Andhra Pradesh State Skill Development Corporation

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Embedded systems

MDK Installation and New project creation in Keil

MDK installation and new project creation

AIM: to the installation of MDK410 and new project creation in the Keil.
Software Required: Keil IDE and MDK410 package.

Components Required:

1. System -1

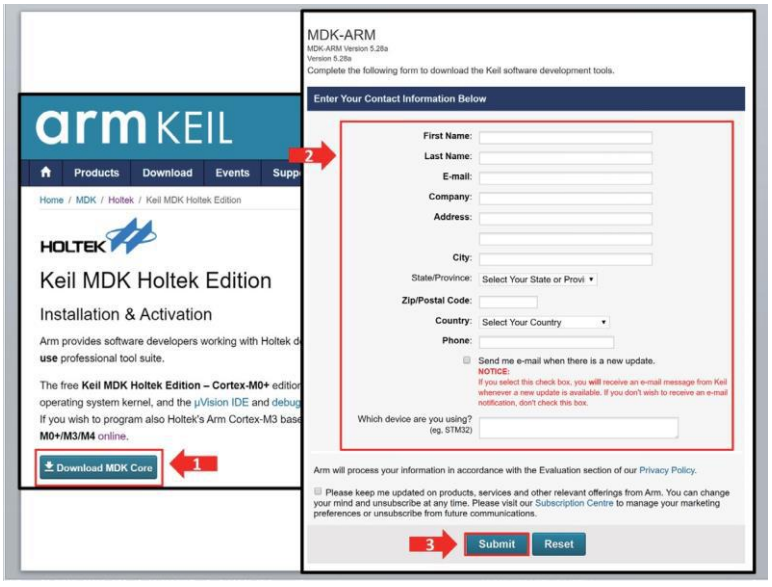
Theory:-

The new version µVision4 and 5 does not support many of the devices that were supported in the older versions yet. LPC2148 is one of the devices that are not supported. Hence, we need to add this device after successfully installing µVision4 or 5. To do this, go to the following link and download the executable file for Legacy Support for ARM7, ARM9, and CortexR: http://www2.keil.com/mdk5/legacy Download the Legacy support for the version of MDK downloaded and installed. We will have the IDE installed and ready to use with support for the device we intend to use, we will create a simple project.

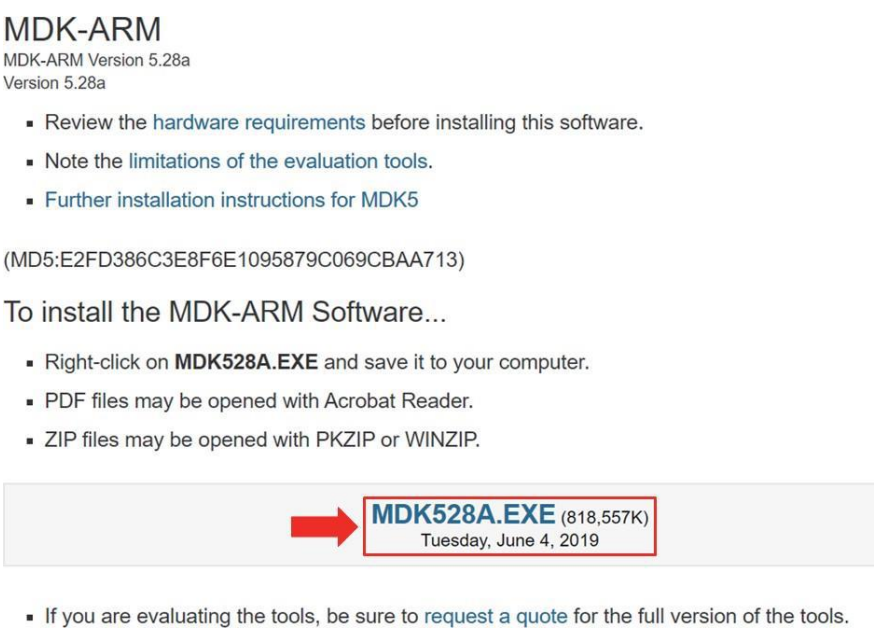
Procedure:-

Download the Keil MDK-ARM Software

The Keil MDK-ARM software can be downloaded from http://www.keil.com. Note that the evaluation version has a limitation on its 32 KB of code size. The following steps show how to download the Keil MDK-ARM software.
Step 1: Press the "Download MDK Core" button on the http://www2.keil.com/holtek/ht-edition website, the following screen will appear.
Step 2: Fill in the information in the window. Step 3: Press the "Submit" button.
Figure 1. Keil MDK-ARM Download

