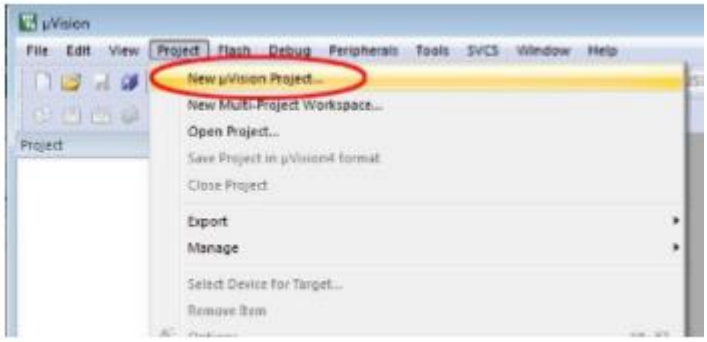
Keil - Start a Project Step by Step

1. Launch Keil uVision.

Create a Project with Project Wizard

2. From the menu, select Project > New uVision Project…

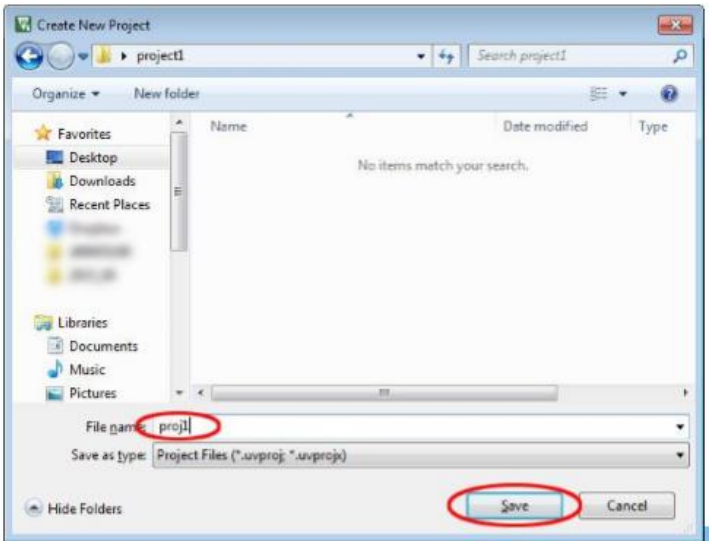


3. In the New uVision Project window, browse the location you need to save the project

4. If you did not create a folder for the project before launching uVision, you may create a folder using the New folder menu item in the Create New Project window.

5. Enter a name for the project folder. We will call it project1 and click Open. This will bring us into the newly created folder project1.

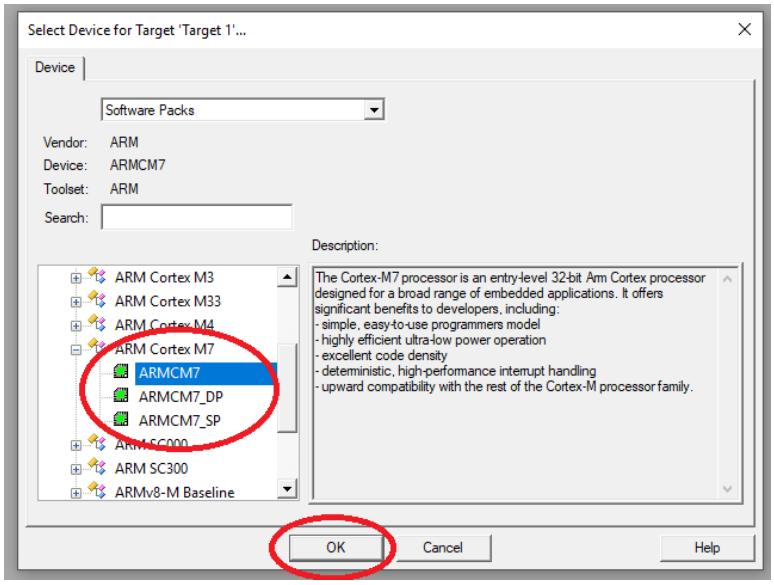
6. Enter a name for the project file. We will call it proj1 and click Save.



