

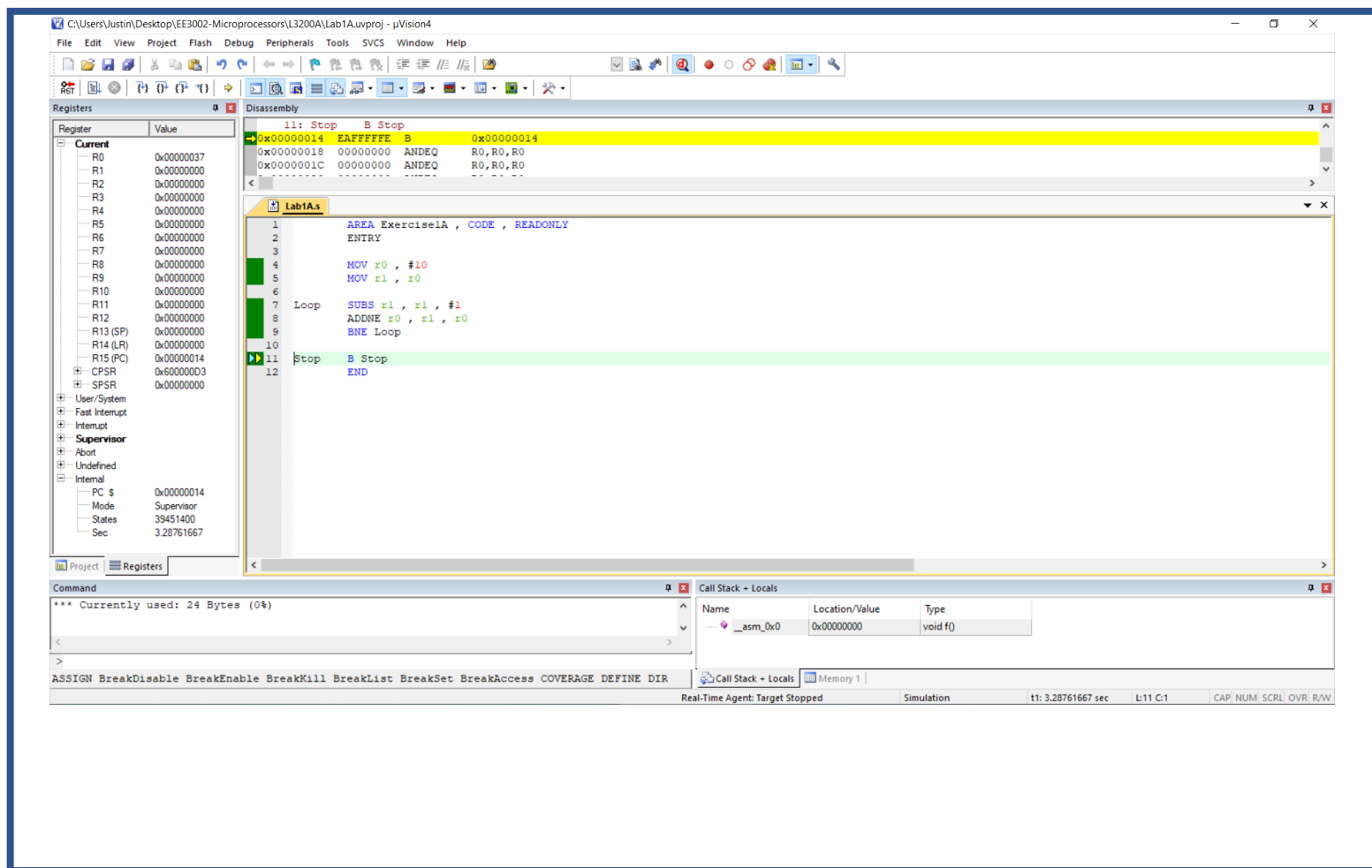
Answer Sheet Submitted by

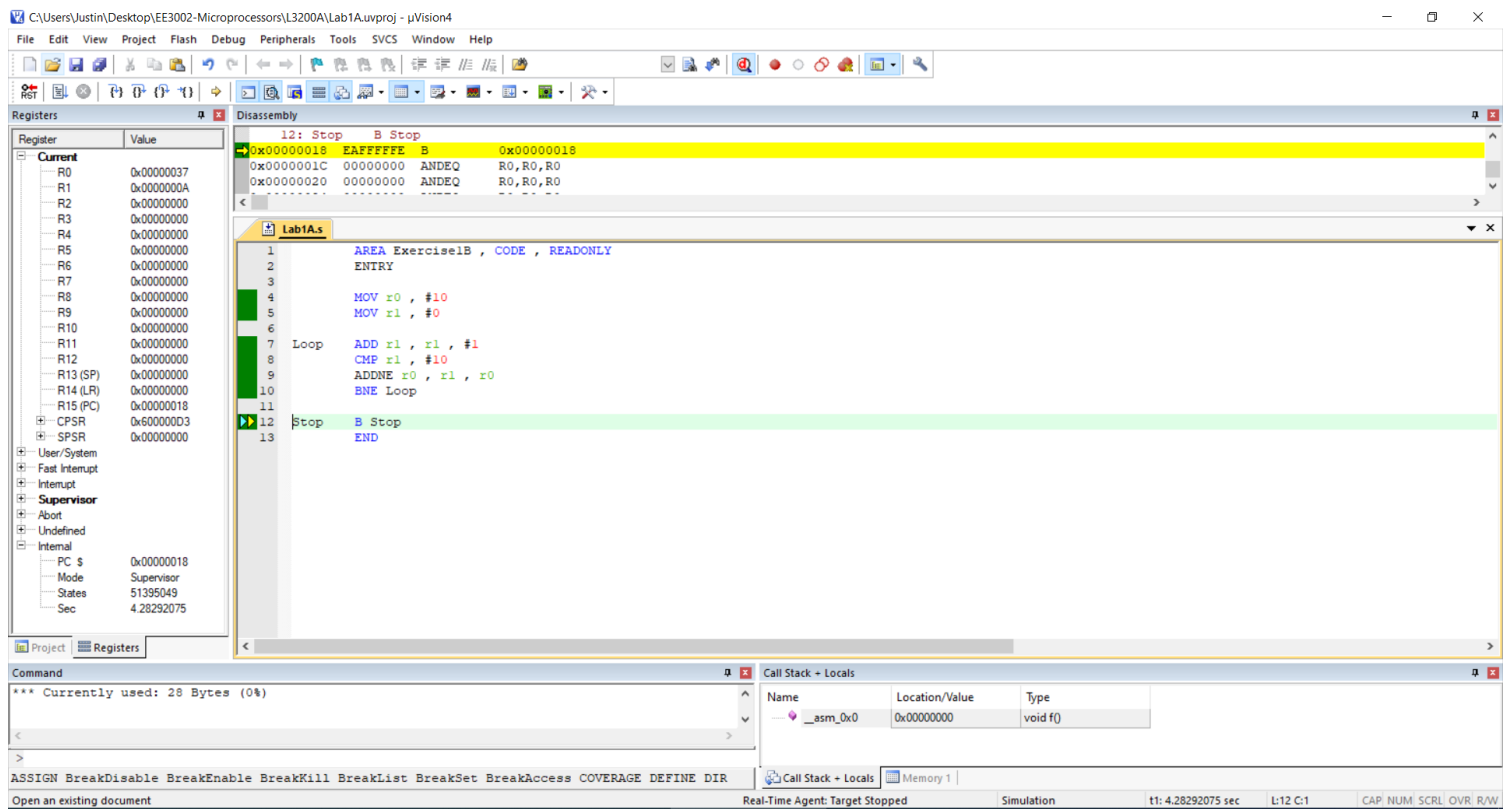
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Matric Number: U1921177E

