ECE 322 EMBEDDED SYSTEM

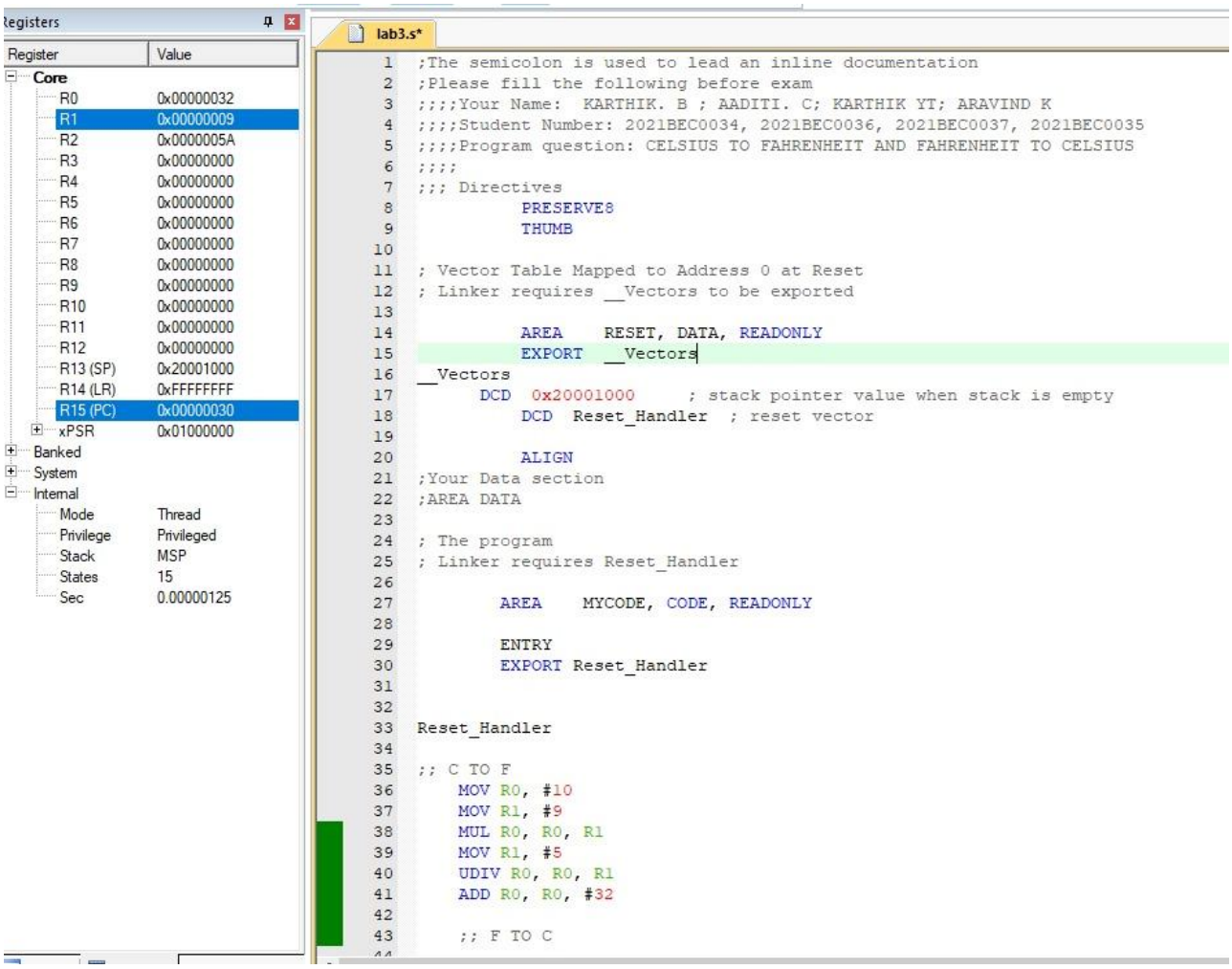
Lab :- 3

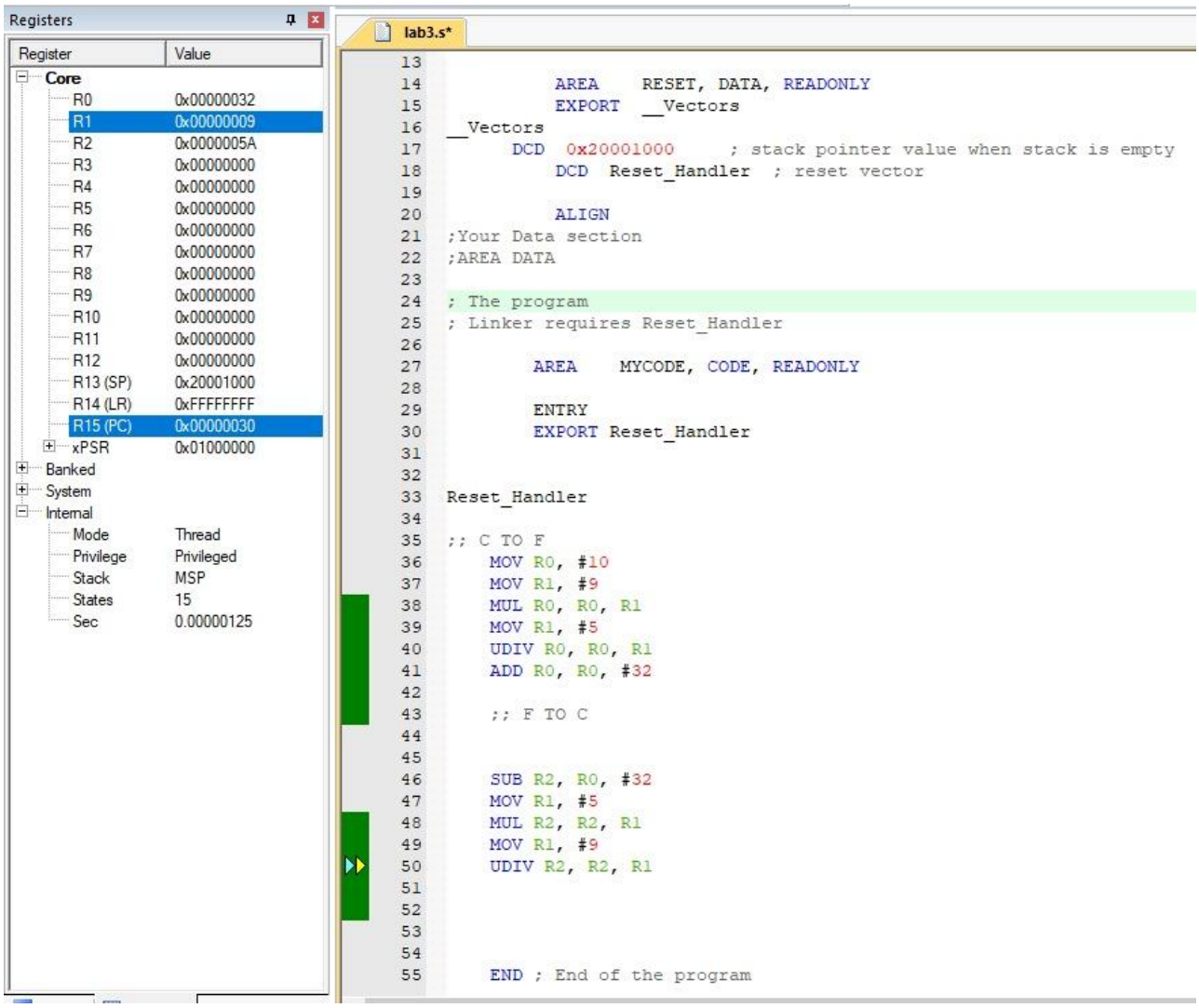
Name :- ARVIND KUMAR
Roll N:-2021BEC0035 **DATE : 23/01/2024**

Submitted to - Della Ma'am

Aim:- To convert Temperature from Celcious to Farenheit or from Farenheight to Celsius .

Code:


Registers
Register
Value
Core
R0 0x00000032
R1 0x00000009
R2 0x0000005A
R3 0x00000000
R4 0x00000000
R5 0x00000000
R6 0x00000000
R7 0x00000000
R8 0x00000000
R9 0x00000000
R10 0x00000000
R11 0x00000000
R12 0x00000000
R13 (SP) 0x20001000
R14 (LR) 0xFFFFFFFF
R15 (PC) 0x00000030
xPSR 0x01000000
Banked
System
Internal
Mode Thread
Privilege Privileged
Stack MSP
States 15
Sec 0.00000125
lab3.s*
1 ;The semicolon is used to lead an inline documentation
2 ;Please fill the following before exam
3 ;;;;Your Name: KARTHIK. B ; AADITI. C; KARTHIK YT; ARAVIND K
4 ;;;;Student Number: 2021BEC0034, 2021BEC0036, 2021BEC0037, 2021BEC0035