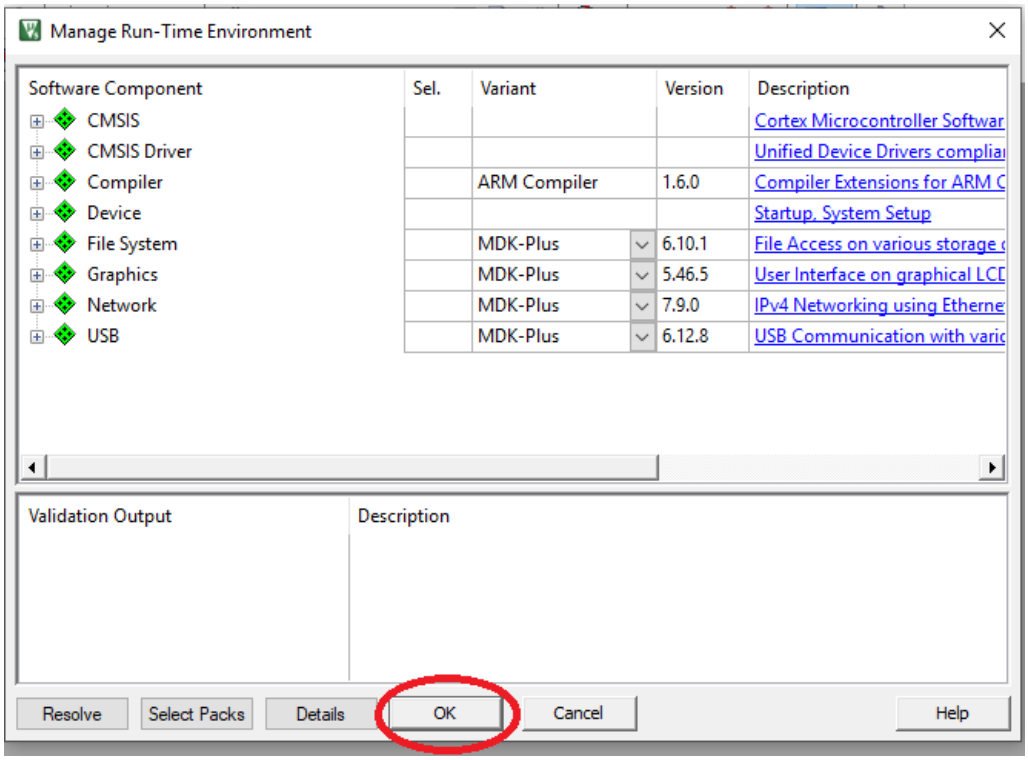
7. The Select Device for Target 'Target 1'… window will pop up. A list of devices supported will show up in the window at the lower left corner. These are the devices with the Device Family Software Pack installed. You may start drilling down the selections to find the device or type a substring of the

device code in the Search window and the display in the window will narrow down to only the ones with match.

8. We will be using ARMCM4_FP. To select this device, click on the + sign to expand the selections until you find the device. Click to highlight the device then click OK button.



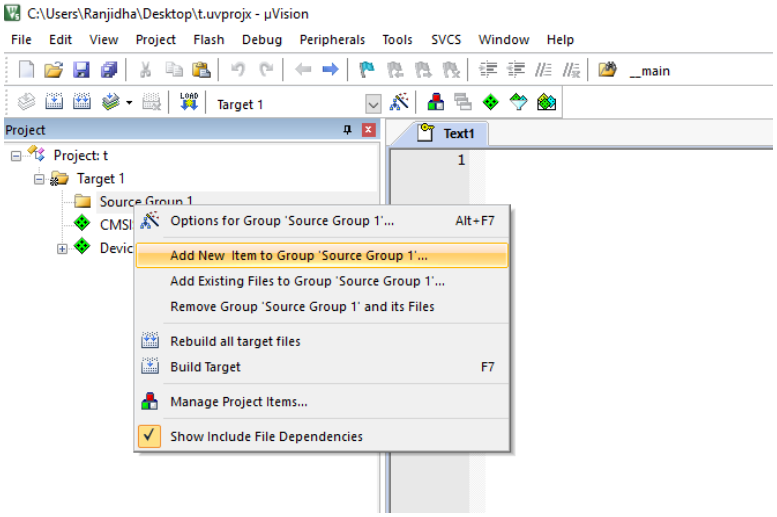
9. A dialog box to Manage Run-Time Environment pops up. Click OK to close it.



