Chap 9 (Week 11)

組別

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Use MOVSD to delete the first element of the following doubleword array. All subsequent array values must be moved one position forward toward the beginning of the array:

**array DWORD 1,1,2,3,4,5,6,7,8,9,10**

.data

array DWORD 1,1,2,3,4,5,6,7,8,9,10

.code

cld

mov ecx, \_\_LENGTHOF \_array\_\_\_\_\_\_\_\_\_\_ ; set REP counter

mov esi, \_\_OFFSET array+4\_\_\_\_\_\_\_\_\_\_\_ ; source

mov edi, \_\_\_ OFFSET array\_\_\_\_\_\_\_\_\_\_ ; destination

rep movsd\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ; do the move

mov DWORD PTR [edi], 0\_\_\_\_\_ ; modify the last element

(1) Write a program that converts each unpacked binary-coded decimal byte belonging to an array (array) into an ASCII decimal byte and copies it to a new array (dest).

**.data**

**array BYTE 1,2,3,4,5,6,7,8,9**

**dest BYTE (LENGTHOF array) DUP(?)**

|  |
| --- |
| **mov esi, \_\_\_\_\_\_** OFFSET array\_**\_\_\_**  **mov edi, \_\_\_\_\_\_** OFFSET dest\_**\_\_\_**  **mov ecx, \_\_\_** LENGTHOF array\_**\_\_\_\_\_\_ ; set loop counter**  **cld**  **L1: \_\_**\_LODSB\_**\_\_\_\_ ; load into AL**  **or al,30h ; convert to ASCII**  **\_\_**STOSB\_**\_\_\_\_\_ ; store into memory**  **loop L1** |

(2) Suppose a two-dimensional array of double-words has 5 logical rows and 6 logical columns. If ESI is used as the row index, what value is added to ESI to move from one row to the next?

4\*6=24.

(3) Should we use EBP to address an array?

**No,** EBP should be reserved as a base pointer for the current procedure's stack frame.