Module 1 Summary Exercises

Due Apr 4 at 11:59pm

Points 30

Questions 30

Available Mar 28 at 12am - Apr 4 at 11:59pm 8 days

Time Limit 1,440 Minutes

Allowed Attempts 2

Instructions

Instructions



These exercises are based on the concepts introduced in Module 1. I encourage you to attempt these exercises twice, especially as a learning and study aid.

You will have two attempts, each of which will last for 24 hours, and only the top score will be counted. You are allowed any resources (including explorations, Piazza, classmates, the internet, etc...).

Good luck!



	Attempt	Time	Score	
KEPT	Attempt 2	49 minutes	30 out of 30	
LATEST	Attempt 2	49 minutes	30 out of 30	
	Attempt 1	47 minutes	27 out of 30	

Score for this attempt: 30 out of 30

Submitted Apr 4 at 6:33pm

This attempt took 49 minutes.

	Question 1	1 / 1 pts
	Which utility program reads an assembly language source file and produces at file?	n object
	editor	
	detangler	
Correct!	assembler	
	compiler	
•	linker	
	Oloader	
	Question 2	1 / 1 pts

A program is considered portable if it . . . can be executed on multiple platforms.

can be quickly copied from conventional RAM into high-speed RAM.

ocan be rewritten in a different programming language without losing its meaning.

Question 3 1 / 1 pts

Language Hierarchy: Rank the following languages from low level (1) to high level (4).

Level 4 (Highest Level): English

Level 3: Python

Level 2: ARM Assembly

Level 1 (Lowest level): Machine Code

Answer 1:

Correct!

English

	Answer 2:	
Correct!	Python	
	Answer 3:	
Correct!	ARM Assembly	
	Answer 4:	
Correct!	Machine Code	
	Overetion 4	1 / 1 pts
	Question 4	171 pts
	The linker combines object files into an executable file.	
orrect!	True	
_	False	
	Question 5	1 / 1 pts

Question 5

	What type of tool can cor	nvert ARM Assembly to x86 Assembly?	
	Linker		
	Loader		
	Cross Compiler		
Correct!	Cross Assembler		
	Question 6		1 / 1 pts
	How many bytes long is	a QUADWORD on x86 systems?	
orrect!	8		
Correct Answ	vers 8 (with margin: 0)		
	Question 7		1 / 1 pts

Correct!

How many bits long is a DWORD (doubleword) on x86 systems?

Correct! 32

Correct Answers 32 (with margin: 0)

The ASCII code values for alphabetic letters (e.g. 'a') are smaller than for decimal digits (e.g. '1').

True

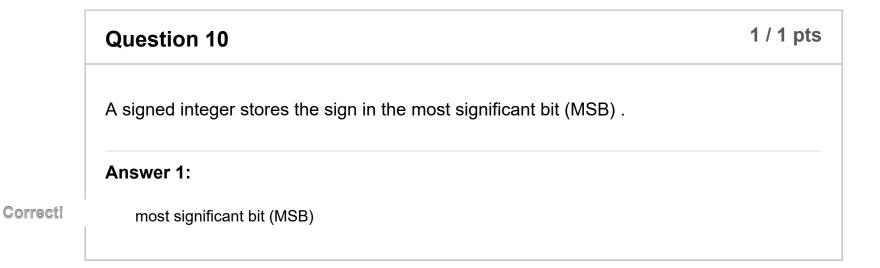
False

Question 9

The two's complement of an binary value is formed by which process?

