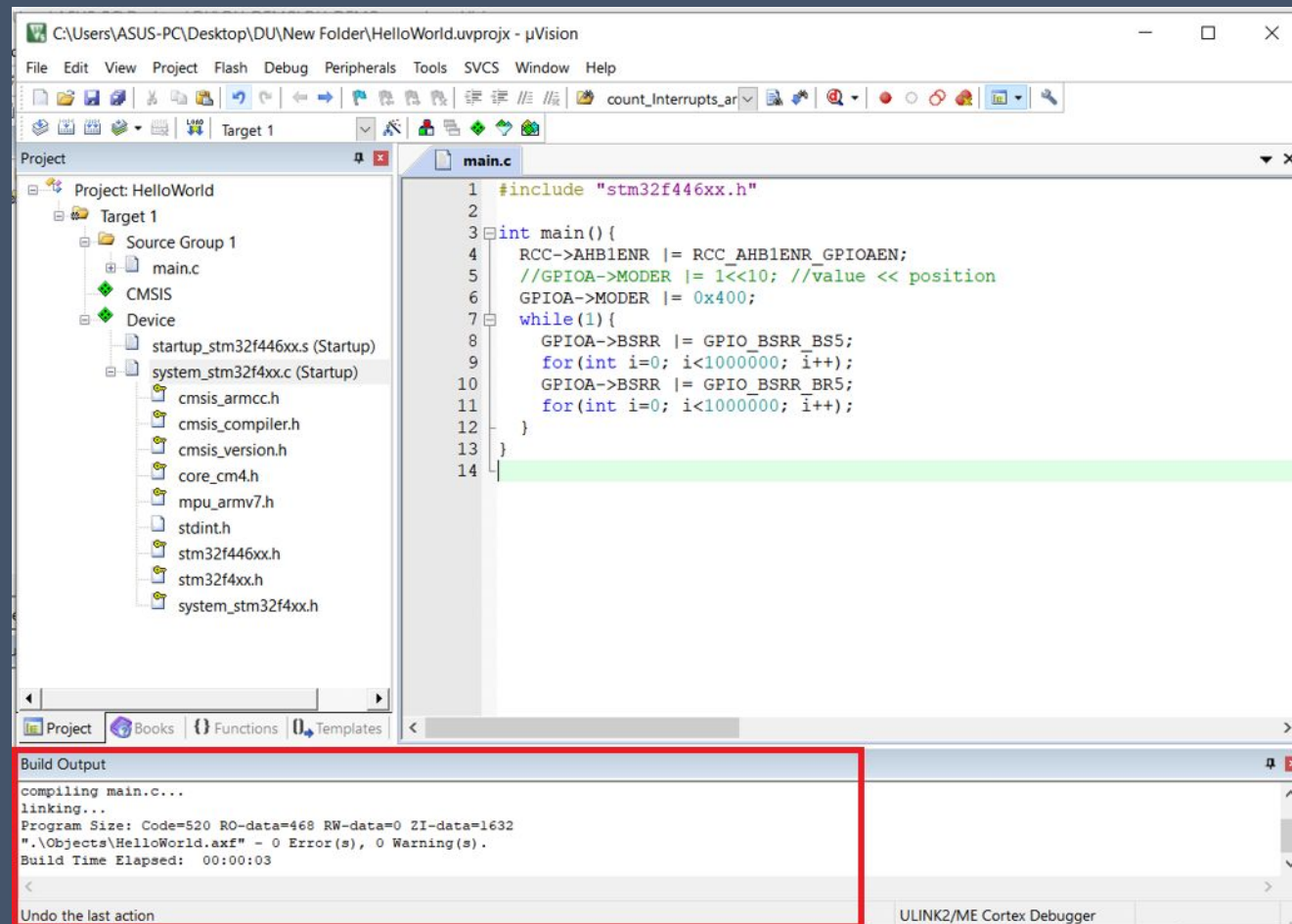
- You are now ready to load the project code onto the Nucleo board.
- Connect the board with a USB cable to your computer.
- If your computer does not recognize the board you will have to download the driver and install it.
- With your board successfully plugged in we will need to change the project options to use STLink.
- Follow Fig. A, Target window will appear (Fig. B)