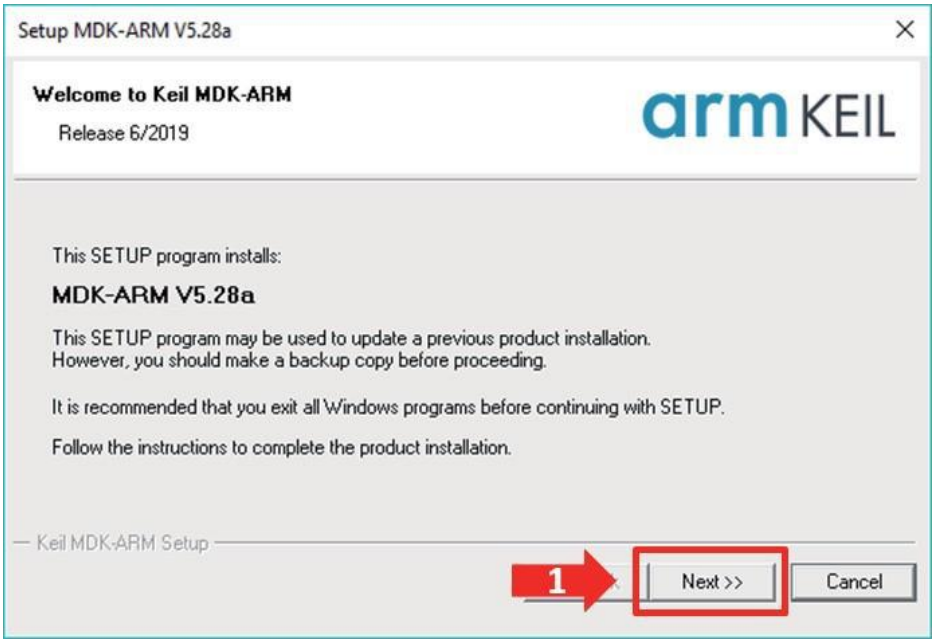


Step 4: Click the installation file download link as shown in the following figure. Refer to the "Installation Process" section for the installation steps.



Keil MDK-ARM Installation

The Keil MDK-ARM installation steps are shown as follows.
Step 1: Double-click on the MDK installation file with the icon. The filename is the "mdknnn. exe", where "nnn" represents the version number and then press the "Next" button to continue.

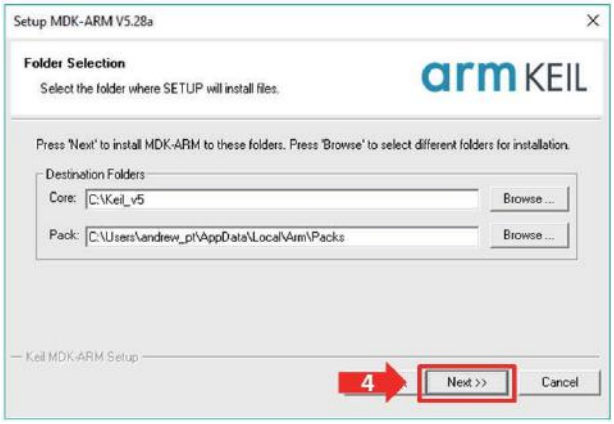


Keil MDK-ARM Installation

Step 2: Confirm the agreement by selecting “I agree to all the terms of the preceding License Agreement”.
Step 3: Press the “Next” button to continue.

