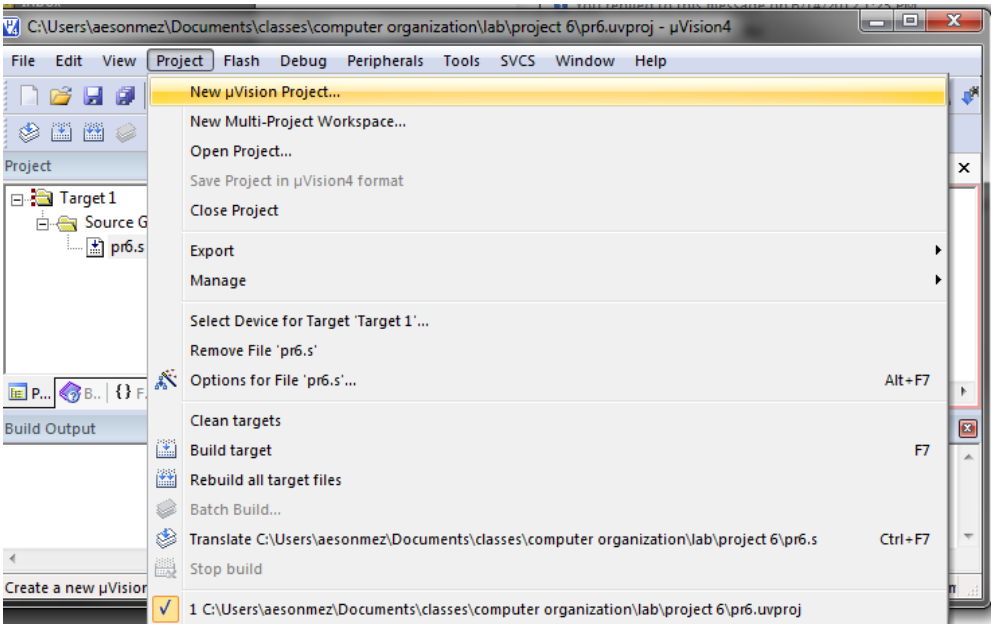
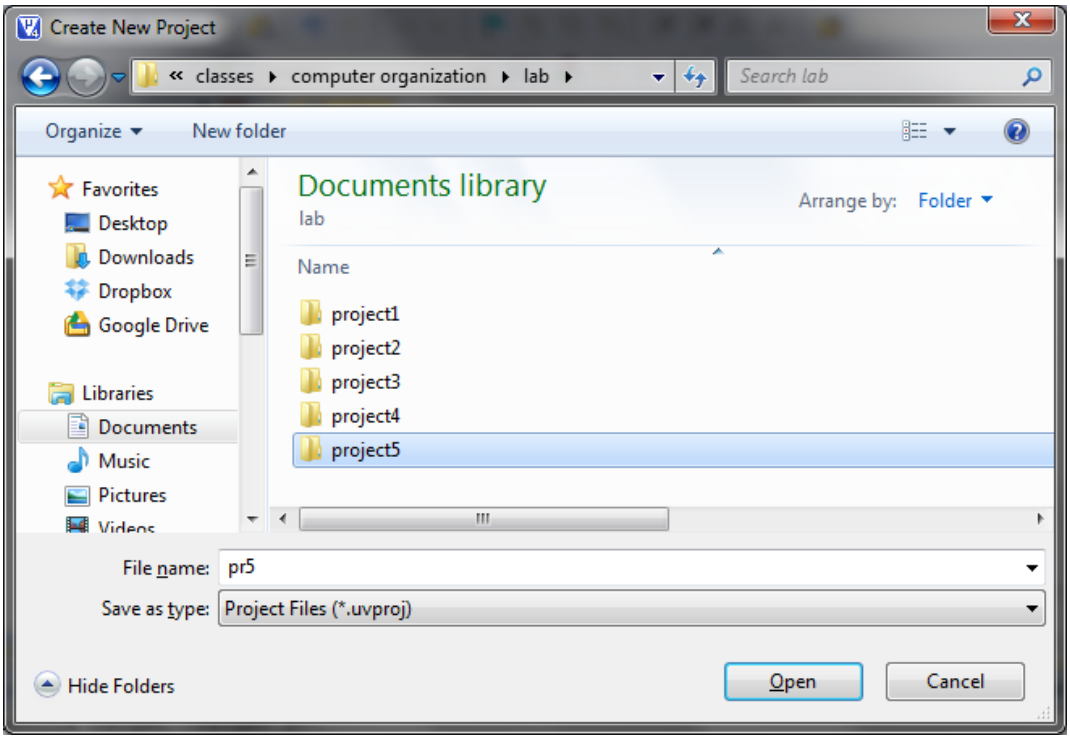