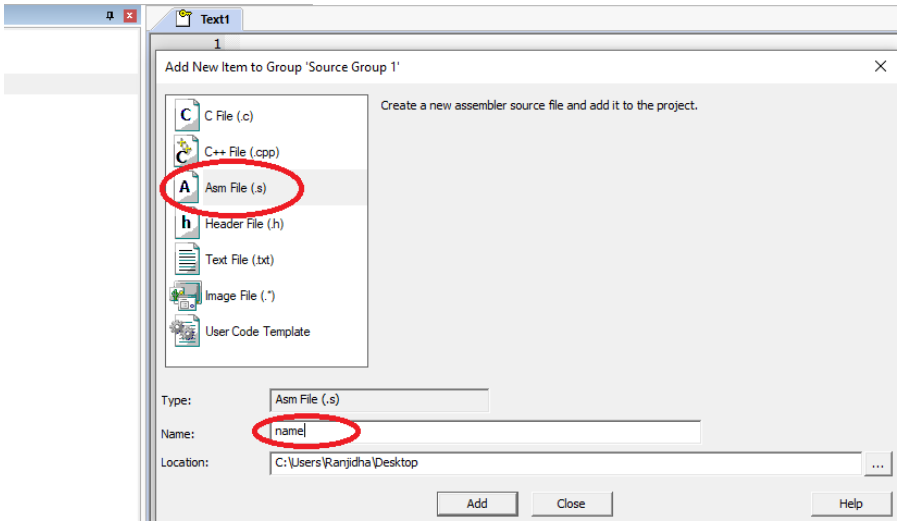
10. In the Project window, a target was created with the default name Target 1. Click on the + sign to the left of Target 1 to expand the folder. A default folder for source code files was created with the name Source Group 1.

Adding a Source File to the Project

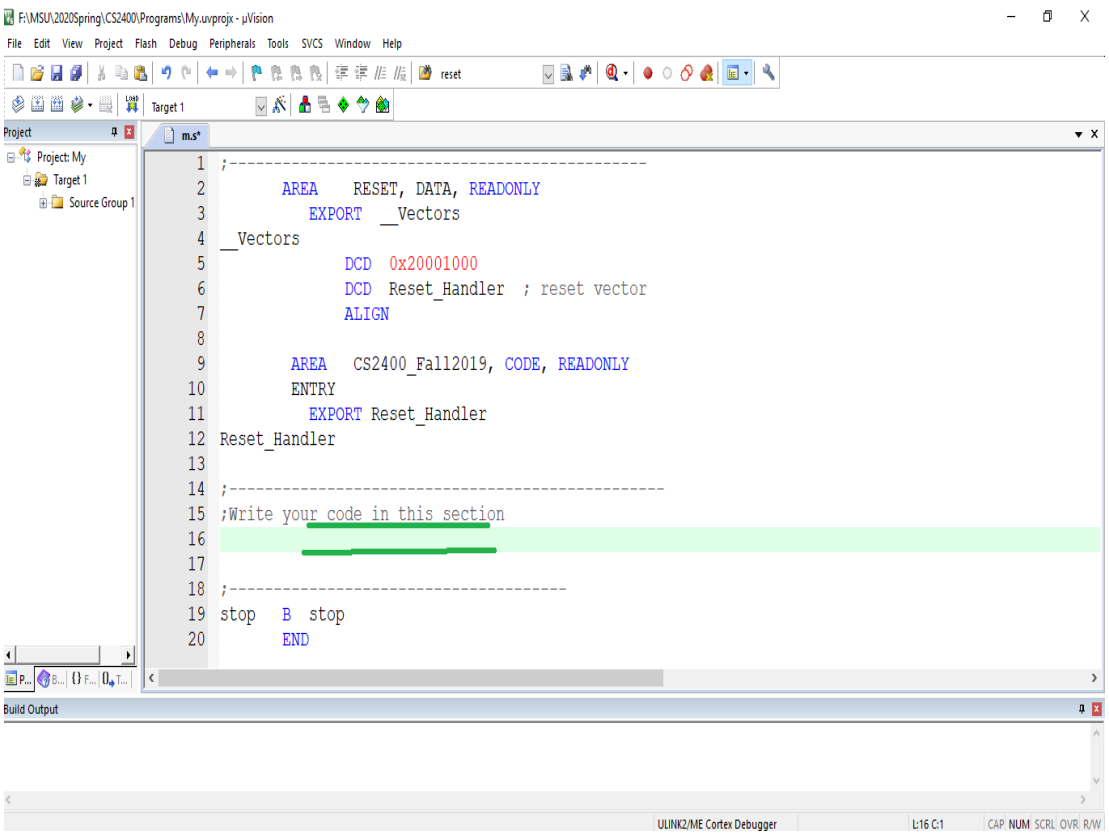
1. Right Click the Source Group Folder and choose Add New Item to Group