• reversing (inverting) the bits and adding 1

 adding 1 and reversing the bits 		
changing the highest bit to a 1		

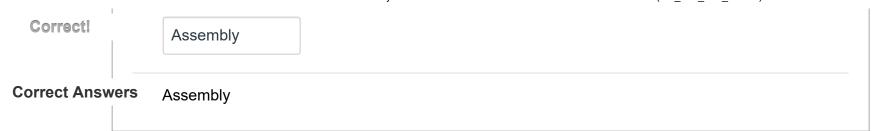


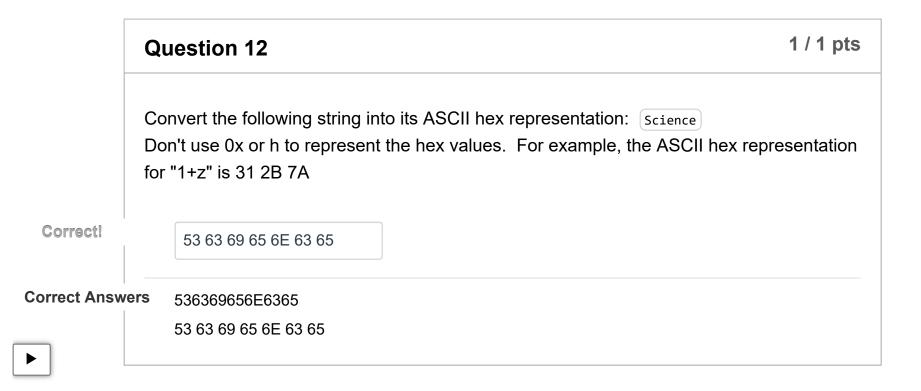


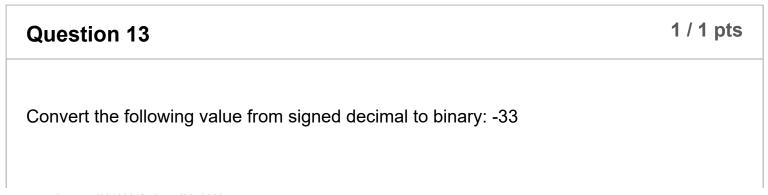
Question 11 Convert the following ASCII hex representation to a character string: 41 73 73 65 6D 62 6C

79

Do not add any spaces. For example, the hex 31 2B 7A represents the string: 1+z







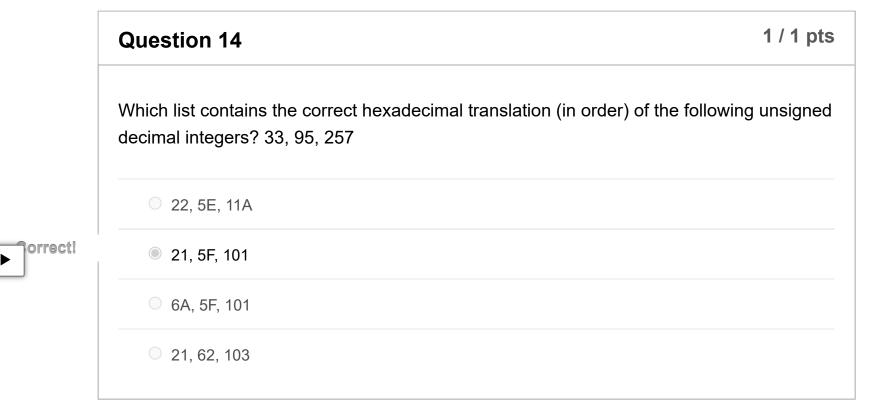
NOTE: Canvas may add a decimal point and thousands place commas, for example 11001100 may appear as 11,001,100.0 ... Please ignore these.

Correct!

11,011,111

Correct Answers

11,011,111 (with margin: 0)



Question 15

1 / 1 pts

Complete the following Unsigned Hexadecimal Addition (answers should also be in Hexadecimal):

NOTE: Canvas may add thousands place commas (for example 9C4B may appear as 9,C4B) ... Please ignore these.

```
2C35
+ 572B
-----
```

Correct!

8,360

Correct Answer

8,360



Question 16

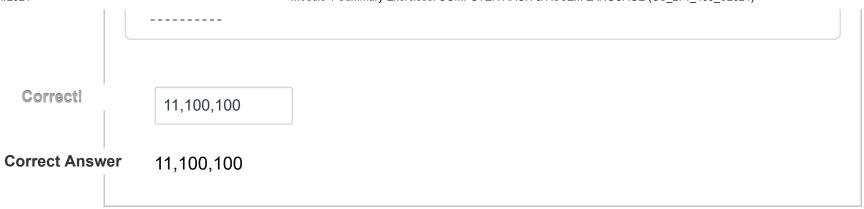
1 / 1 pts

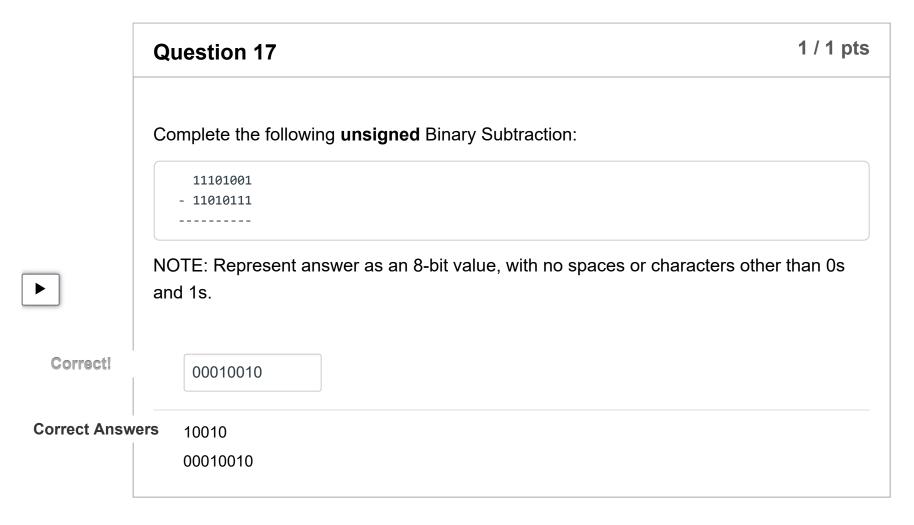
Complete the following Unsigned Binary Addition (answers should also be in Binary):

NOTE: Canvas may add thousands place commas (for example 11001100 may appear as 11,001,100) ... Please ignore these.

