Pre-Lecture 3

Due Aug 26 at 9am	Points 12	Questions 12		
Available until Aug 26 a	t 9am Ti	me Limit None	Allowed Attempts 2	

Instructions

Take this quiz after you have watched the required videos and/or read the associated sections of the textbook. See <u>Lecture 3: x86 machine model</u>.

You may attempt this quiz twice. Incorrect responses are marked after each attempt. Correct answers are revealed at the start of class for this lecture.

Carefully note the deadline for responses. Submissions are not accepted after the deadline, and there is no grace period.

This quiz was locked Aug 26 at 9am.

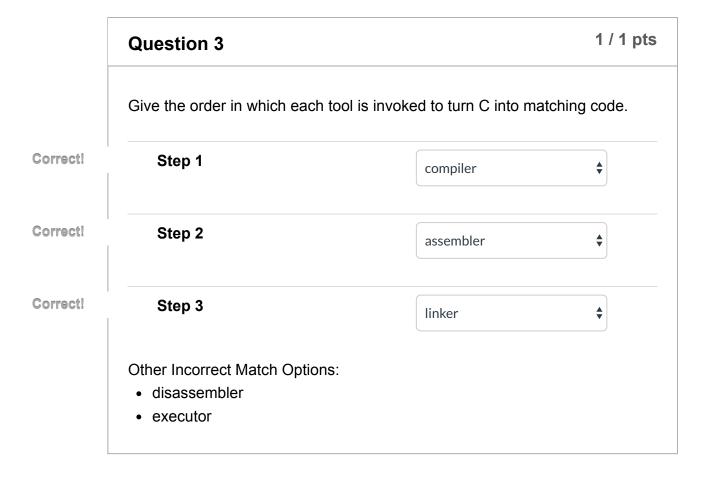
Attempt History

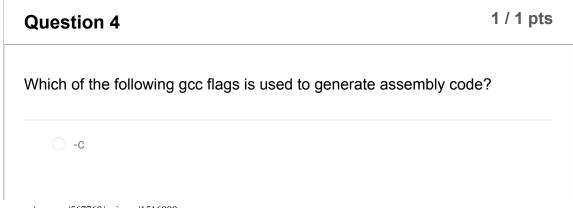
	Attempt	Time	Score
LATEST	Attempt 1	6,183 minutes	12 out of 12

Score for this attempt: **12** out of 12 Submitted Aug 25 at 8:31pm This attempt took 6,183 minutes.

	Question 1	1 / 1 pts
	In x86, which is an example of CISC (complex instruction set), each instruction requires the same number of bytes to be represented.	1
	○ True	
Correct!	• False	

Unlike memory in which locations are specified with byte addresses, each register has a special name (e.g., %rbx). Correct! True False





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	○ -d	
	O -O2	
Correct!	• -S	
	○ -Wall	
L		
	Question 5	1 / 1 pts
Correct!	What is the name of the tool that when used with the file as input and gives the corresponding assembly objdump	
orrect Answer	s objdump	
	Question 6	1 / 1 pts
	When the q suffix is used for an x86 instruction, it incomes the operand is how many bytes?	dicates that the size of
Correct!	8	
orrect Answers	s 8	

1 / 1 pts **Question 7** Suppose:

Correct!

M[*addr*] = the value stored at *addr* in memory

R[*reg*] = the value stored in the register named *reg*Which of the following is the meaning of the first operand (i.e., source operand) in the x86 instruction below?

addl 4(%eax, %ecx), %edx

R[%eax] + R[%ecx] * 4

M[R[%eax] + R[%ecx] * 4]

M[4 + R[%eax] + R[%ecx]]

M[4 + %eax + %ecx]

Question 8 1 / 1 pts

Suppose that register %ecx contains the hexadecimal value 0x8. Also, suppose that we have this snapshot of memory:

address	value	
0x20c	0x12	
0x210	0x2a	
0x214	0xd4	
0x218	0xfd	

What is the value in decimal of the operand below?

0x200(,%ecx,2)

Correct!

42

orrect Answers

42

	Question 9	1 / 1 pts
	Suppose that register %rax contains the value 0x8. Which of the x86 instructions is equivalent to the following?	
	subq %rax, %rsp movq %rbp, (%rsp)	
	oppq %rbp	
	oppq (%rbp)	
Correct!	pushq %rbp	
	pushq (%rbp)	
	None of the above.	

con	opose that register %eax contains the value 0x4 and register %ecx tains the value 0xa. What is the value <i>in decimal</i> contained in each ister after execution of the following x86 instruction?
	addl %eax, %ecx
%e	ax: 4
%e	cx: 14
Ans	swer 1:

Correct!

14

Question 11 1 / 1 pts

Suppose that register %eax contains the hexadecimal value 0x200 and register %ecx contains the hexadecimal value 0x14. Also, suppose that we have this snapshot of memory:

address	value
0x20c	0x12
0x210	0x2a
0x214	0xd4
0x218	0xfd

What is the value *in decimal* contained in the register %ebx after execution of the following x86 instruction?

leal (%eax, %ecx), %ebx

Correct!

532

orrect Answers

532



Suppose that register %rdx contains program variable x. Fill in the blank to make the C statement $x *= ___;$ equivalent to the following x86 instructions:

leaq (%rdx, %rdx, 4), %rdx salq \$2, %rdx

Correct!

20

orrect Answers 20

Quiz Score: 12 out of 12