

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!

[Take the Quiz Again](#)

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	37 minutes	32.75 out of 33

Score for this attempt: **32.75** out of 33

Submitted Apr 8 at 8pm

This attempt took 37 minutes.

Question 1

1 / 1 pts

Groups of bytes in memory can only be interpreted a single way.

☐ True**Correct!**☒ False**Question 2****1 / 1 pts**

MASM is case-sensitive

☐ True**Correct!**☒ False**Question 3****1 / 1 pts**

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

Correct!`.stack 2048`**Correct Answers** `.stack 2048`**Question 4****1 / 1 pts**How many **bytes** long is a SQWORD on x86 systems?

Correct!

8

Correct Answers 8 (with margin: 0)**Question 5****1 / 1 pts**

What does the END directive do? (Check all that apply)

- ☐ Terminates a loop
- ☒ Sets the entry point (procedure) for the program
- ☐ Exits to the operating system
- ☒ Marks the end of the module

Correct!**Correct!****Question 6****0.75 / 1 pts**Which of the following BYTE declarations are allowed in MASM?
(Check all that apply)☒ `myByte1 BYTE "Hot ", 'Dog', 33, 0`**Correct!****Correct Answer**☐ `myByte4 BYTE "nested 'quotes' "`**Correct!**☒ `myByte2 BYTE 'Fancy'`

`myByte3 BYTE 'simple 'quotes' '`**Correct!**`myByte5 BYTE 'W','o','r','s','t','!',0`

Question 7

1 / 1 pts

Code labels may only appear on lines with no instructions.

☐ True☒ False**Correct!**

Question 8

1 / 1 pts

By default, code labels are visible only within the procedure in which they are assigned (created).

☒ 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)

☐ MOV reg,reg

☐ MOV mem,reg

☒ MOV imm,imm

☐ MOV reg,imm

☒ MOV mem,mem

☐ MOV reg,mem

☒ MOV imm,mem

☐ MOV mem,imm

Correct!

Correct!

Correct!



Question 10

1 / 1 pts

After the following instruction sequence, show the values of the

Carry , Zero , and Sign

flags

```
mov al,5
```

```
cmp al,7
```

Answer 1:

Correct!

1

Answer 2:

Correct!

0

Answer 3:


Correct!

1

Question 11

1 / 1 pts

Suppose that you are given the following program. What decimal value does the **AX** register hold when *someProcedure* is called?



```
.data
x  DWORD  153461
y  BYTE   37
z  BYTE   90

.code
main PROC
    MOV  AH, y
    MOV  AL, z
    CALL someProcedure
    INC  EAX
    MOV  EBX, z
    XOR  EAX, EBX
    exit
main ENDP
END MAIN
```

☐ 23077☐ 9037

Correct!

☒ 9562☐ 3790

Question 12**3 / 3 pts**

After the following MASM code is executed:

```
MOV  EAX, 37
MOV  EBX, 23
MOV  ECX, 11
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:****Correct!****Answer 2:****Correct!****Answer 3:****Correct!****Question 13****3 / 3 pts**

After the following MASM code is executed:

```
MOV EAX, 149
MOV EBX, 7
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!

Question 14

1 / 1 pts

The following are both valid data definitions:

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

Correct!

☒ True

☐ False

Question 15

1 / 1 pts

Which directive is used when defining 64-bit IEEE long reals?

☐ REAL4

☒ REAL8

☐ REAL64

☐ REAL

Correct!



Question 16

3 / 3 pts

Match the datatype to its use/description.

BYTE

8-bit unsigned integer ▼

WORD

16-bit unsigned integer ▼

SWORD

16-bit signed integer ▼

DWORD

32-bit unsigned integer ▼

Correct!

Correct!

Correct!

Correct!

Correct!

SDWORD

32-bit signed integer. ▾

Correct!

REAL4

32-bit (4-byte) IEEE s ▾

Correct!

REAL8

64-bit (8-byte) IEEE l ▾

Question 17**1 / 1 pts**

How many bytes does the following string occupy in memory?

```
.data
```

```
myString    BYTE    "Everyone should learn to  
program!",224,6,95,0
```



Correct!

37

Correct Answer

37

Question 18**3 / 3 pts**

The following data segment starts at memory address 2300h (hexadecimal)

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

What is the hexadecimal address of dueDate?

☐ 2368h

☐ 2340h

☐ 2310h

☒ 2344h

Correct!

Question 19

3 / 3 pts

The following data segment starts at memory address 1300h (hexadecimal)

```
.data
printString  BYTE  "MASM is fun",0
moreBytes    BYTE  32 DUP(0)
dateIssued   DWORD  ?
dueDate      DWORD  ?
elapsedTime  WORD   ?
```

What is the hexadecimal address of dueDate?

☐ 1348h

☒ 1330h

☐ 132Ch

☐ 130Ch

Correct!

Question 20**1 / 1 pts**

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

☐ EAX☒ ESI☐ EDX☐ ECX☐ EBX☐ EDI**Correct!****Question 21****1 / 1 pts**

Which library procedure reads a 32-bit signed decimal integer from standard input?

Correct!**Correct Answers** ReadInt**Question 22****1 / 1 pts**

Which library procedure displays the CPU flags and 32-bit registers?

Correct!

DumpRegs

Correct Answers DumpRegs

Question 23

1 / 1 pts

Which library procedure reads a string from standard input?

Correct!

ReadString



Correct Answers ReadString

Quiz Score: **32.75** out of 33