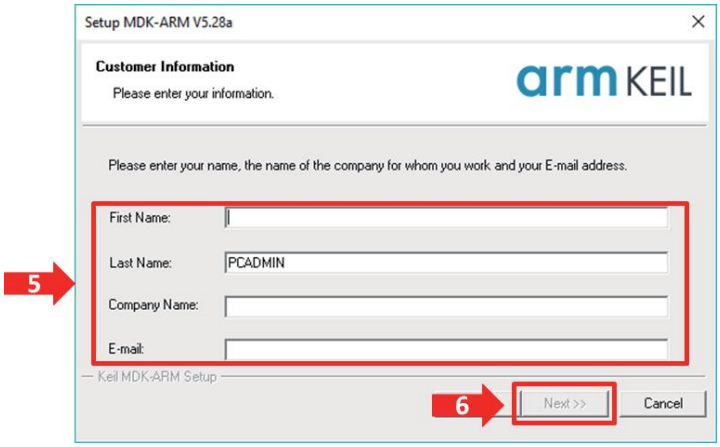
Keil MDK-ARM Installation – License Agreement Confirmation

Step 4: Confirm the installation path and press the “Next” button to continue.



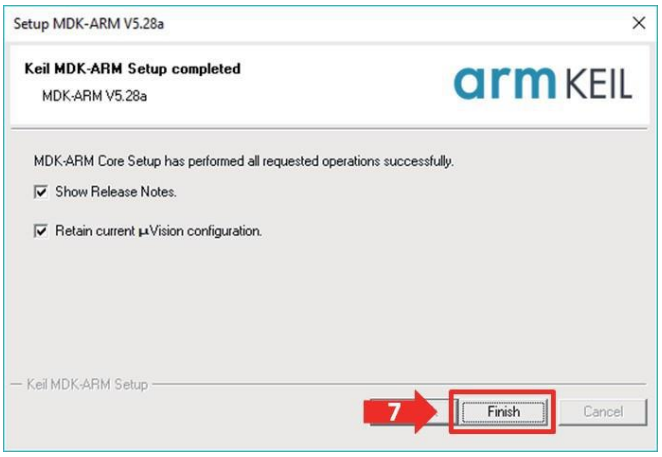
Keil MDK-ARM Installation – Destination Installation Path

Step 5: Fill in the personal information.
Step 6: Press the “Next” button to continue.



Keil MDK-ARM Installation – Personal Information

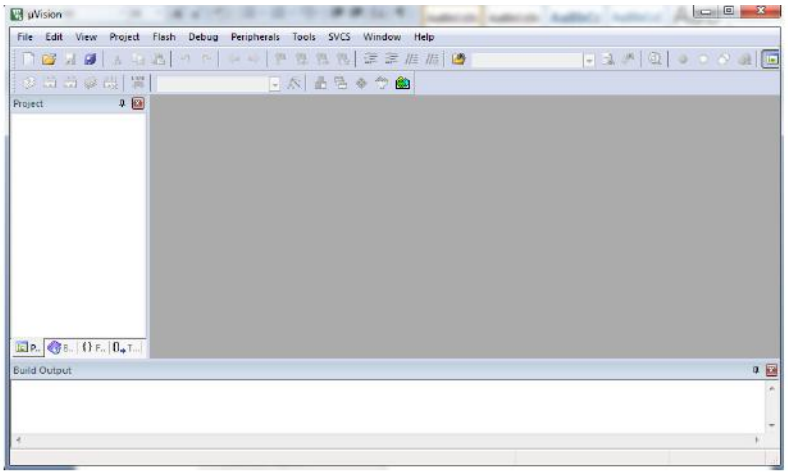
Step 7: Press the “Finish” button to exit the installation program when the installation setups are finished.



