

Module 2 Summary Exercises

Due Apr 11 at 11:59pm**Points** 33**Questions** 23**Available** Apr 4 at 12am - Apr 11 at 11:59pm 8 days**Time Limit** 1,440 Minutes**Allowed Attempts** 2

Instructions

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These exercises are based on the concepts introduced in Module 2. 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 History

| | Attempt | Time | Score |
|--------|---------------------------|------------|-----------------|
| KEPT | Attempt 2 | 20 minutes | 33 out of 33 |
| LATEST | Attempt 2 | 20 minutes | 33 out of 33 |
| | Attempt 1 | 37 minutes | 32.75 out of 33 |

Score for this attempt: **33** out of 33

Submitted Apr 8 at 8:28pm

This attempt took 20 minutes.

Question 1

1 / 1 pts

How many **bytes** long is a SQWORD on x86 systems?

Correct!

8

Correct Answers 8 (with margin: 0)**Question 2****1 / 1 pts**

The basic parts of an instruction, in order from left to right, are:

- ☐ label, mnemonic, comment
- ☒ label, mnemonic, operand(s), comment
- ☐ comment, label, mnemonic, operand(s)
- ☐ mnemonic, operand(s), comment

Correct!**Question 3****1 / 1 pts**

Which directive identifies the part of a program containing instructions? Use correct syntax.

.code

Correct!**Correct Answers** .code**Question 4****1 / 1 pts**

MASM is case-sensitive

☐ True

☒ False

Correct!

Question 5

1 / 1 pts

Write the syntax to set the size of the runtime stack to 2048 bytes.

`.stack 2048`

Correct!

Correct Answers

`.stack 2048`



Question 6

1 / 1 pts

Which of the following BYTE declarations are allowed in MASM?
(Check all that apply)



`myByte4 BYTE "nested 'quotes' "`

Correct!



`myByte2 BYTE 'Fancy'`

Correct!



`myByte5 BYTE 'W','o','r','s','t','!',0`

Correct!

Correct!

☐

myByte3 BYTE 'simple 'quotes' '

☒

myByte1 BYTE "Hot ", 'Dog', 33, 0

Question 7

1 / 1 pts

In MASM **all text** following a semicolon (on the same line) is treated as a comment and ignored when the program is converted to machine code.

Correct!

☒ True☐ False

Question 8

1 / 1 pts

Code labels may only appear on lines with no instructions.

☐ True☒ False

Correct!

Question 9

1 / 1 pts

Which of the following is **NOT** a valid MOV operation? Table 4-1 might be helpful. (check any/all that apply)

Correct!

☒ MOV imm,mem

☐ MOV mem,reg

☐ MOV mem,imm

Correct!

☒ MOV imm,imm

☐ MOV reg,mem

☐ MOV reg,imm

Correct!

☒ MOV mem,mem

☐ MOV reg,reg



Question 10

1 / 1 pts

Which answer choice shows the correct values of the Carry, Zero, and Sign flags after the following instructions execute?

```
mov al,6
```

```
cmp al,5
```

☐ CF = 1, ZF = 0, SF = 0

☐ CF = 1, ZF = 0, SF = 1

☒ CF = 0, ZF = 0, SF = 0

Correct!

☐ CF = 1, ZF = 1, SF = 0

Question 11

1 / 1 pts

Select the answer choice that best implements the following expression. Do not permit dword1, ECX, or EDX to be modified:

For reference, `NEG EAX` will replace the value in EAX with its two's complement (e.g. 14d becomes -14d, or -20d becomes 20d).

`eax = -dword1 + (edx - ecx) + 1`

`neg dword1`
`mov ebx,edx`
`sub ebx,ecx`
`add eax,ebx`
☐ `inc eax`

`mov eax,dword1`
`neg eax`
`sub edx,ecx`
`add eax,edx`
☐ `inc eax`

`mov eax,dword1`
`neg eax`
`mov ebx,edx`
`sub ebx,ecx`
`add eax,ebx`
☒ `inc eax`

`mov eax,dword1`
`mov edx,ebx`
`sub ebx,ecx`
`add eax,ebx`
☐ `inc eax`



Correct!