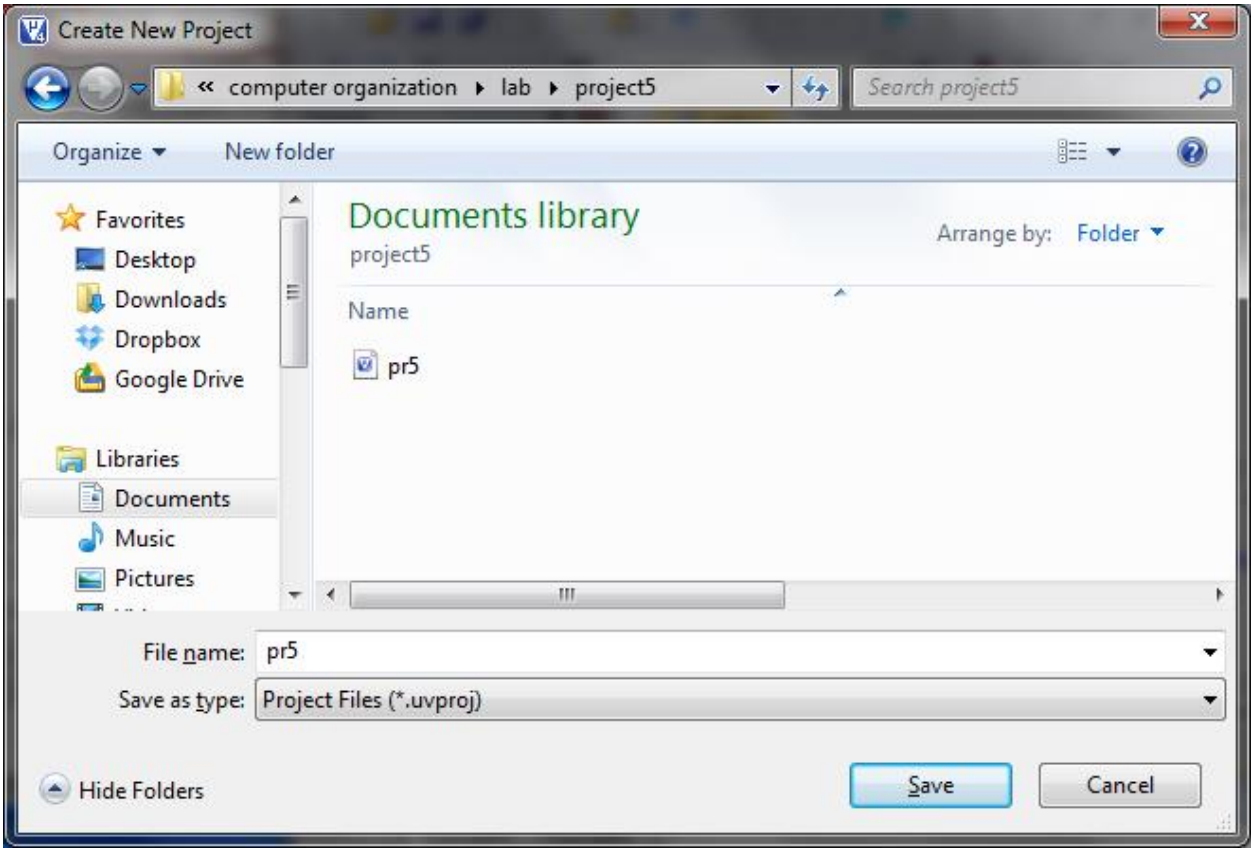
CREATE A PROJECT