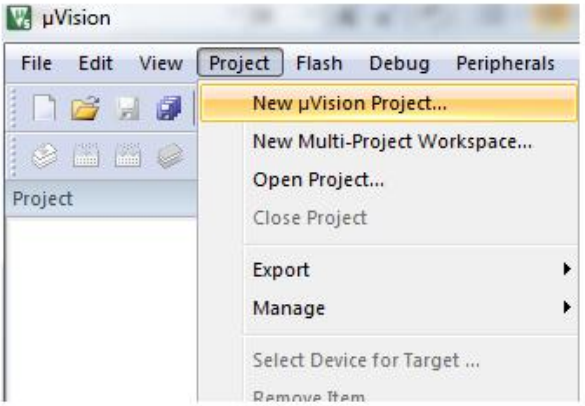
Keil MDK-ARM Installation – Completion

create a simple project in Keil IDE:-

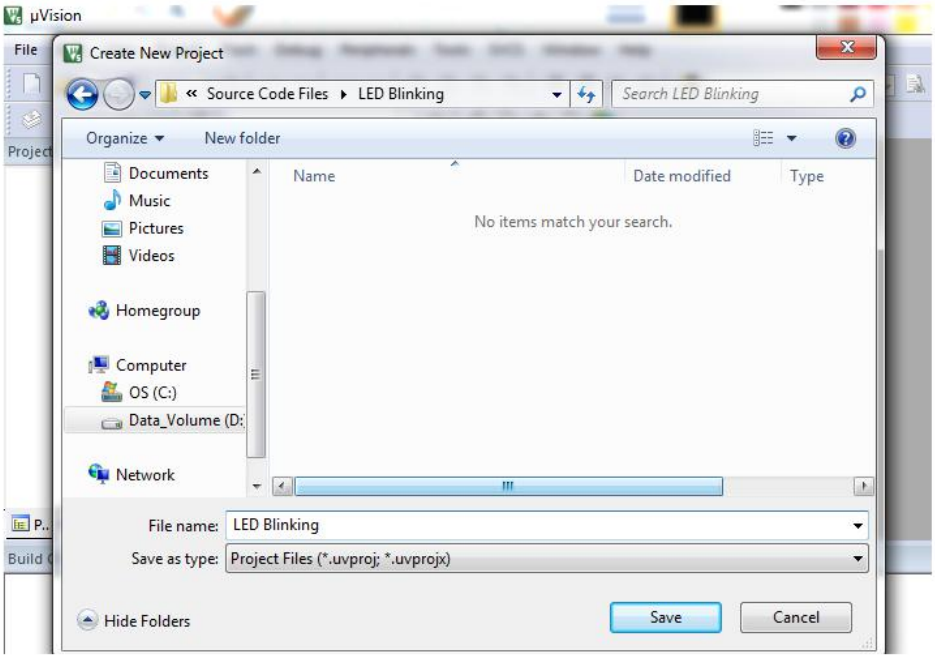
step1. Open Keil µVision from the icon created on your desktop.



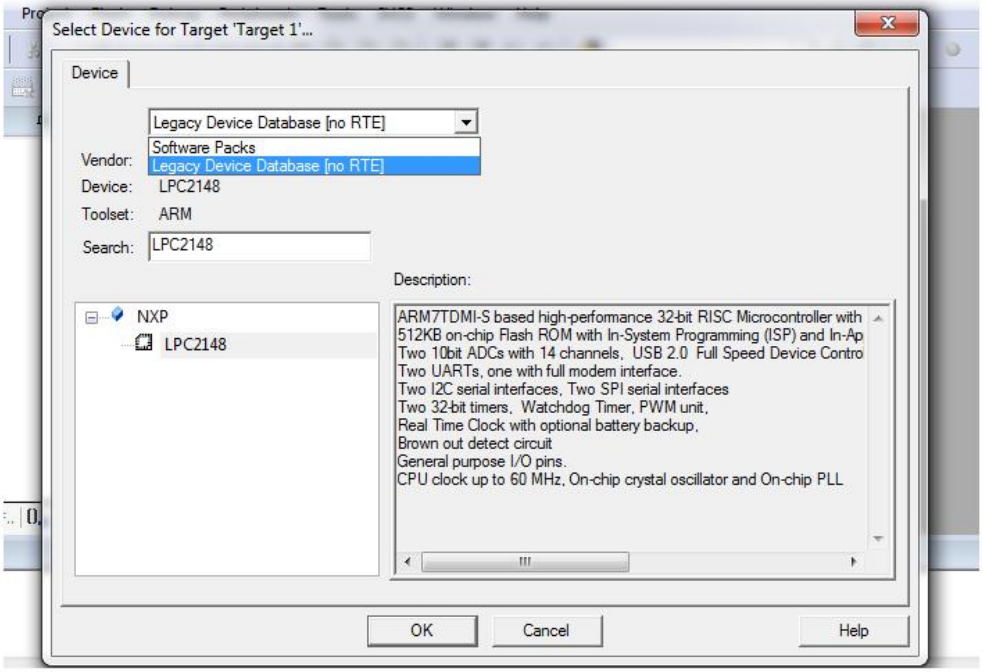
Step 2. Go to the **Project** tab. Select New **µVision Project ...**from that menu.



Step 3. **Create New Project** window will pop up. Select the folder where you want to create project and give a suitable name to the project. Then click on **Save**.