10110011

+ 00110001





1 / 1 pts **Question 18** Complete the following unsigned Hexadecimal Subtraction: C6F1 - A735 NOTE: Represent answer as a 16-bit hex (four character) value, with no spaces or characters other than 0-9, A-F. Correct! 1FBC **Correct Answers** 1FBC

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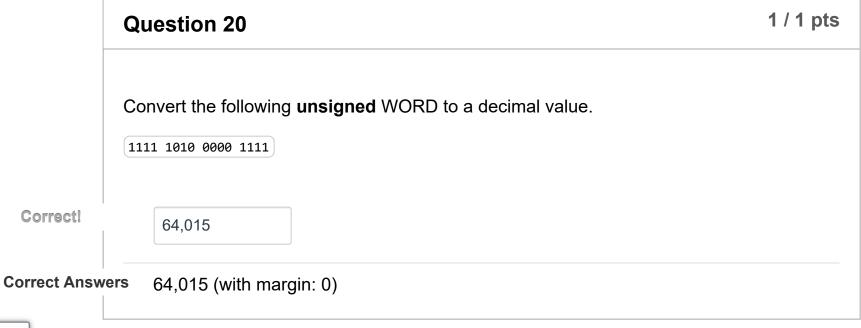
Question 19

Convert the following signed SWORD to a decimal value.

0011 1001 0001 1110

Correct! 14,622

Correct Answers 14,622 (with margin: 0)





A bus is a set of parallel wires used to conduct a group of electrical signals simultaneously. Answer 1:

bus

Question 22 1 / 1 pts

When transferring instructions and data between the *Main Memory Unit* and the *CPU*, they will be placed on the Data Bus.

Answer 1:

Correct!

