

CARRY OVER

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16/ENG02/011

COMPUTER ENGINEERING

COB 306

1a) It would not be a good idea to use numeric addresses when writing instructions that access variables because the addresses coded in the instructions would have to be updated whenever new variables were inserted before existing ones.

b) .ELF files (Object file in (ELF)).

2a) A segmented memory model divides the system memory into groups of independent segments referenced by pointers located in the segment registers. Each segment is used to contain a specific type of data.

2b) No.

Each assembly language is based on either a processor family or a specific computer.

16-bit	32-bit
AX	EAX
BX	EBX
CX	ECX
DX	EDX
	ESI
	EDI
	EBP
	ESP



2) Portability is a characteristic attributed to a computer program if it can be used in an operating system other than the one in which it was created without requiring major rework.

3b) Main PROC

The PROC directive identifies the start of a procedure. "main" is the name chosen for the procedure.

MOV AX, 47104

The integer 47104 is moved/copied to the AX register

ADD EAX, 1270

The number 1270 is added to the EAX register

MOV DS, AX

The current value of the AX register is moved or copied to the DS register

~~END~~ main ENDP

The ENDP directive ends the procedure i.e. the main procedure

c) i)	value 1	BYTE	60h
	variable name	Size of memory	Value contained in value 1

Declare a byte, referred to as location value 1, containing the value 60h

ii) Value 2: DWORD?

Declare a 2-byte uninitialized value, referred to as location value 2.

(iii) Value 3 SBYTE -10, -20, -30, -40, -50

Declare a signed byte, initialized to -10, -20, -30, -40, -50, then value of location value 3

4) TITLE Subtract three integers.

; This program subtract three integers

.data

Val 1 DWORD 70000h

Val 2 DWORD 40000h

Val 3 DWORD 2000h

FinalVal DWORD ?

.code

main PROC

mov AX, Val 1

sub AX, Val 2

sub AX, Val 3

mov FinalVal, AX

call DumpRegs

exit

main ENDP