Lab Group: IL03

Date: 9 / 10 / 20

Exercise 1A: (insert screenshot of the Debug session, which must include Register, Disassemble, Memory and command windows)

Exercise 1B (insert screenshot of the Debug session, which must include Register, Disassemble, Memory and command windows) Exercise 1B

Please type in your answer in the boxes below:

(1B_1) State the number of bytes of the revised programming code (including the literal pool and data in program memory)

28

(1B_2) What is the end address of your programming code?:

0x00000018

(1B_3) State the conditional branch statement used:

BNE Loop

(1B_4) State the additional instruction used in the revised code:

CMP r1 , #10

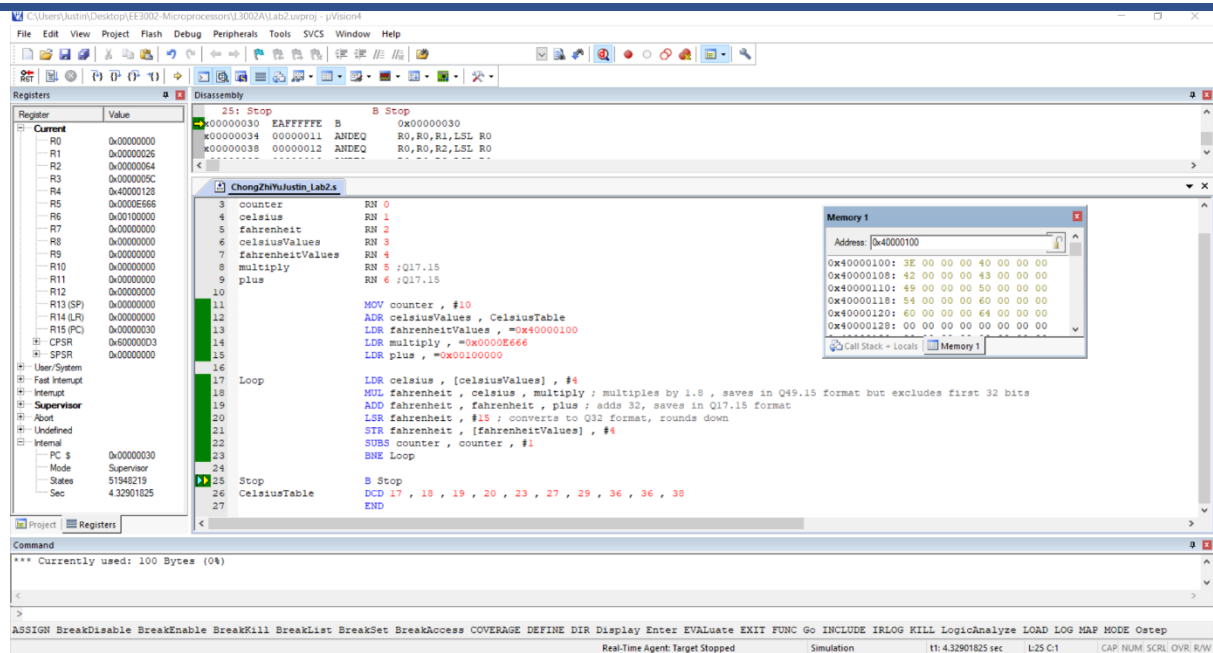
Exercise 2:

Fill in the Table below

Original temperature Celsius (°C) in decimal format	Represent in hex format (Q24.8)	Round up temperature Celsius (°C) in integer format (Q32.0)	Represent in hex format (Q32.0)
16.5	0x00001080	17	0x00000011

17.6	0x0000119A	18	0x00000012
18.9	0x000012E6	19	0x00000013
20.1	0x0000141A	20	0x00000014
22.5	0x00001680	23	0x00000017
26.7	0x00001AB3	27	0x0000001B
28.9	0x00001CE6	29	0x0000001D
35.6	0x0000239A	36	0x00000024
36.2	0x00002433	36	0x00000024
37.6	0x0000259A	38	0x00000016

Insert screenshot of the Debug session, which must include Register, Disassemble, Memory (starting from 0x40000100) and command windows.