1) First you need to create a new project

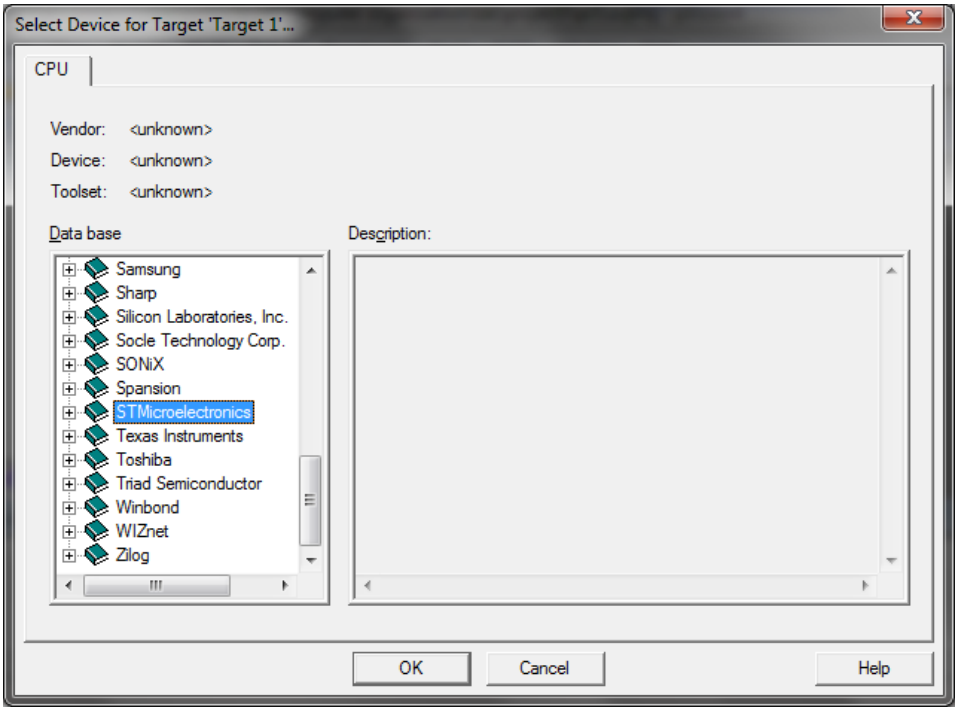


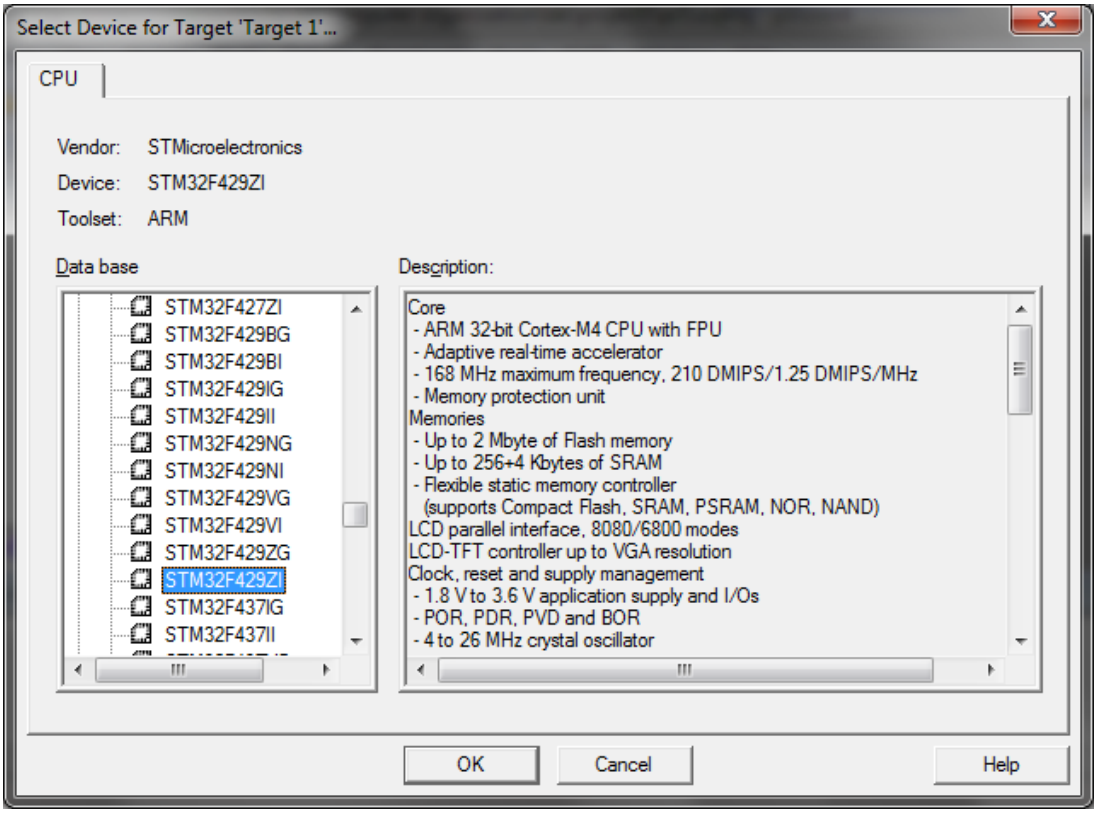
2) Create a project folder, give a project name and save project in that folder