Question 12

3 / 3 pts

After the following MASM code is executed:

```
MOV EAX, 219
MOV EBX, 23
MOV ECX, 56
ADD EAX, EBX
SUB EAX, ECX
```

What is the decimal value in the **EAX** register?

What is the decimal value in the **EBX** register?

What is the decimal value in the **ECX** register?

Answer 1:

Answer 2:

Answer 3:



Correct!

Correct!

Question 13

3 / 3 pts

After the following MASM code is executed:

```
MOV EAX, 93
MOV EBX, 13
```

```
MOV EDX, 0
DIV EBX
```

What is the value in the **EAX** register (in decimal)?

What is the value in the **EBX** register (in decimal)?

What is the value in the **EDX** register (in decimal)?

Answer 1:

Answer 2:

Answer 3:

Correct!

Correct!



Correct!

Question 14

1 / 1 pts

In the following data definition, assume that List2 begins at offset 2000h. What is the offset of the third value (5)?

```
List2 WORD 3,4,5,6,7
```

Correct!

☒ 2004h

☐ 20006h

☐ 2000h☐ 2008h☐ 2002h☐ 20008h

Question 15

1 / 1 pts

The following are both valid data definitions:

```
List1  BYTE 10, 20
        BYTE 30, 40
```

☒ True☐ False

Question 16

3 / 3 pts

Match the datatype to its use/description.

Correct!

BYTE

8-bit unsigned integer ▼

Correct!

WORD

16-bit unsigned integer ▼

Correct!

SWORD

16-bit signed integer ▼

Correct!

DWORD

32-bit unsigned integer ▼

Correct!

SDWORD

32-bit signed integer. ▼

Correct!

REAL4

32-bit (4-byte) IEEE single ▼

Correct!

REAL8

64-bit (8-byte) IEEE double ▼

**Question 17****1 / 1 pts**

MASM will throw an error when assembling the following data segment:

```
.data
myChecker  BYTE 12h
           BYTE 34h
           BYTE 56h
           BYTE 78h
           BYTE 90h
```

☐ True☒ False

Correct!

Question 18**3 / 3 pts**

The following data segment starts at memory address 4400h (hexadecimal)

```
.data
printString    BYTE    "Assembly is fun",0
moreBytes      BYTE    28 DUP(0)
dateIssued     DWORD    ?
dueDate        DWORD    ?
elapsedTime    WORD     ?
```

What is the hexadecimal address of dueDate?

☐ 4448h☐ 442Ch☒ 4430h☐ 4410h**Correct!****Question 19****3 / 3 pts**

The following data segment starts at memory address 1100h (hexadecimal)

```
.data
printString    BYTE    "MASM is fun",0
moreBytes      BYTE    48 DUP(0)
dateIssued     DWORD    ?
dueDate        DWORD    ?
elapsedTime    WORD     ?
```

What is the hexadecimal address of dueDate?

☐ 1164h☐ 113Ch☐ 110Ch☒ 1140h**Correct!****Question 20****1 / 1 pts**

Which library procedure writes an unsigned 32-bit integer to standard output in hexadecimal format?

Correct!**Correct Answers**

WriteHex

WriteHexB

Question 21**1 / 1 pts**

Which register contains the starting address of data when calling DumpMem?

☐ ECX☒ ESI☐ EAX**Correct!**

☐ EDI☐ EBX☐ EDX**Question 22****1 / 1 pts**

Which register should contain an unsigned integer before calling WriteDec?

☐ EDX☐ EDI☒ EAX☐ EBX☐ ESI☐ ECX Correct!**Question 23****1 / 1 pts**

Which library procedure locates the cursor at a specific row and column on the screen?

Correct!

orrect Answers Gotoxy

Quiz Score: **33** out of 33

