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ID: Nahe Maloom phly yaad teh

CS401 ASSIGNMENT SOLUTION 1

Q. Write an assembly language program to swap the first four digits of your VUID with the last four digits leaving the middle one intact. For example, if the digits in your VUID are 1423 5 0986, then the VUID should be converted to 0986 5 1423.

Solution:

```
jmp begin
vu_id: dw 2, 0, 0, 4, 0, 1, 2, 7, 9
sum:   dw 0
; mnemonic destination, source

begin:   mov ax, 0
mov bx, vu_id
mov cx, 9

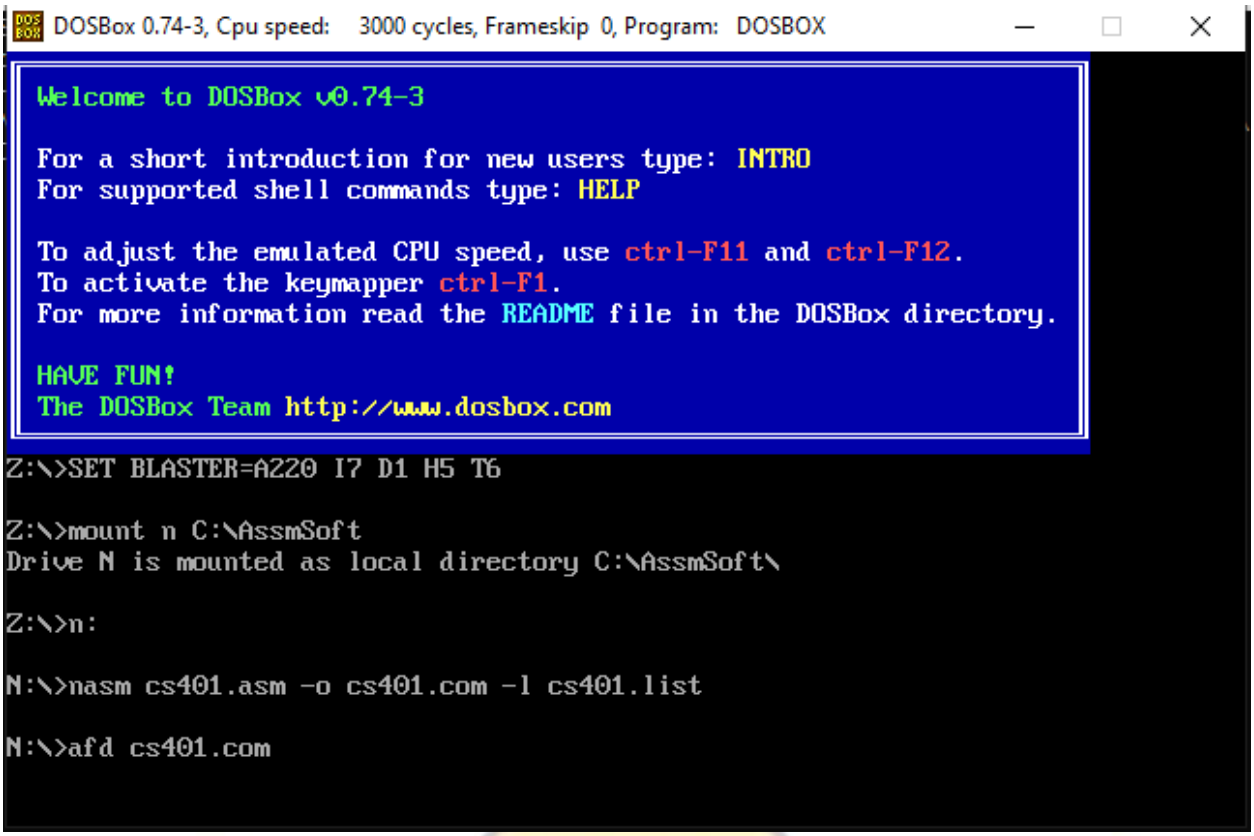
continue_Process:   cmp word [bx], 0
```

