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17/ENIC102/027... Question ①

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(1a) it will not be a good idea because the addresses coded in the instructions would have to be updated whenever new variables were inserted before existing ones and the `doubleword` directive tells the assembler to reserve space in the program for a doubleword variable.

1b) Object file.

Question ②

a) The concept of portability is that it applies to programming language as the ability of the same software to be able to run on any operating system it is put on.

(b) They are different my reason is because they operate on different instruction sets, different machine code, different combinations and they vary from each other.

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(2c)

8

8

AH

AL

AX

16 b.t

EAX

32 b.t

Question (3)

6/

a) Segmentation is achieved by using directives which are embedded comments in the source code. They are code used to describe the area with executable instructions, data (used to describe the area with variables declaration), stack (used to describe the area with stack pointers).

b) Main proc: This shows procedure has been initialized, the variable "main" is used to name the procedure being executed.

(3b) Main proc: this identifies beginning of a procedure. The chosen for the only procedure in the program is main.

MOV AX, 47104: Move 47104 to the AX register

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ADD EAX, 1234: Add 1234 to the EAX register

MOV DS, AX: Move AX to the DS register

MOV EIP: marks the end of the main procedure

(30) Value 1 Byte 60h: uninitialized unsigned 8-bit variable declaration

(1) Value 2 DWORD: uninitialized 32-bit unsigned integer

(1) Value 3 5 byte -10, -20, -30, -40, -50: multiple initialized signed integers

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