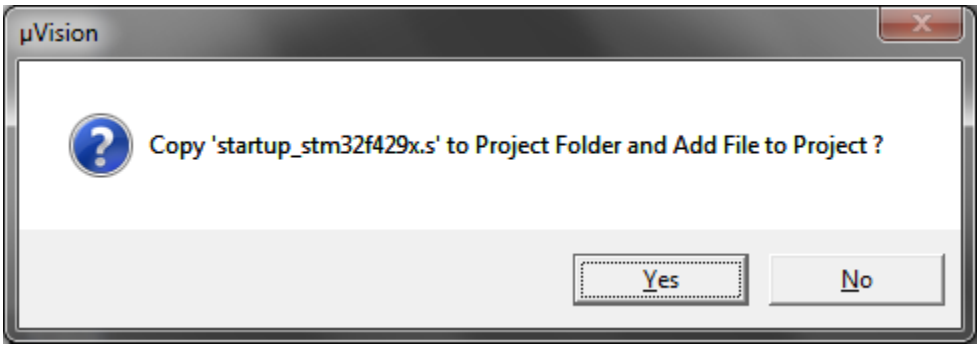




3) Choose STM Microelectronics then 32F429ZI



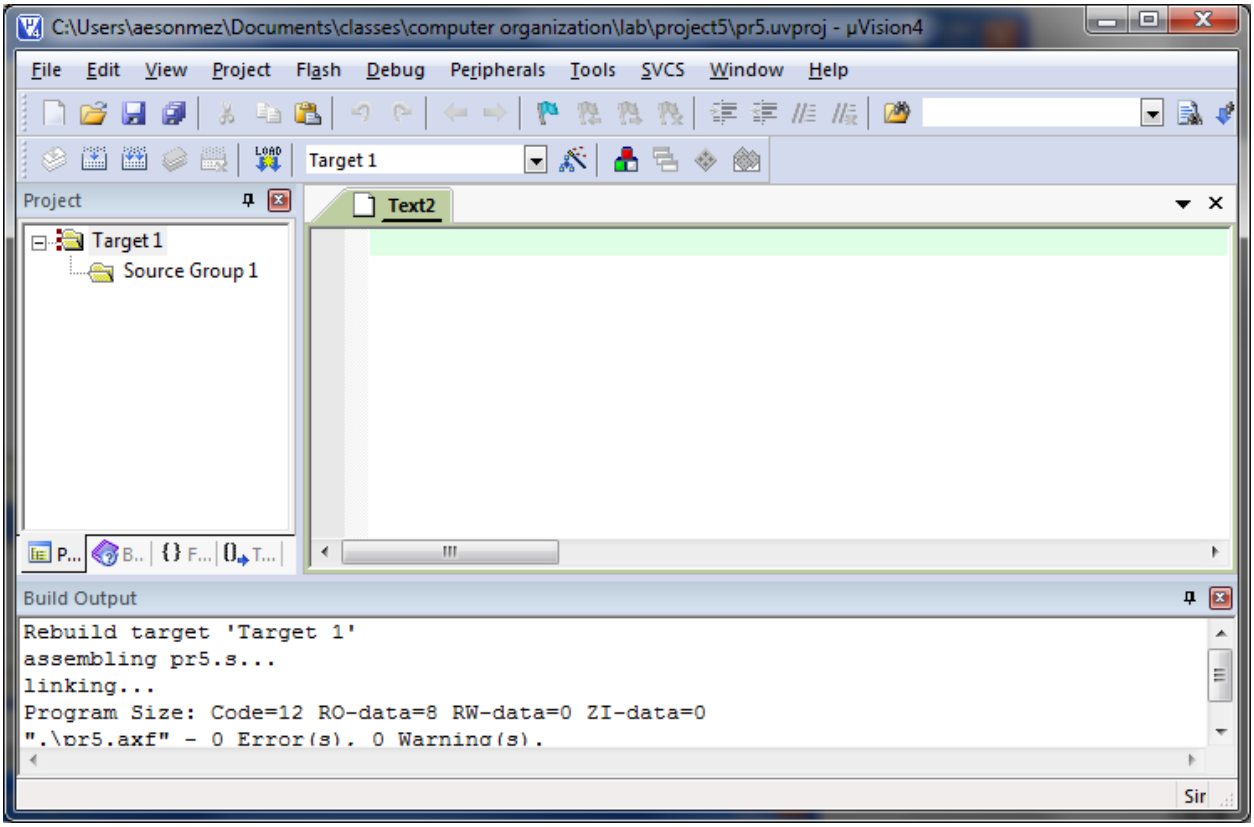




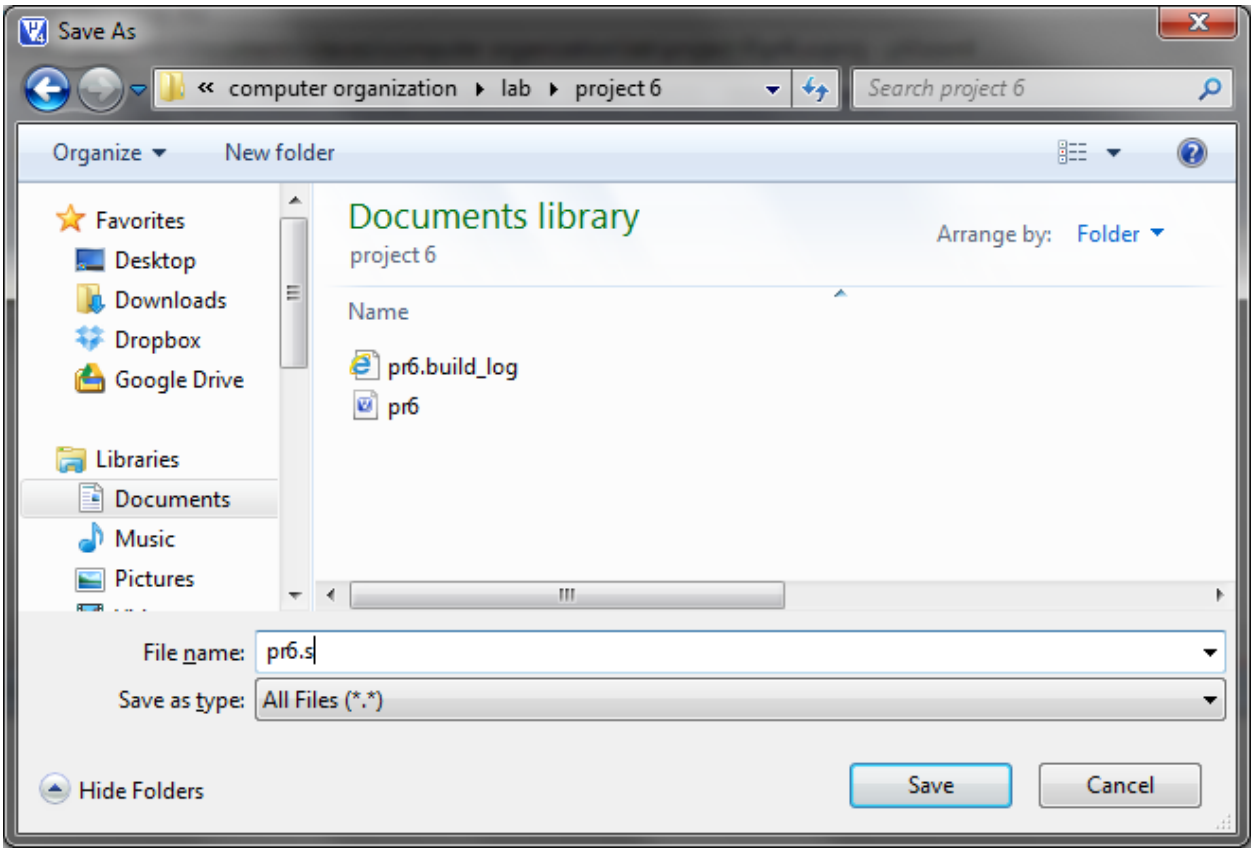