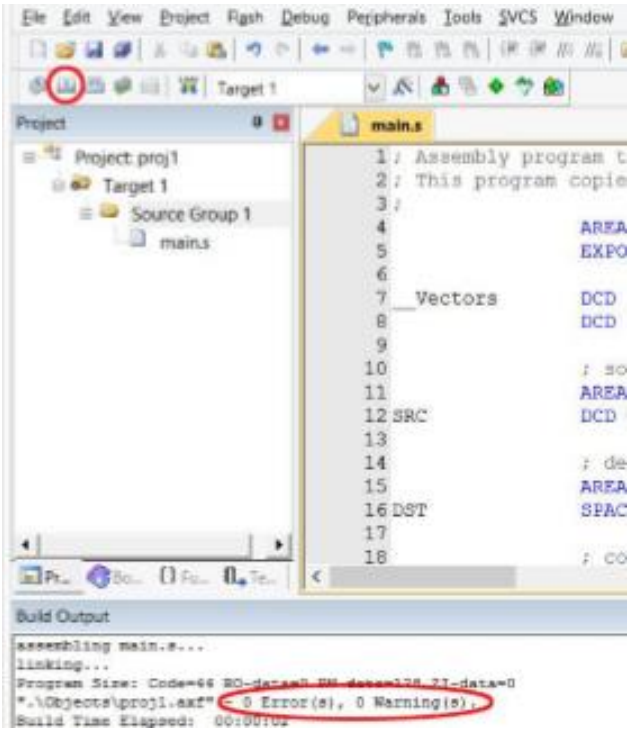
2. Choose Asm Files(.s) and give filename and Add.



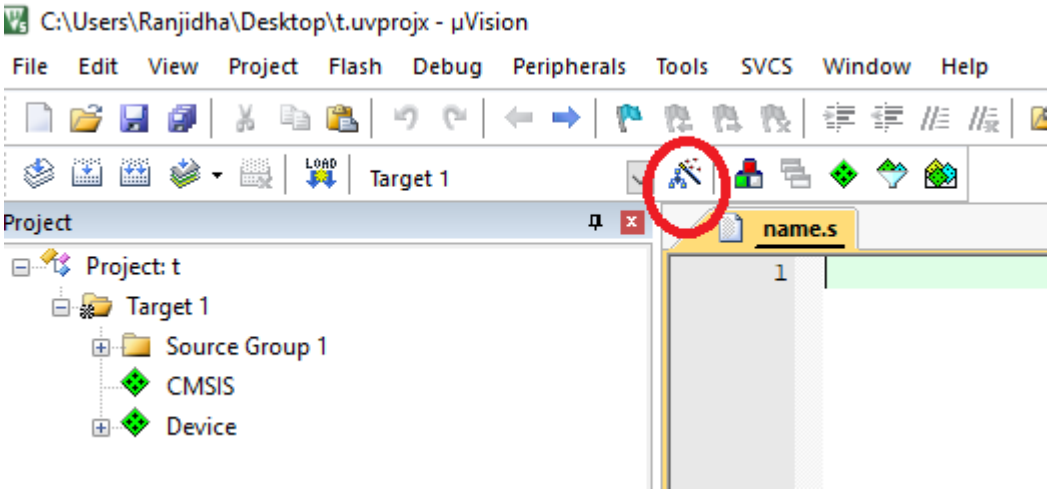
3. Type the code in the “asm” file and build. Copy and paste default code given in Moodle. Write your code in the space marked with green lines.



