

Question 2

- a) 1) The concept of portability in programming language refers to when a program can be used on other operating systems other than the original one it was introduced for without needing major changes to the codes.
- b) The assembly language for x86 processors are NOT the same for other computer systems such as AMD or Motorola 68000 because each assembly has its own specific processor or computer.

32 Bit registers

16 Bit registers

	31	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

Professor David Eshe

Computer Engineering COE 306 mid semester test

Question 1

b)

1)

b)

The type of files produced by an assembler are:

- Object files
- Listing files

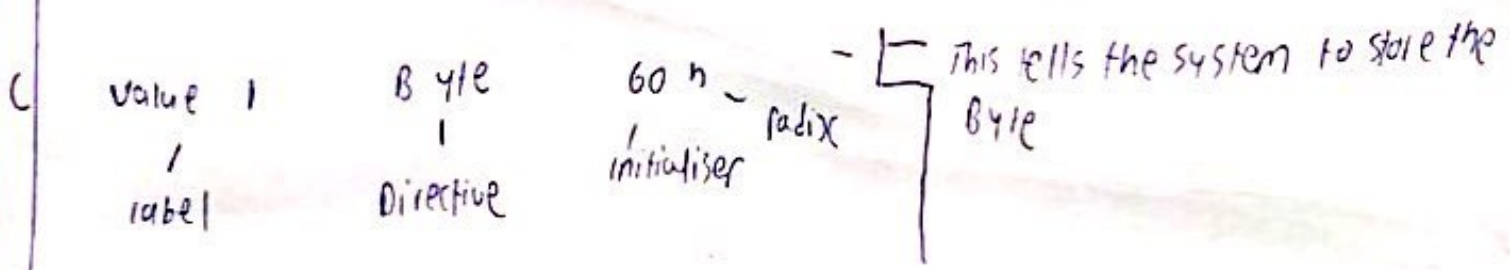
a)

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.

3

- b) main Proc: The Proc directive indicates the beginning of a procedure
- MOV AX, 4710h: The MOV instruction copies the integer 4710h to the AX register
- ADD EAX, 1270: The ADD instruction adds (1270) to the EAX register.
- MOV DS, AX: It tells the program to move the value in AX to DS
- main ENDP: The main ENDP is the End statement: (indirectly calls a predefined MS-DOS windows function that holds the program.

4 Segmentation is achieved in assembly language by 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.



value 2 0 word - This is an uninitialized variable and its value will be assigned at runtime

Abhiram