HW 1-1

Due Aug 19 at 11:59pm **Points** 13 **Questions** 5 **Available** until Aug 19 at 11:59pm **Time Limit** None **Allowed Attempts** 2

Instructions

Complete the following problems from chapter 1 of your text book. Solutions will be turned on after due date/time.

Average Time: 1 hour.

This quiz was locked Aug 19 at 11:59pm.

Attempt History

	Attempt	Time	Score
KEPT	Attempt 2	6 minutes	13 out of 13
LATEST	Attempt 2	6 minutes	13 out of 13
	Attempt 1	1,410 minutes	10 out of 13

Score for this attempt: **13** out of 13
Submitted Aug 18 at 9:32pm
This attempt took 6 minutes.

Question 1

1 / 1 pts

1.1 What is the two's complement of 11011101?

Keep your answers to the smallest 4 bit (nibble) boundary as possible. If your answer exceeds 4 bits, you may enter your answer in 1 of 2 formats:

1. 4 bit nibbles with one (1) space between: #### ####
2. 8 bit word with no spaces and including all 8 bits: ########

All other formats will be marked invalid! You know canvas is unforgiving and I will not be going back and hand grading because you failed to follow simple instructions :)

This solution requires 8 bits.

Answer: _____

Correct!

0010 0011

Correct Answers

0010 0011

00100011

Question 2

6 / 6 pts

1.2 Perform the base conversions to fill in the blank spaces in the following table:

Ensure that you adhere to the 8 bit formatting rules mentioned in problem 1.1.

For Base 16 answers, always leave off the 'h' at the end (i.e. 17_{10} = D9). If the base 16 result exceeds 2 hex characters, keep on an 1-byte(8 bit) boundary separated by a space.

Examples:

$A01_{16}$ = 0A 01

For Base 21 answers, keep the same spacing rules as Base 16 if (and only if) answers exceed two (2) base 21 characters (i.e. 800_{10} = 01 H2, **NOT** 1H2).

BASE 10	BASE 2	BASE 16	BASE 21
23	0001 0111	17	12
19	0001 0011	13	0J
2747	1010 1011 1011	0A BB	06 4H
1253	0100 1110 0101	04 E5	02 HE

Answer 1:

Correct!

0001 0111

Correct Answer

00010111

Answer 2:

Correct! 17

Answer 3:

Correct! 12

Answer 4:

Correct! 19

Answer 5:

Correct! 13

Answer 6:

You Answered 0J

Correct Answer J

Answer 7:

Correct! 2747

Answer 8:

Correct! 1010 1011 1011

Correct Answer 101010111011

Answer 9:

You Answered 06 4H

Correct Answer 64H

Answer 10:

Correct! 1253

Answer 11:

Correct! 0100 1110 0101

Correct Answer 010011100101

Answer 12:

Correct! 04 E5

Correct Answer 04E5

Question 3

3 / 3 pts

1.3 What is the 8-bit ASCII binary representation for the following characters?

(a) "A"
(b) "a"
(c) "!"

(a) 0100 0001

(b) 0110 0001

(c) 0010 0001

Answer 1:

Correct! 0100 0001

Correct Answer 01000001

Answer 2:

Correct! 0110 0001

Correct Answer 01100001

Answer 3:

Correct! 0010 0001

Correct Answer 00100001

Question 4

1 / 1 pts

1.4 What is \ minus ! given that \ and ! are ASCII characters? Give your answer in binary.

Correct!

0011 1011

Correct Answers

0011 1011

00111011

111011

Question 5

2 / 2 pts

1.5 Representing characters:

(a) Convert the string “Super!” to its ASCII representation. Show your result as a sequence of hexadecimal values.

(b) Convert the hexadecimal sequence into a sequence of values in base four.

Trick question here. From C++, what you know that all strings end with? Even though this is a string, use two (2) hex characters for the formating of each ASCII value and separate them with a single space.

(a) Ascii representation (with spaces): 53 75 70 65 72 21

For base 4, your going to need to put a space to separate each number. Also in order to not have dozens of correct answers, just provide your answer using the smallest number of digits for each number (i.e. 21_{10} = 111; 6_{10} = 12).

(b) Base 4 sequence: 1103 1311 1300 12

Answer 1:

Correct! 53 75 70 65 72 21

Correct Answer 5375706572100

Correct Answer 53 75 70 65 72 21 00

Correct Answer 53757065721

Answer 2:

Correct! 1103 1311 1300 1211 1302 0201

Correct Answer 1103 1311 1300 1211 1302 0201 0000

Correct Answer 11031311130012111302020100000

Correct Answer 1103131113001211130202010000

Quiz Score: **13** out of 13