5 ;;;;Program question: CELSIUS TO FAHRENHEIT AND FAHRENHEIT TO CELSIUS
6 ;;;;
7 ;;; Directives
8 PRESERVE8
9 THUMB
10
11 ; Vector Table Mapped to Address 0 at Reset
12 ; Linker requires __Vectors to be exported
13
14 AREA RESET, DATA, READONLY
15 EXPORT __Vectors
16 __Vectors
17 DCD 0x20001000 ; stack pointer value when stack is empty
18 DCD Reset_Handler ; reset vector
19
20 ALIGN
21 ;Your Data section
22 ;AREA DATA
23
24 ; The program
25 ; Linker requires Reset_Handler
26
27 AREA MYCODE, CODE, READONLY
28
29 ENTRY
30 EXPORT Reset_Handler
31
32
33 Reset_Handler
34
35 ;; C TO F
36 MOV R0, #10
37 MOV R1, #9
38 MUL R0, R0, R1
39 MOV R1, #5
40 UDIV R0, R0, R1
41 ADD R0, R0, #32
42
43 ;; F TO C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37 MOV R1, #9
38 MUL R0, R0, R1
39 MOV R1, #5
40 UDIV R0, R0, R1
41 ADD R0, R0, #32
42
43 ;; F TO C
44
45
46 SUB R2, R0, #32
47 MOV R1, #5
48 MUL R2, R2, R1
49 MOV R1, #9
50 UDIV R2, R2, R1
51
52
53
54
55 END ; End of the program