Please type in your answer in the boxes below:

(2_1) State the number of bytes used in your program memory

100

(2_2) State the number of bytes to store the original temperatures (or converted temperatures)

40

(2_3) State the memory range (or ending address) of the converted FahrenheitTable.

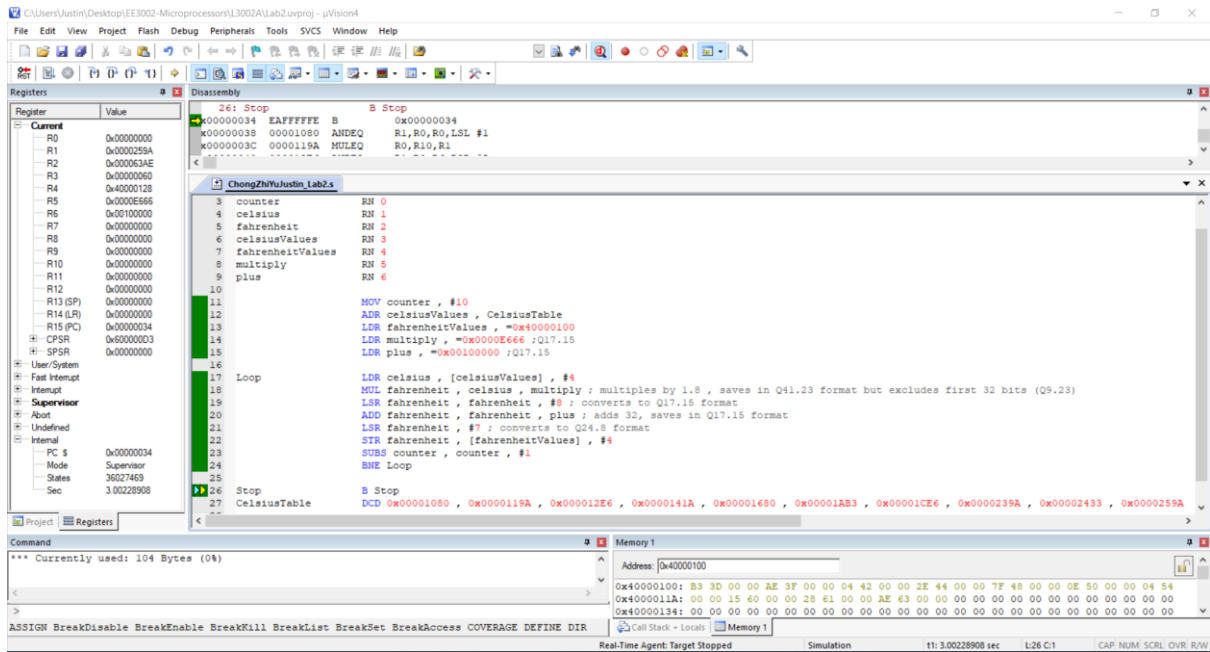
0x40000010 – 0x40000128

(2_4) Manually convert the readings in the FahrenheitTable into decimal values in Q32.0 (or Q24.8).

62 64 66 67 73 80 84 96 96 100

(2_5) How do you modify your code to have both Celsius and Fahrenheit readings in Q24.8 format? Please insert a screenshot of the modified code, which must include Register, Disassemble, Memory and command windows.

L3002A_Answer_Sheet



Exercise 3: (optional exercise). Insert screenshot, which must include Register, Dis-assembly, Memory and command windows)

Declaration:

I, **Chong Zhi Yu Justin** understand that submitting work that isn't my own may result in no mark being awarded to this lab component.