Choose NO on this screen

CREATE A SOURCE FILE

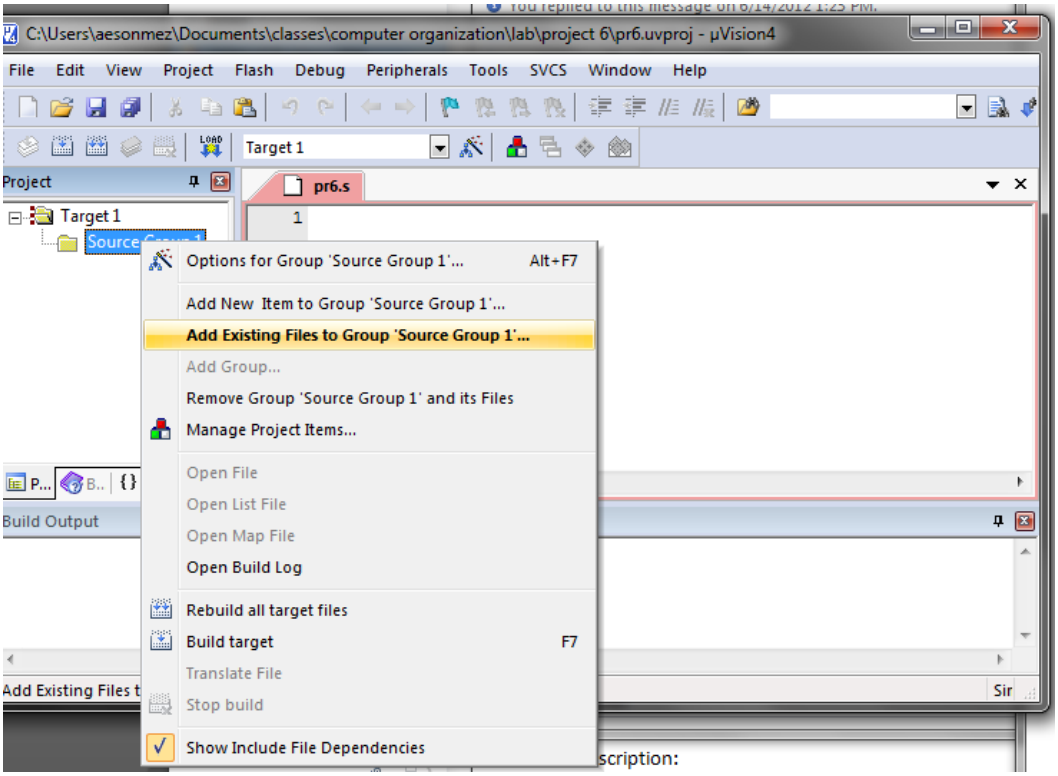
4) Create a new empty document, this is going to be the source file