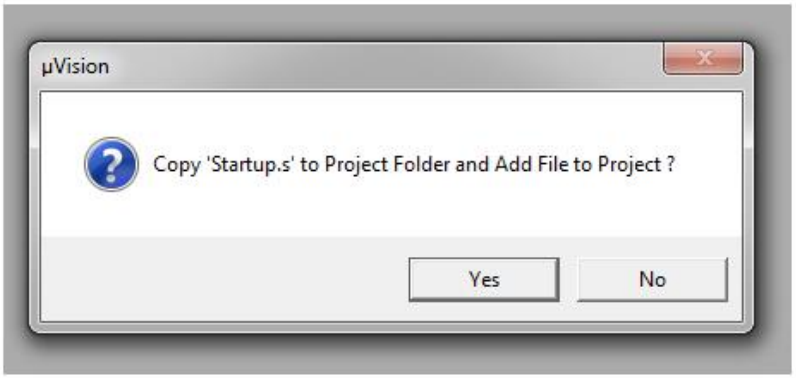


Step 4. **Select Device for Target: 'Target1'...**window will pop up next. It has a select window to choose between Software Packs or Legacy Device Database. As LPC2148 is in Legacy Device Database, choose Legacy Device Database.

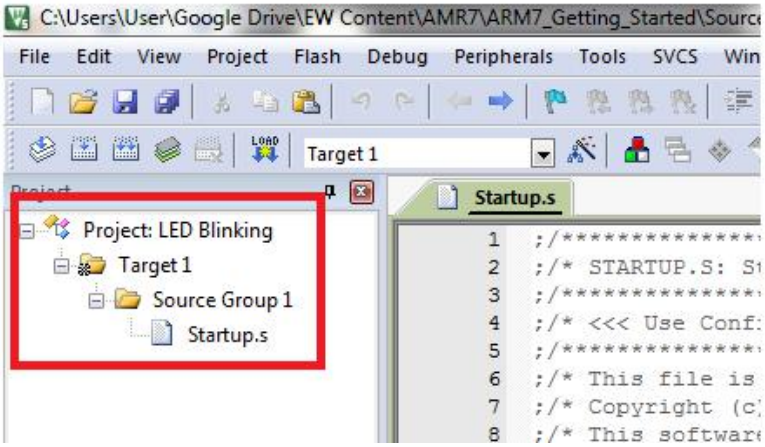


Type in LPC2148 in search and select the device under NXP with the name LPC2148 and click on OK.

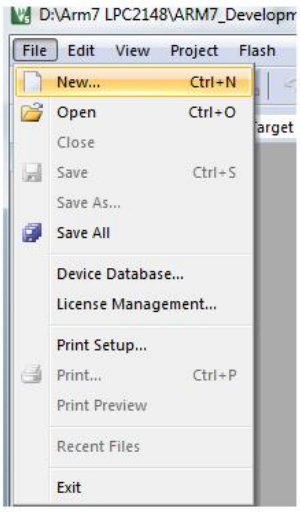
Step 5. A window will pop up asking whether to copy Startup.s to project folder and add file to project. Click on **Yes**.



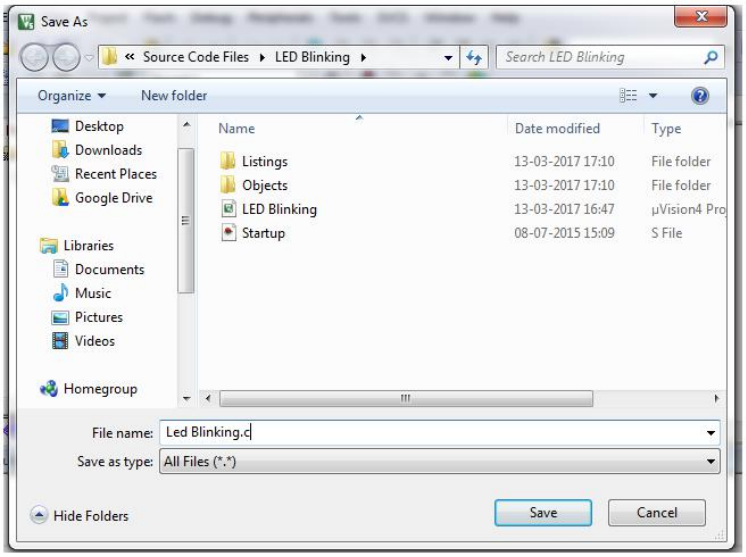
Step 6. The project name and its folders can be seen on the left side in the project window after the previous step is completed as shown below.