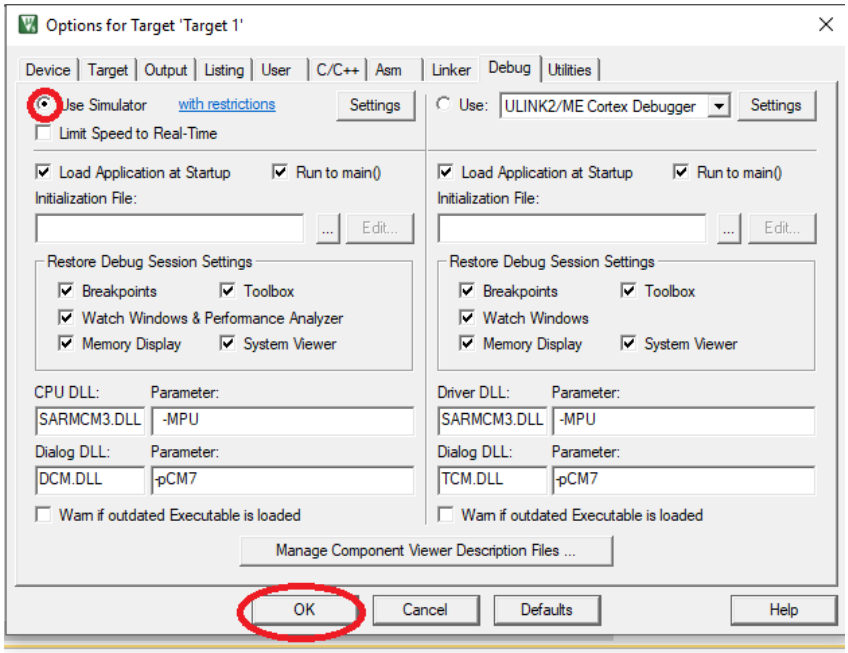
4. To Build the Project, click on the Build button and wait for the build to complete. Make sure there are no error messages or warning messages.



5. To test the program with the simulator. Click on the Options for Target button.

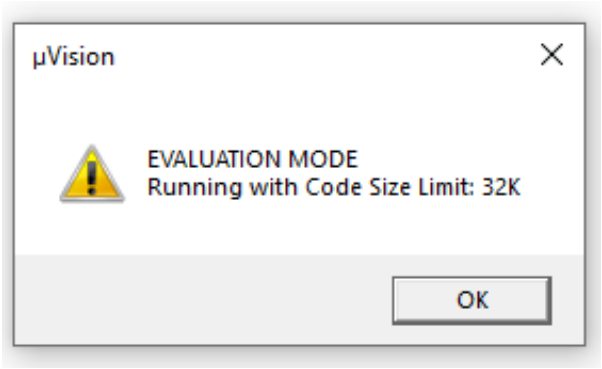


6. Select Debug tab and click the radio button and select Use Simulator on the left to test the code with the simulator. Click OK.



7. To simulate the program, you need to go into the debugger. Click the Debug button on the right.

8. If you are running MDK-ARM Lite Edition, a message window will pop up to warn the code size limitation. Click OK to proceed.



9. When entering the debugger, the IDE changes the perspective to the debug view. Where you can see the values in registers.

Sample Program

```
;-------------------------------------------------
        AREA    RESET, DATA, READONLY
            EXPORT   __Vectors
__Vectors
                DCD  0x20001000
                DCD  Reset_Handler  ; reset vector
                ALIGN

          AREA   CS2400_Fall2019, CODE, READONLY
          ENTRY
            EXPORT Reset_Handler
Reset_Handler
;-------------------------------------------------
;Write your code in this section
    MOV R0,#0x40
    ADD R0,#1

;-------------------------------------
stop    B  stop
        END
```