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Computer Engineering
Assembly Language

① The address would have to be updated with each new variable that is entered.

② The assembler produces a machine language file called ~~the~~ object files and listing files. This must be passed to the linker program to be linked into an executable file.

2a) Portability in programming language is the ability of a code to run on different platforms irrespective of software or hardware.

③ No this is because assembly languages are unique to their own specific processor family.

①

2c

③a Segmentation is achieved with the use of memory segments, each contains a specific layer of data

④ Main Proc:

① The PROC ~~is a derivative~~ ^{directive} identifies the start of a procedure and the name of the procedure is Main

(14)

(ii) MOV AX, 47104

The ~~move~~ copies 47104 to the AX register

(iii) ADD EAX, 1270

The ADD adds 1270 to the EAX register.

(iv) MOV DS, AX

The ~~move~~ copies the DS register to AX

(v) Main ENDP

ENDP signifies the end of the main procedure

(c) Value 1 BYTE 6 Dh

allocate storage for unsigned byte.

Value 2 DWORD

allocate storage in memory for a variable

①

(iii) Values 5 BYTE - 10, -20, 30, -40, 50
allocate storage for small signed byte

④ T4

INCLUDE Irvine32.toc

.code

main PROC

mov eax, 1000h ; EAX = 1000h

sub eax, 100h ; EAX = 9900h

sub eax, 100h ; EAX = 9800h

call DumpRegs ; display register

exit

END main