Name: Okoli Chukwuemeike Walter
Matric No: 17/ENG02/067
Department: Computer Engineering.

(1b) (i) Listing files
(ii) Object files

(2a) It is not good 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 the existing ones.

(3a) Segmentation is achieved in the assembly language whereby each segment is used to contain a specific type of data. One segment is used to contain instruction codes, another segment stores the data elements and a third segment keeps the program stack.

(b) Main proc : The proc directive indicates the beginning of a procedure.

MOV AX, 47104 – The MOV instruction copies the integer 47104 to the AX register

ADD EAX, 1270 - The ADD instruction adds 1270 to the EAX register

MOV DS, AX – This tells the program to move the value in AX in to DS

Main EDP - The main EDP is the last statement indirectly called a predefined MS windows function that halts the program.

(3c) Value 1 (label) Byte (Directive) 6DH (Initializer) (radix) – This tells the System to store byte 6DH under value 1 label (it is an unsigned byte)

Value 2 DWORD ? – This is an uninitialized variable and its value will be assigned at run time.

(2a) Portability in programming language refers to when a program can be used on other operating systems other than the original one, it was intended for without needing major changes to the codes.

(2b) No, it is not, because each assembly language is for a specific computer or processor.

(2c)

31	16	15	8	7		
EAX		AH		AL	AX	Accumulator
EAX		BH		BL	BX	Base
ECX		CH		CL	CX	Counter
EDX		DH		DL	DX	Data

4 TITLE Add and Subtract (Add Sum. asm)

; Program Assignment 1- Subtracting three Integers

; Using the Add Sub program from Section 3.2 as a Pa

; Write a program that Subtracts Three Integer

; Insert a call Dump Regs statement to display the

```
INCLUDE Irvine32.inc
.code
main PROC
 mov eax, 9000H ;  EAX = 1000h
 Sub eax, 4000H ;  EAX = 5000h
 Sub eax, 2000H ;  EAX = 3000h
 call Dumpregs                ; display Dumpregs.

 exit.
main  EDP
END   main
```