Fig. A

Fig. B

- In Target window Go to debug tab.
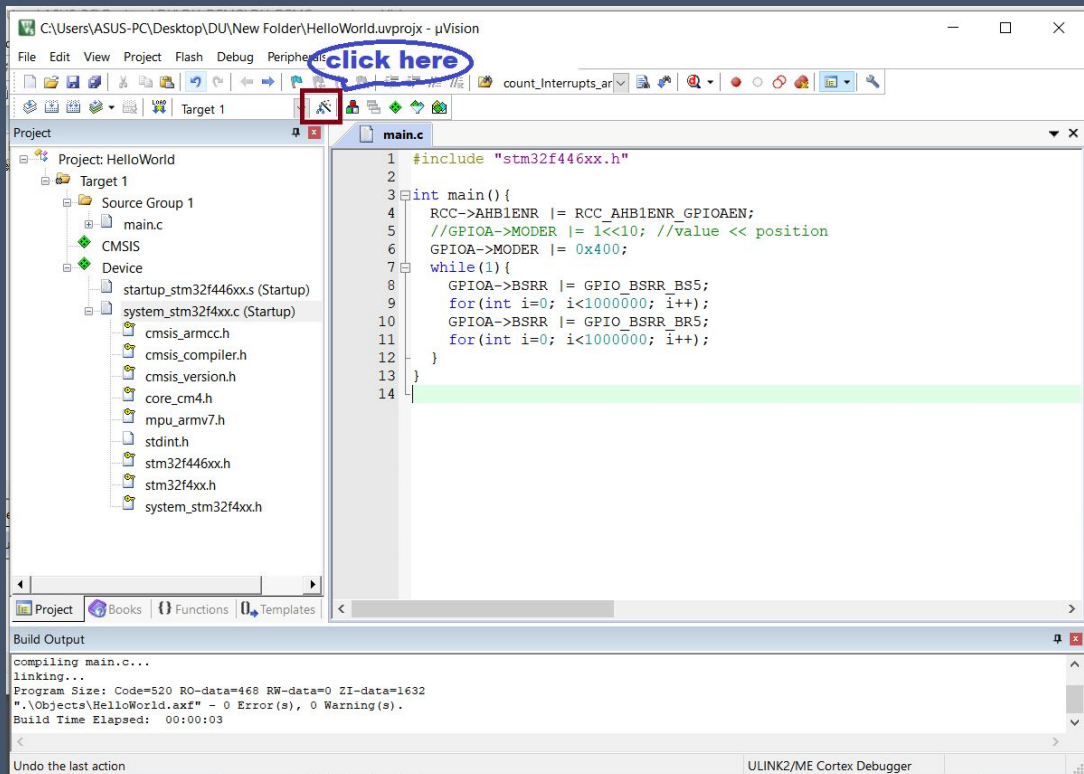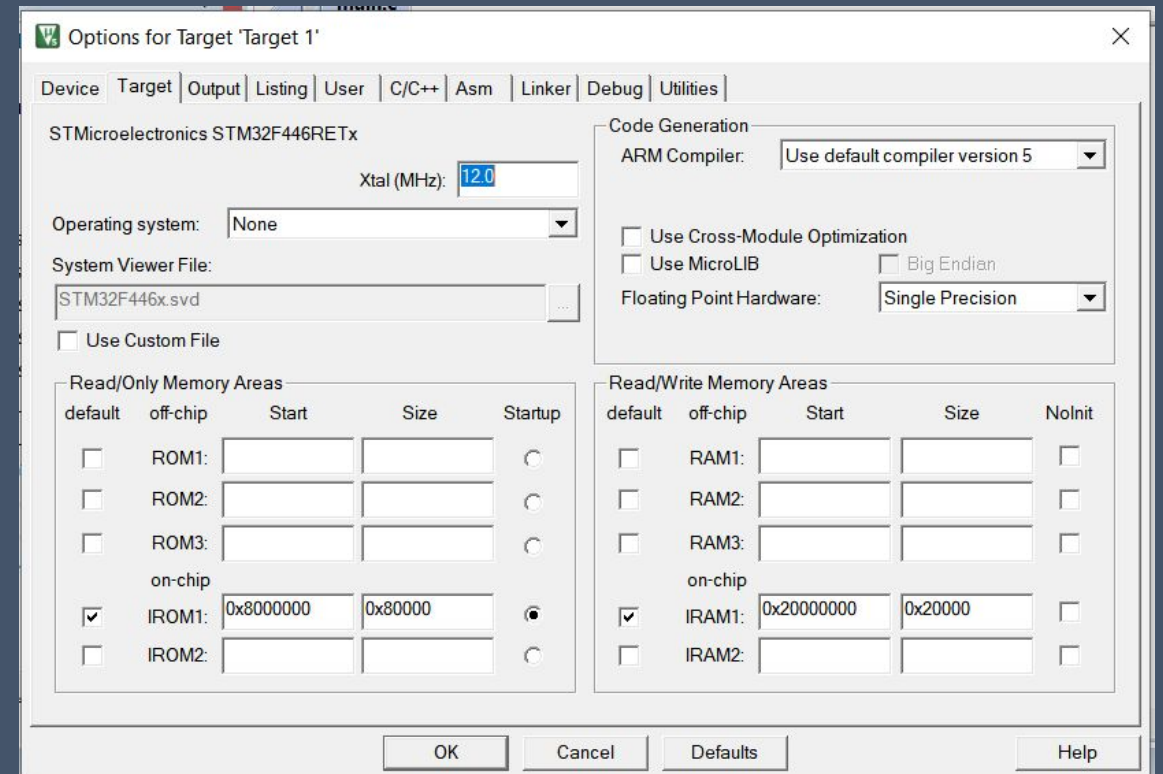- Select ST-Link Debugger from Drop down list shown in Fig. A. Also click on the