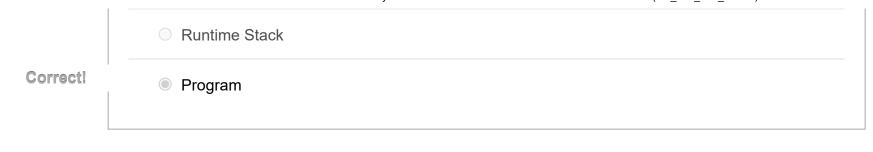
Data

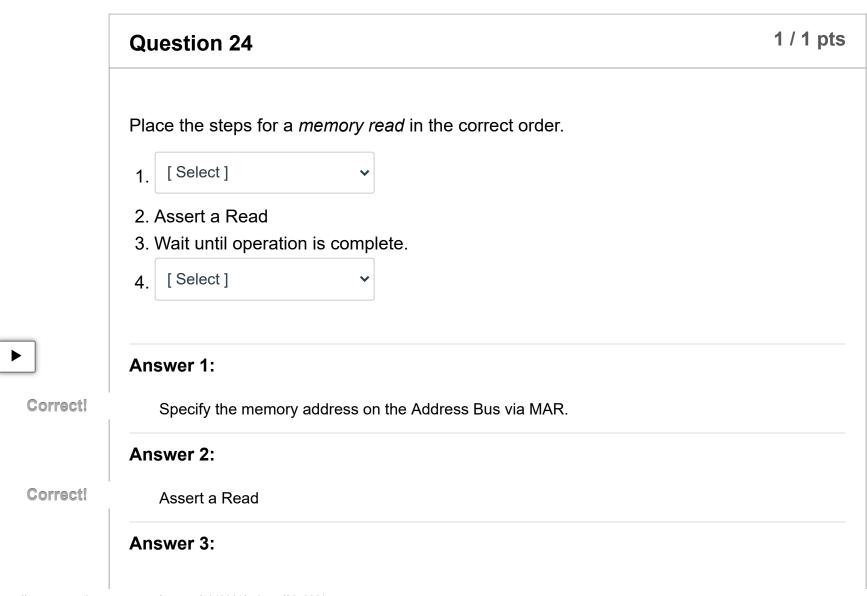


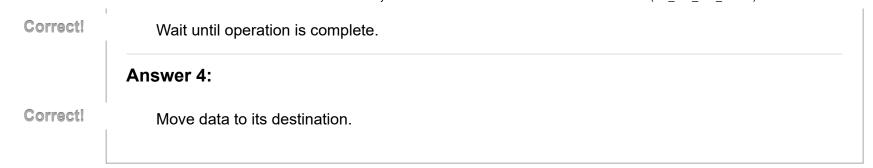


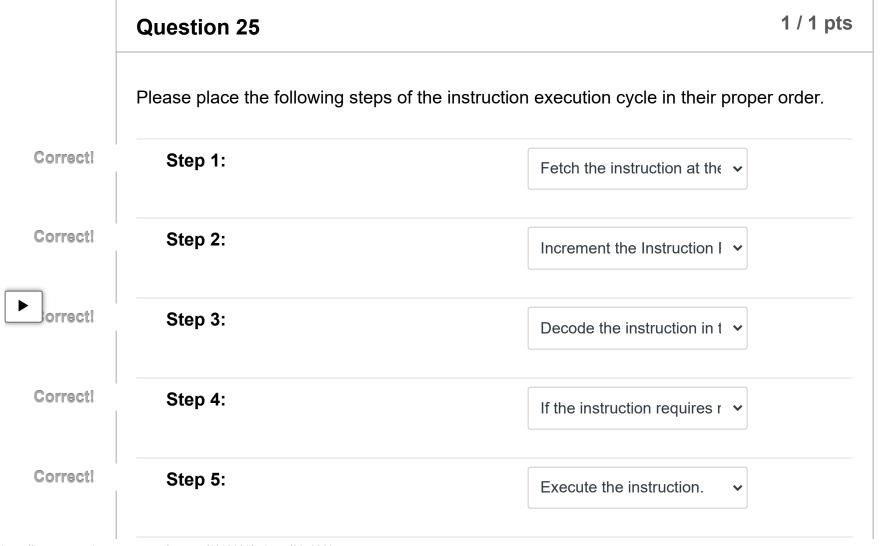
What would you call an ordered list of organized instructions existing somewhere in memory, and associated with a data structure for storage of data?

- Assembler
- Instruction Set Architecture (ISA)









4/4/2021 Correct! Correct!

Step 6:

If the output operand is in 💌

How much memory can be addressed in Real-address mode? 4GB 16MB 1MB 640K

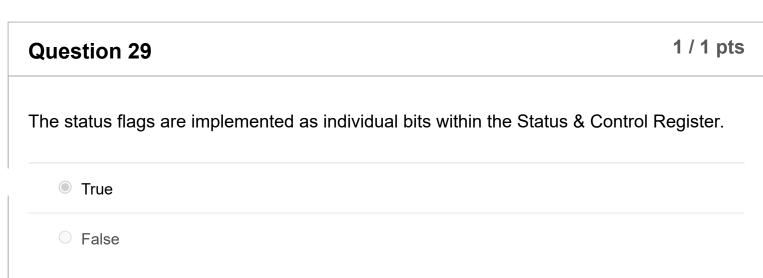
Question 27

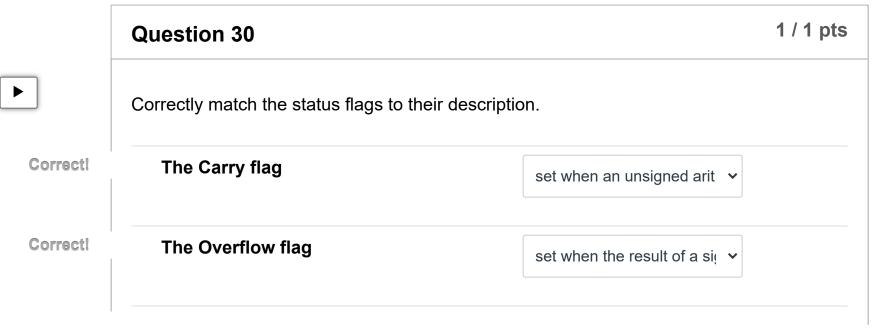
In the IA-32 architecture, which of the following are valid 8-bit register references?

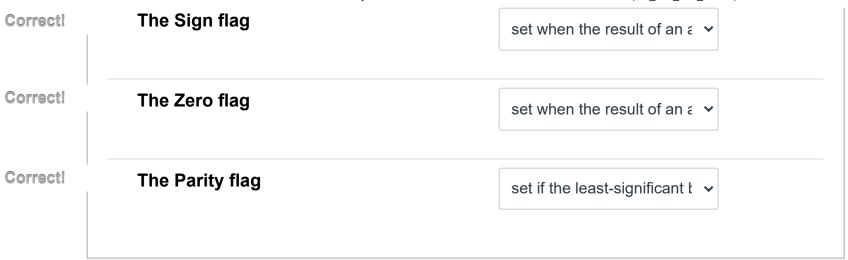
	SH	
Correct!	✓ AL	
Correct!	☑ DH	

	Question 28	1 / 1 pts
	In the IA-32 architecture, which of the following are valid 16-bit register reference	es?
	□ ESI	
orrect!	☑ CX	
Correct!	SP	
	■ BL	
Correct!	☑ SS	









Quiz Score: 30 out of 30