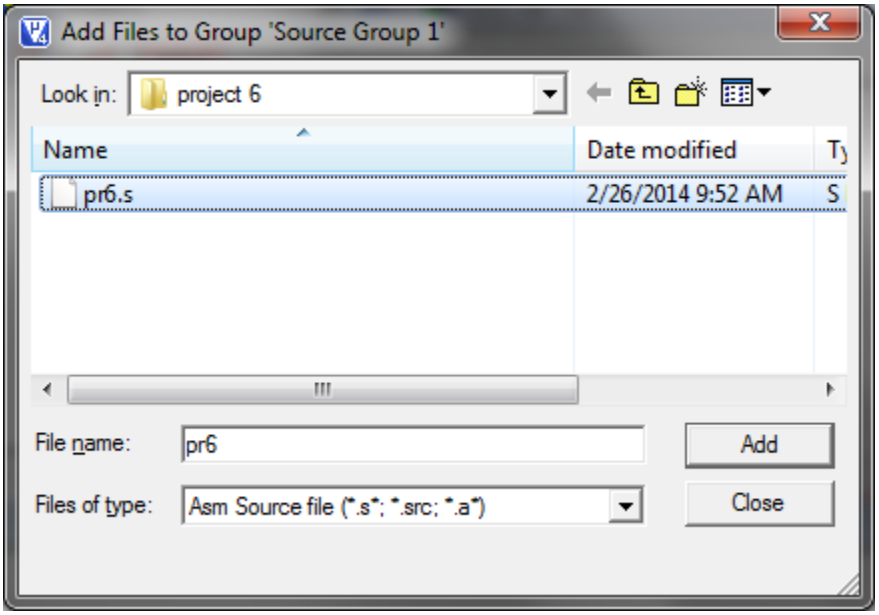


5) Save it to the project folder, by adding .s to the file name.