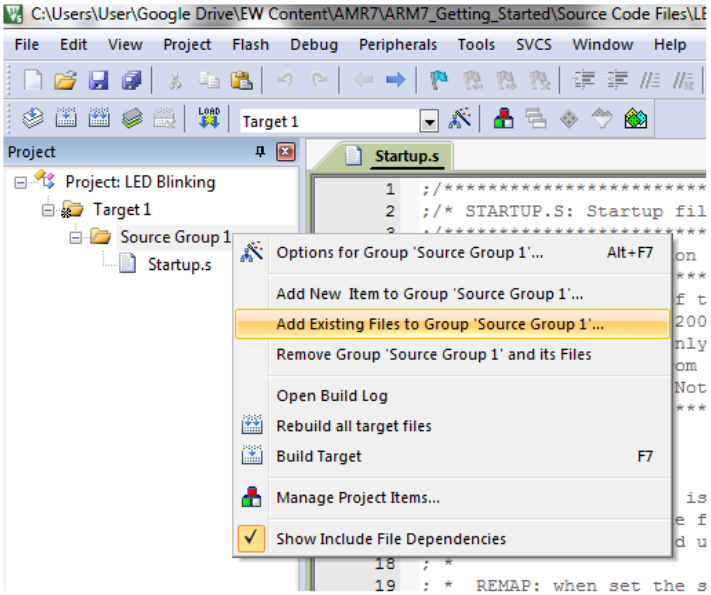
Step 7. Now go to File tab and add **New** file from the menu.

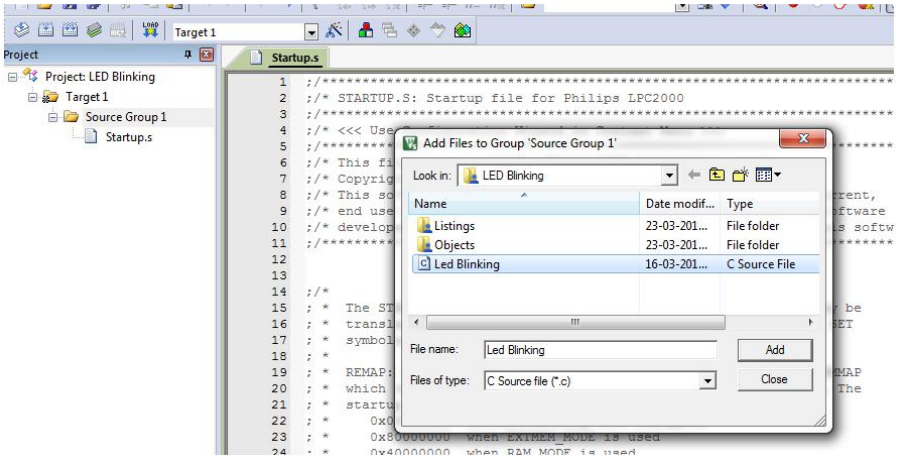


Step 8. Save the file from the previous step with a specific name. Add .c extension to the file name.



Step 9. Add this file to Source Group folder in the project window by right clicking on Source Group1 folder and selecting **Add Existing Files to Group 'Source Group1'...**

