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COE 306
MID-Term Test

Question 1

a) It would not be a good idea to use a numeric address when writing instructions that access variables because the addresses in the code of instructions would need to be refreshed any time a new variable is added. i.e before the initial ones.

- b) i) Relocatable ELF files
ii) Object files (ELF)
iii) Source files

Question 2

a) Portability (Programming) - This is a feature or characteristics of a computer program, in which it the program can be used in another operating system, outside the one the program was created.

b) No it is not the same, because each processor type instruction set is unique, also because assembly language is directly linked to the machine code of the processor, and these codes differ with processors

↓ 32-bit

	16	15	8	7	0	↓ 16-bit registers
EAX			AH	AL		AX - Accumulator
EBX			BH	BL		BX - Base
ECX			CH	CL		CX - Counter
EDX			DH	DL		DX - Data

~~3(a)~~

3(a) Segments are specified areas in a program for containing data, code and stack. Each segment is used to contain a specific data type, one segment contains code, the other instruction codes.

b) (i) Main Proc - This is declaring the code below is to carry out by the CPU only

(ii) MOV AX, 47104 - This is commanding for starting that the number 47104 should be moved to register AX

(iii) ADD EAX, 1270 - This line states that 1270 should be added to register EAX

(iv) MOV DS, AX - This line says that the values in the AX register should be moved to the address of the DS register

v) Main ENDP - This line says the main procedure should be terminated there.

3(c)

i) Value 1 Byte 0Dh - This code states a variable name "Value 1" and data type "Byte", that contains a value of 0Dh (8-bit value)

ii) Value 2 DWORD? - This declares a variable "Value 1" of data type "Double word", meaning that it is an assigned 32-bit unit

iii) Value 3 SByte -10, -20, -30, -40, -50 :- This code declares a variable "Value 3" that data type, signed byte, that has

~~Q3~~
negative values of 10, 20, 30, 40 & 50

Question 4

TITLE Add and Subtract (AddSub.asm)

Include Irvine32.Inc

.code

main Proc

mov eax, 9000h

sub eax, 3000h

sub eax, 2000h

call DumpRegs

exit