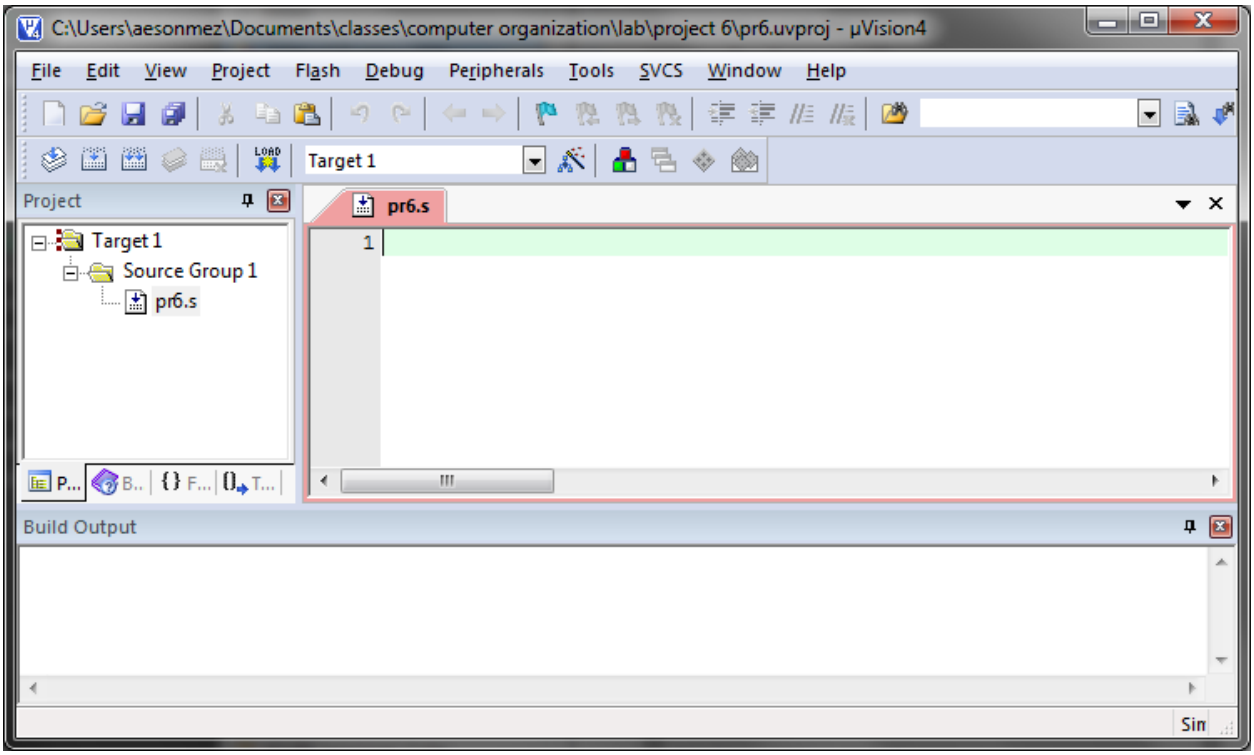
6) Include this file to the project





Add, then close

7) Now you should be able to see the source file under project



WRITING YOUR CODE

1) Start with the header

```
;;; Directives
        PRESERVE8
        THUMB

; Vector Table Mapped to Address 0 at Reset
; Linker requires __Vectors to be exported

        AREA    RESET, DATA, READONLY
        EXPORT  __Vectors

__Vectors
       DCD  0x20001000     ; stack pointer value when stack is empty
        DCD  Reset_Handler  ; reset vector

        ALIGN

; The program
```

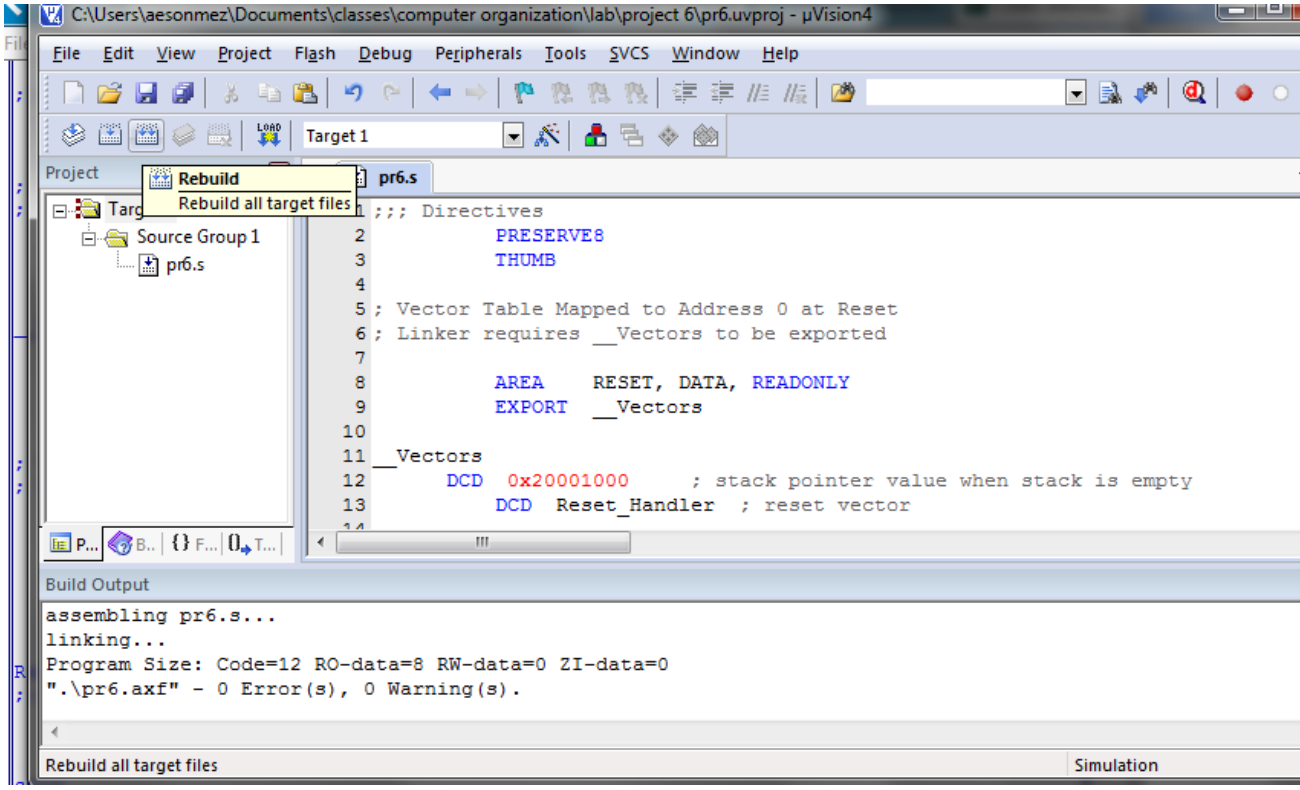
```
; Linker requires Reset_Handler

        AREA    MYCODE, CODE, READONLY

        ENTRY
        EXPORT Reset_Handler


Reset_Handler
;;;;;;;;;;User Code Starts from the next line;;;;;;;;;;;;
```