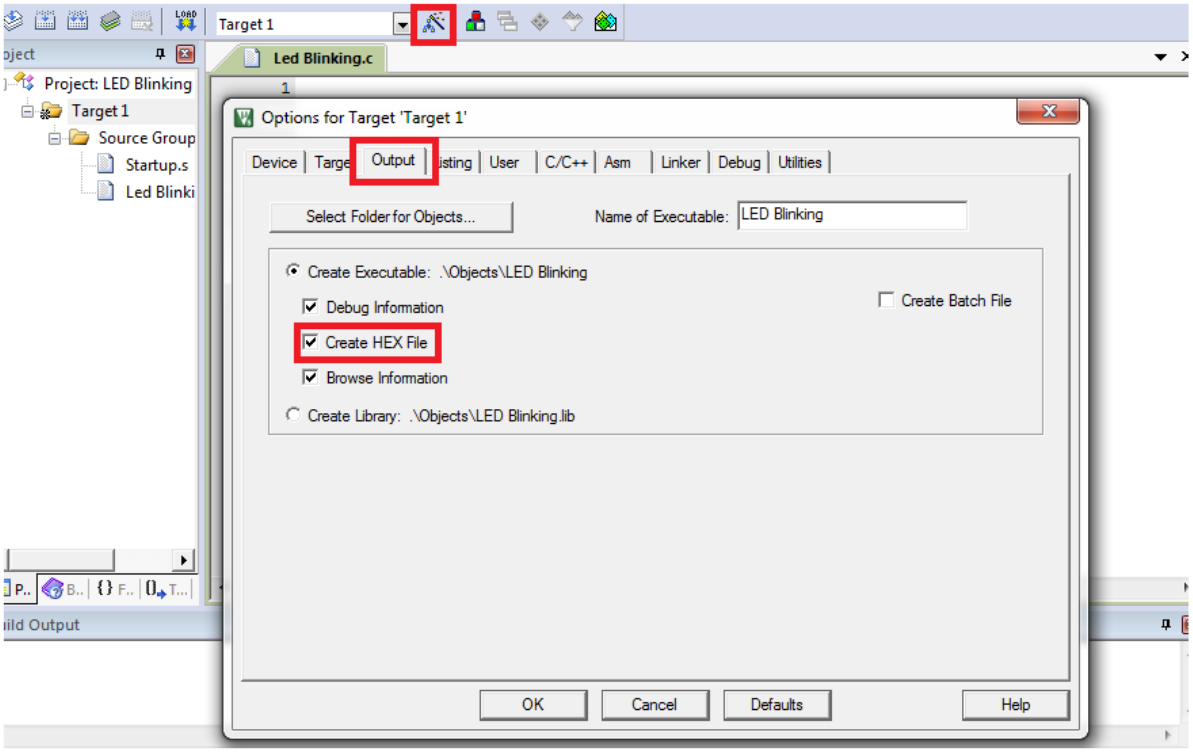




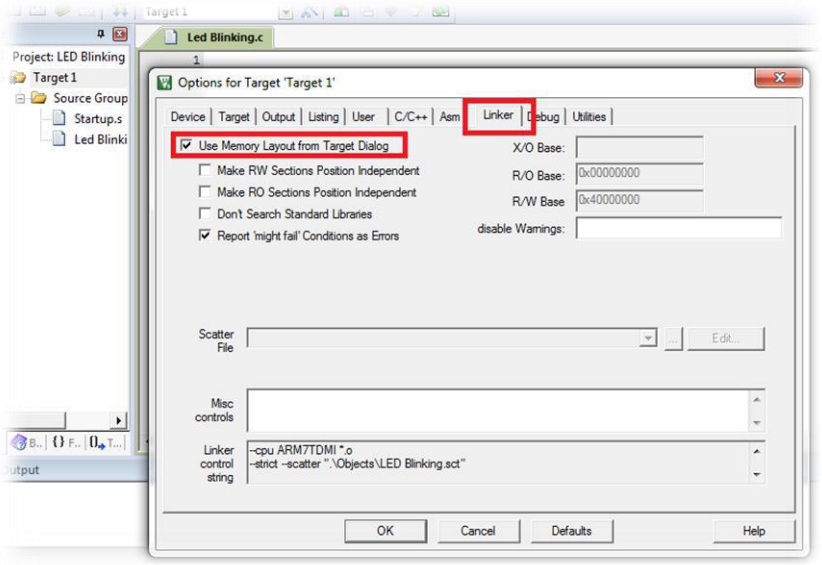
Select the previously saved file from the window that pops up and add it to the Source Group1. In our case, LED Blinking.c

Step 10. Now click on the **Options for Target 'Target1'...** symbol shown in red box in the image below or press **Alt+F7** or right click on Target1 and click on **Options for Target 'Target1'...**.

Options for target window will open. Go to the **Output** tab in that window. Tick '√' **Create HEX File** option. We need to produce HEX file to burn it into the microcontroller.



In the options for target window, go to the **Linker** tab. Select the **Use Memory Layout from Target Dialogue** option.



Then click on OK.