

Question 1

b) What type of files are produced by the assembler?  
- The assembly source file is the translation of file into an object file in (ELF). There are five ELF files are produced by the assembler.

(9) Because the addresses coded in the instructions would have to be updated whenever new variables were inserted before existing ones.

Question 2


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

b) No. Each assembly language is based on either a processor family or a specific computer.

c)

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

32-bit register  
16-bit register

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Question 3.

9) A Segmentation in assembly language is achieved by memory models divides the System memory into groups of independent segments referenced by pointers located in the segment registers.

Main Proc - defines a procedure. Specifies the name of the procedure. Specifies that the procedure is a standard procedure function. Specifies the procedure is near or far.

MOV AX, 47104 - tells the computer to copy the number 47104 into the location AX.

MOV DS, AX - tells the computer to copy the number in AX into the location DS.

ADD EAX, 1270 - add 1270 to the EAX register.

main ENDP - ends the procedure of the program.

3c) Value 1 BYTE 6Dh

Value 2 DWORD ?

→ DWORD,

Uninitialized

Value 3 SBYTE -10, -20, -30, -40, -50

# QUESTION 4

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TITLE Add and Subtract (Addsub.asm)

i Program Assignment 1 - Subtracting Three integers

; using the Addsub program ~~from Section 3.2~~ as a reference,

; write a program that subtracts three integers using 16 bit registers,

; Insert a Call DumpRegs statement to display the register values.

```
INCLUDE Irvine32.inc
```

```
.code
```

```
main PROC
```

```
mov eax, 90000h ; EAX = 10000h
```

```
sub eax, 40000h ; EAX = 50000h
```

```
sub eax, 20000h ; EAX = 30000h
```

```
call DumpRegs ; display registers
```

```
exit
```

```
main ENDP
```

```
END main
```