radio button labeled Use so that the Use Simulator button is not chosen.
- Click on the setting button just next to it. The setting should look like that shown in Fig. B. If not, be sure your board is plugged in and you have debug option set up as shown in Fig. A.
- Click on OK for the target options and get back to the window with the c-code in it.
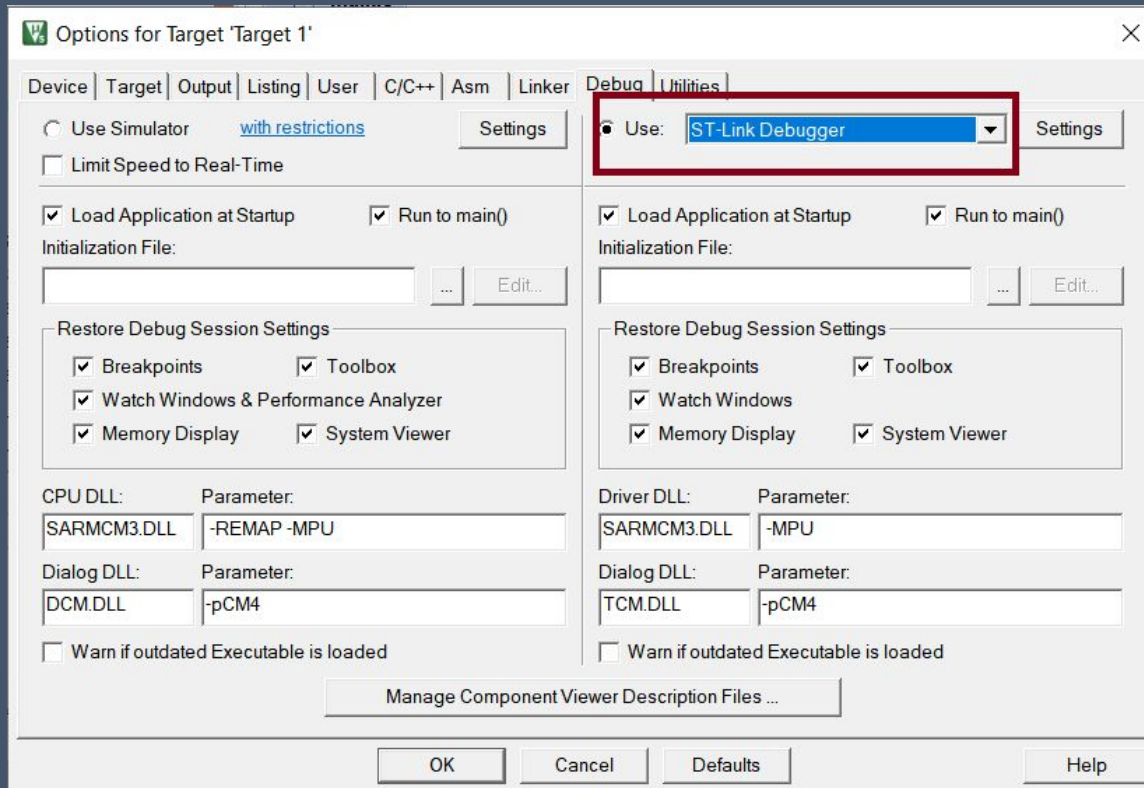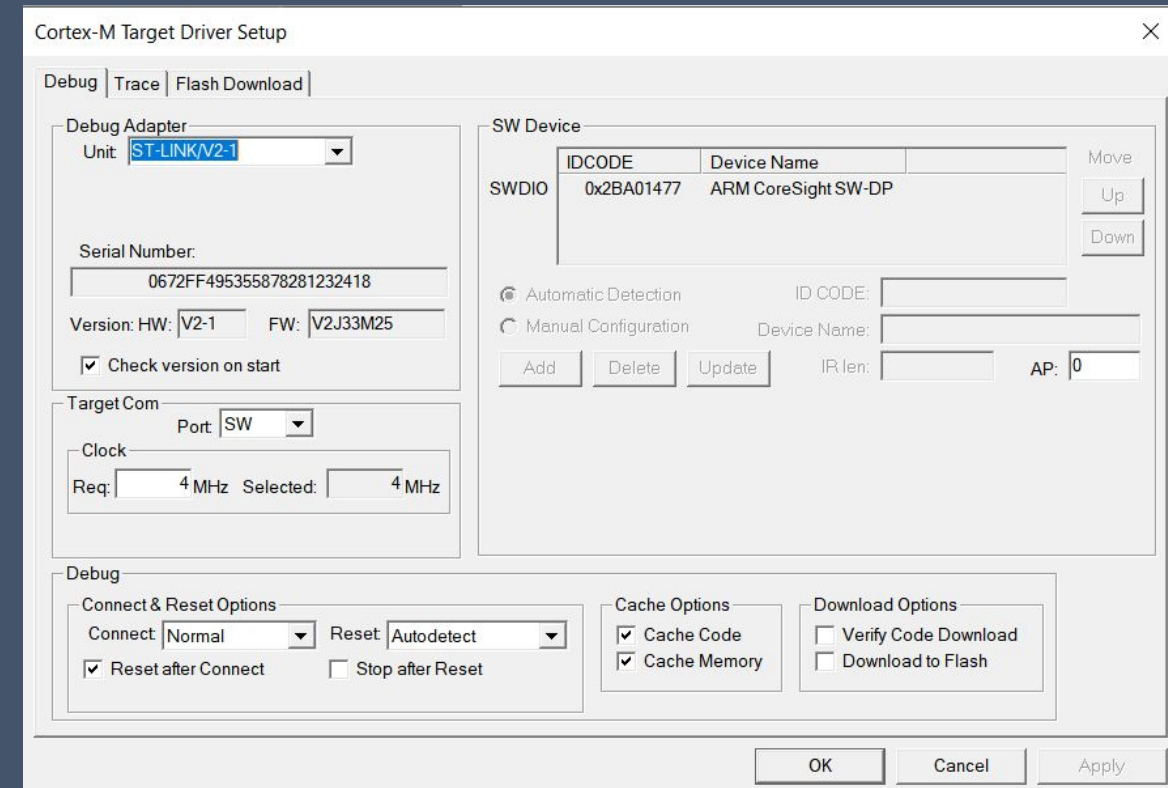