2) Then add your code, leave tab spaces before each line

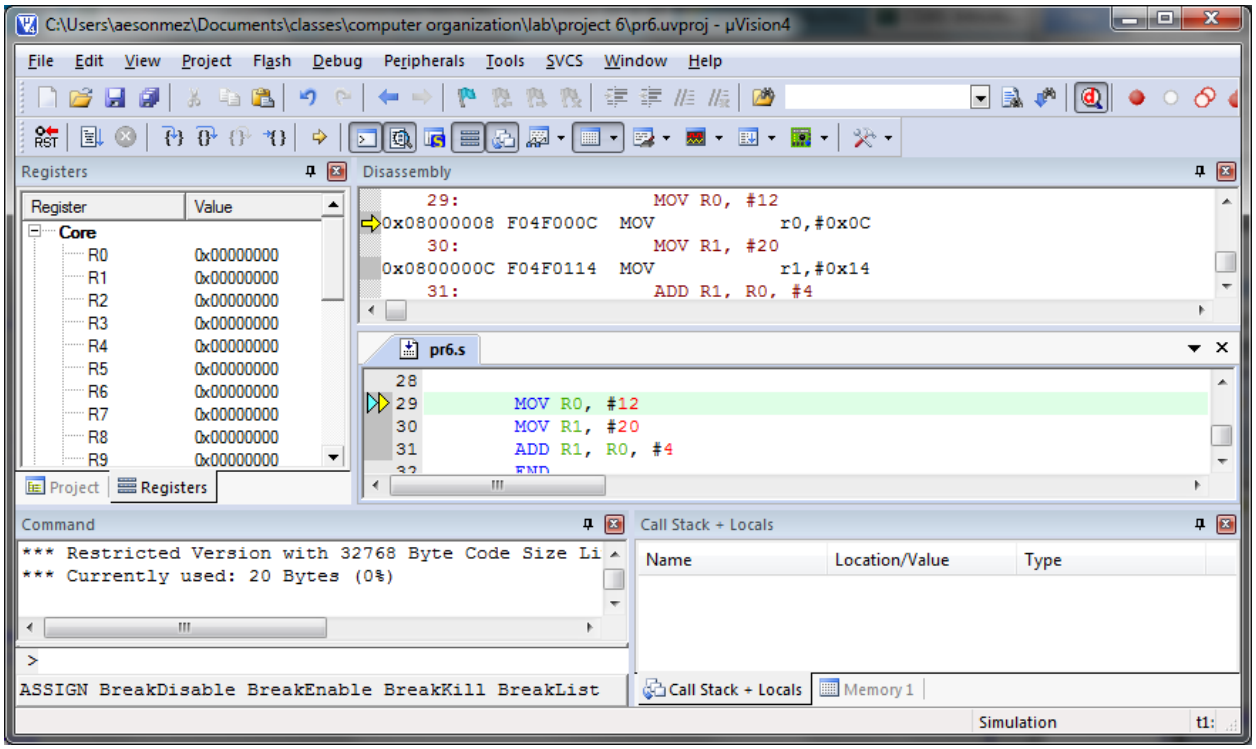
```
MOV R0, #12
MOV R1, #20
ADD R1, R0, R1
END
```

COMPILING YOUR CODE

1) Rebuild all target files



2) Debug your code and observe registers in one line steps (F11)


C:\Users\aesonmez\Documents\classes\computer organization\lab\project 6\pr6.uvproj - µVision4
File Edit View Project Flash Debug Peripherals Tools SVCS Window Help
Registers
Register
Value
Core
R0 0x00000000
R1 0x00000000
R2 0x00000000
R3 0x00000000
R4 0x00000000
R5 0x00000000
R6 0x00000000
R7 0x00000000
R8 0x00000000
R9 0x00000000
Project
Registers
Disassembly
29: MOV R0, #12
0x08000008 F04F000C MOV r0,#0x0C
30: MOV R1, #20
0x0800000C F04F0114 MOV r1,#0x14
31: ADD R1, R0, #4
pr6.s
28
29 MOV R0, #12
30 MOV R1, #20
31 ADD R1, R0, #4
Command
*** Restricted Version with 32768 Byte Code Size Li
*** Currently used: 20 Bytes (0%)
ASSIGN BreakDisable BreakEnable BreakKill BreakList
Call Stack + Locals
Name
Location/Value
Type
Call Stack + Locals
Memory 1
Simulation
t1: