

Successful build

```
33      AREA    MYCODE, CODE, READONLY
34
35      ENTRY
36      EXPORT Reset_Handler
37
38
39      Reset_Handler
40      ;;;;;;;;;;User Code Starts from the next line;;;;;;;;;;
41
42      MOV     R0, #70      ; Load constant 70 into R0
43      MOV     R2, #9       ; Load constant 9 into R2
44
45      ; F to C first - C = 5 * (F - 32) / 9
46      SUB     R1, R0, #32 ; subtract 32 from the current F value, store in R1
47      MOV     R4, #9
48      SDIV    R1, R1, R4   ; divide difference by 9, store in R1
49      MOV     R4, #5
50      MUL     R1, R1, R4   ; multiply quotient by 5
51
52      ; C to F second - F = (9 * C / 5) + 32
53      MOV     R4, #9
54      MUL     R3, R2, R4   ; multiply by 9, store in R3
55      MOV     R4, #5
56      SDIV    R3, R3, R4   ; divide product by 5, store in R3
57      ADD     R3, R3, #32 ; add 32 to quotient, store in R3
58
59
60      END ;End of the program
```

Build Output

```
*** Using Compiler 'V5.06 update 3 (build 300)', folder: 'C:\Keil_v5\ARM\ARMCC\Bin'
Build target 'Target 1'
".\Objects\Lab6.axf" - 0 Error(s), 0 Warning(s).
Build Time Elapsed: 00:00:00
```

Register data at end of program

Register	Value
R0	0x00000046
R1	0x00000014
R2	0x00000009
R3	0x00000010
R4	0x00000005
R5	0x00000000
R6	0x00000000
R7	0x00000000
R8	0x00000000
R9	0x00000000
R10	0x00000000
R11	0x00000000
R12	0x00000000
R13 (SP)	0x20001000
R14 (LR)	0xFFFFFFFF
R15 (PC)	0x08000034
xPSR	0x01000000

Disassembly

```
0x08000034 F1030320 ADD     r3,r3,#0x20
0x08000038 0000     MOVS     r0,r0
0x0800003A 0000     MOVS     r0,r0
0x0800003C 0000     MOVS     r0,r0
0x0800003E 0000     MOVS     r0,r0
```

lab6.s

```
36      EXPORT Reset_Handler
37
38
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40      ;;;;;;;;;;User Code Starts from the next line;;;;;;;;;;
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48      SDIV    R1, R1, R4   ; divide difference by 9, store in R1
49      MOV     R4, #5
50      MUL     R1, R1, R4   ; multiply quotient by 5
51
52      ; C to F second - F = (9 * C / 5) + 32
53      MOV     R4, #9
54      MUL     R3, R2, R4   ; multiply by 9, store in R3
55      MOV     R4, #5
56      SDIV    R3, R3, R4   ; divide product by 5, store in R3
57      ADD     R3, R3, #32 ; add 32 to quotient, store in R3
58
59
60      END ;End of the program
```