Fig. A

Fig. B

- At this point you are ready to upload your code to the board and run your program. To do this click on the Button shown in Fig. A

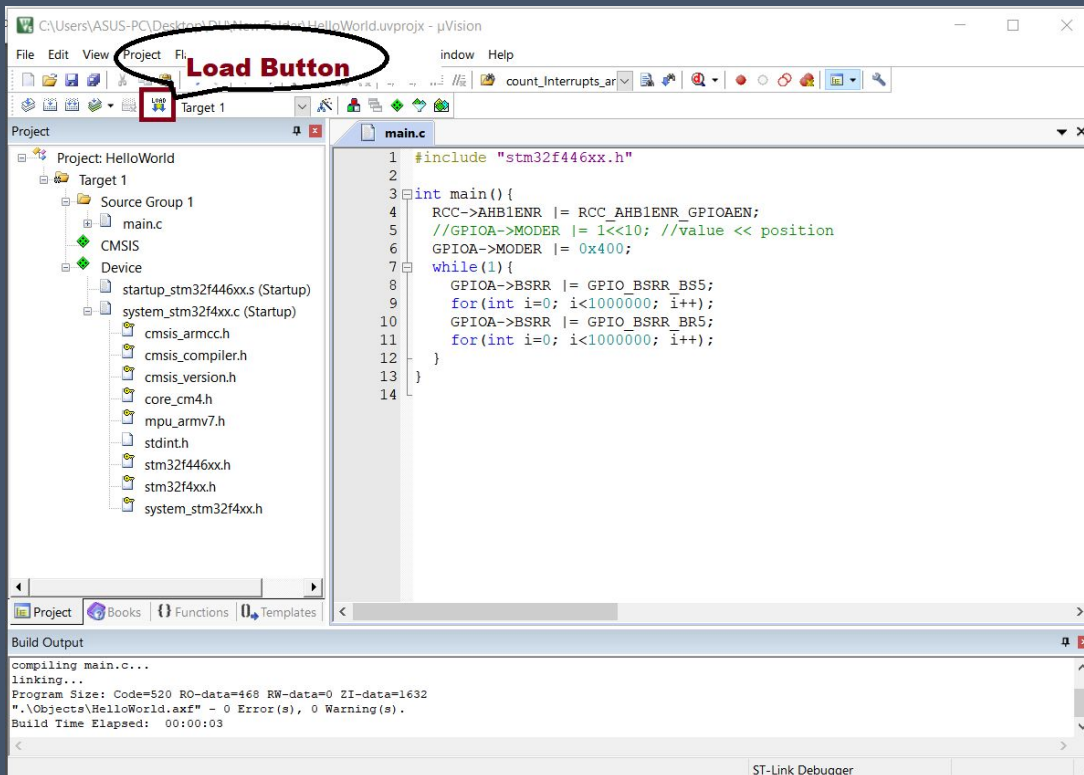- If you want to debug your code click on the button shown in Fig. B
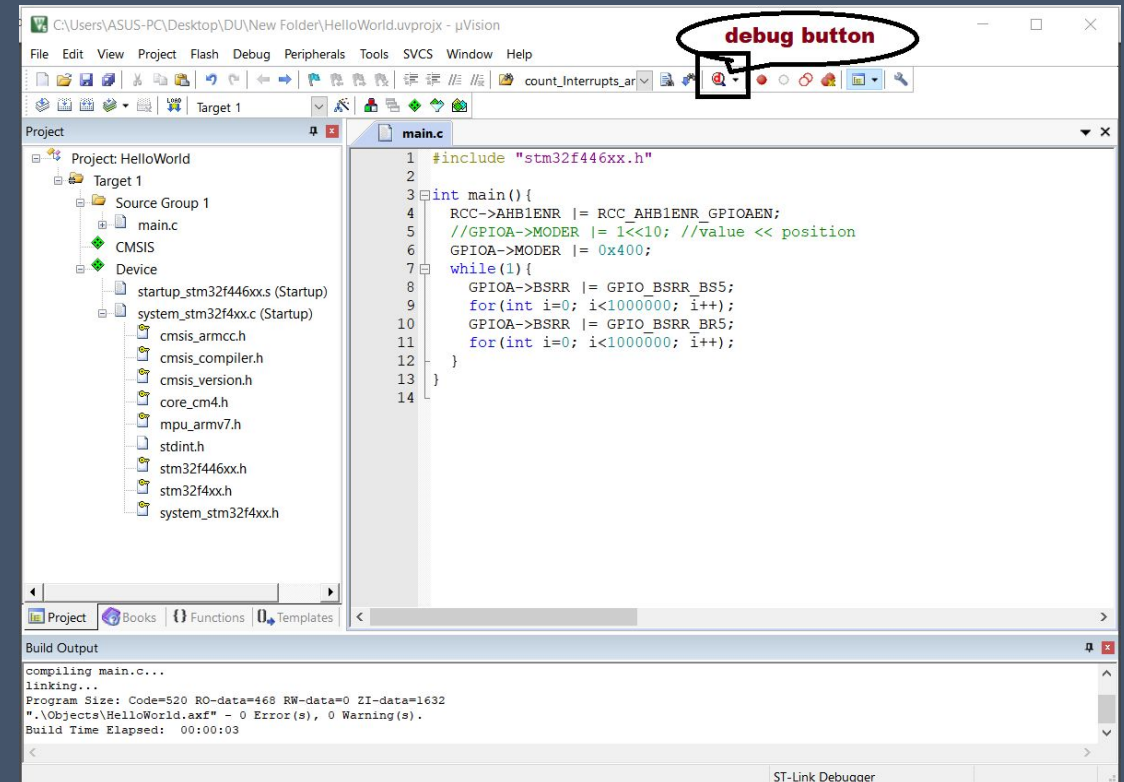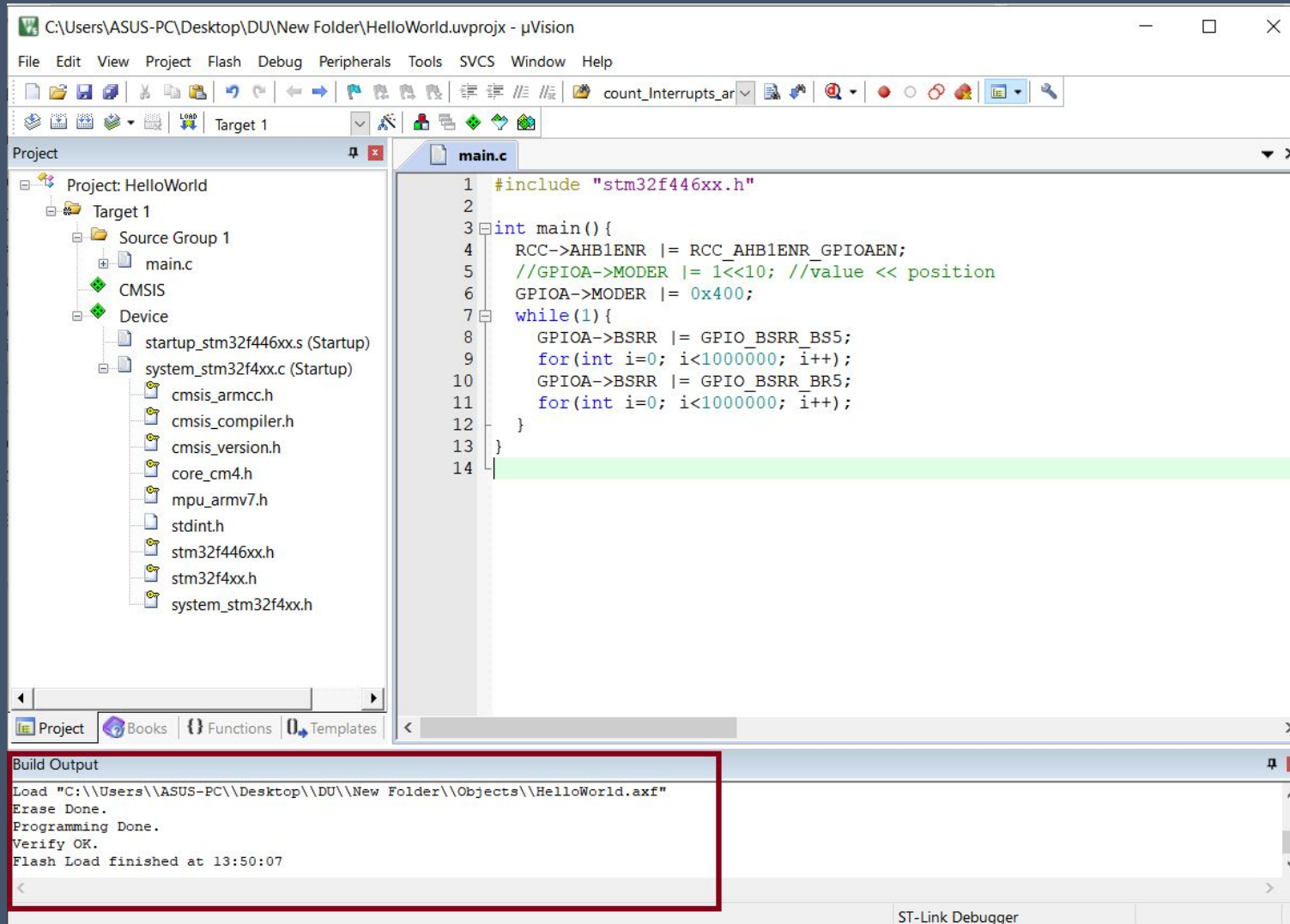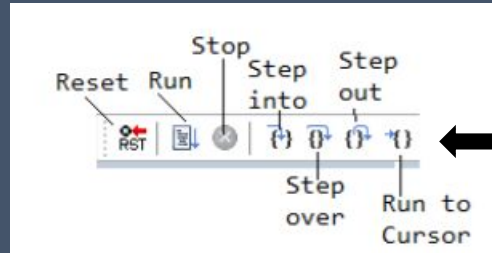

Fig. A

Fig. B

- If program is loaded successfully in the board you will get this message in the "Build Output" window shown in the figure below.

- Debug window will look like this in the figure shown below.

Thank You