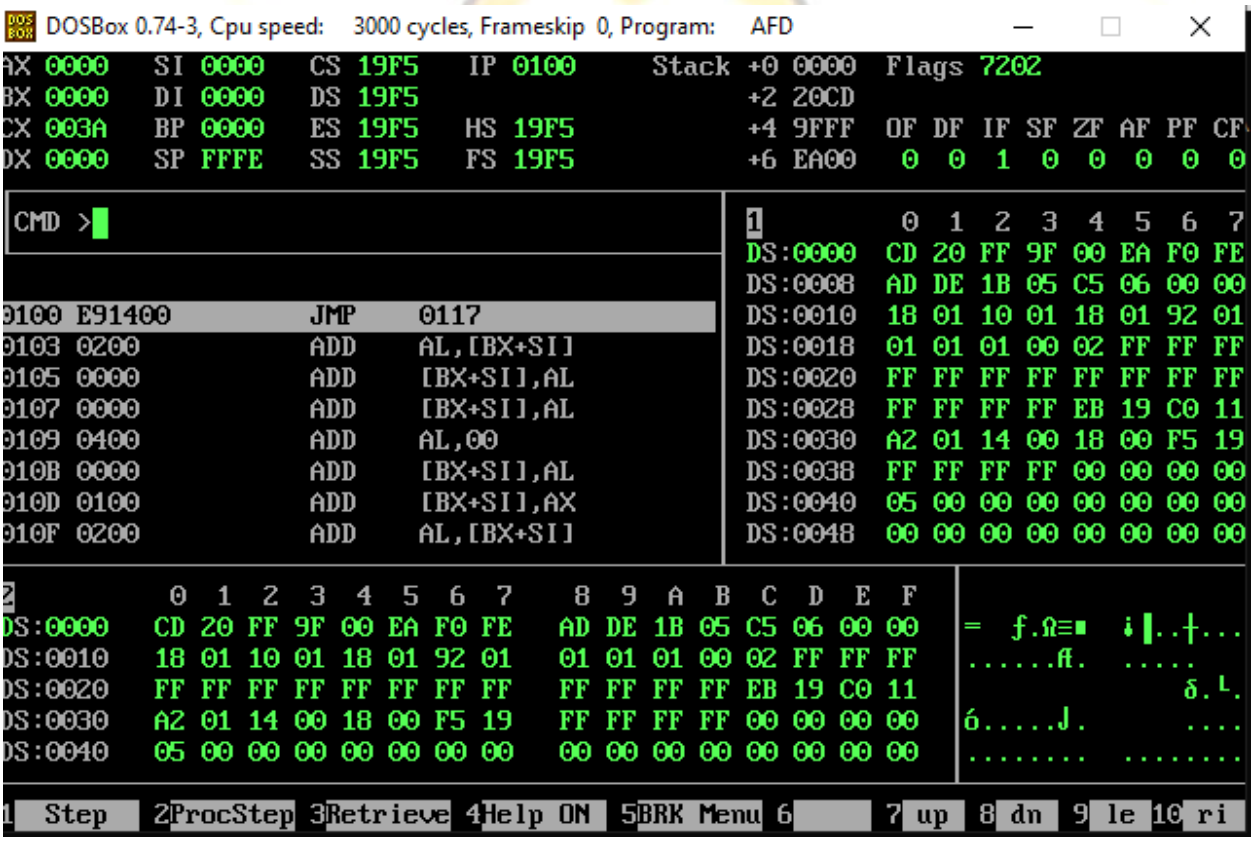
```
                je check_Is_Entire_Array_Traversed
                add ax, [bx]

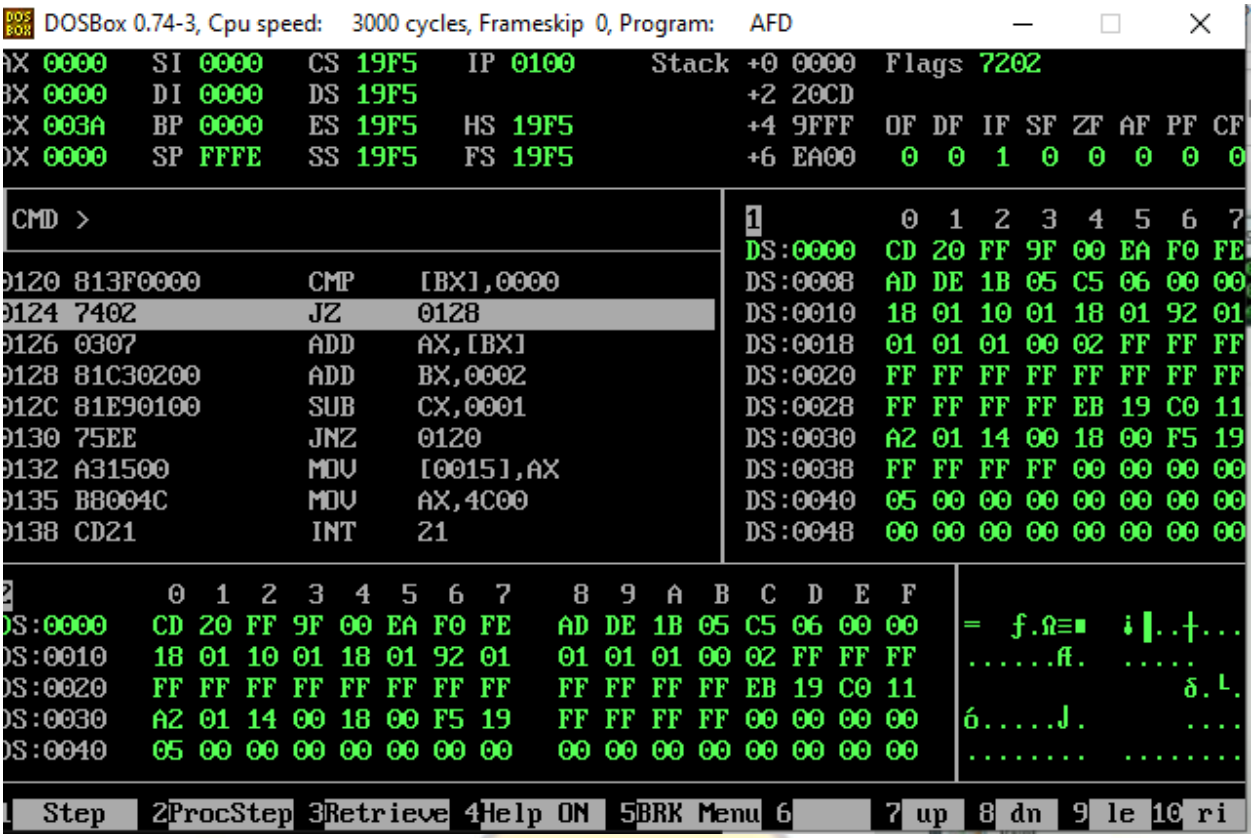
check_Is_Entire_Array_Traversed:        add bx,2
;move to the next index (remember this is a address)
                                        sub cx,1
;decrement our count
                                        jnz continue_Process
;continue process if the entire is not traversed
mov [sum], ax

terminate:  mov ax, 0x4c00
            int 0x21
```

VIRTUAL UNIVERSTY
ORANGE MONKEY


DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
Welcome to DOSBox v0.74-3
For a short introduction for new users type: INTRO
For supported shell commands type: HELP
To adjust the emulated CPU speed, use ctrl-F11 and ctrl-F12.
To activate the keymapper ctrl-F1.
For more information read the README file in the DOSBox directory.
HAVE FUN!
The DOSBox Team http://www.dosbox.com
Z:\>SET BLASTER=A220 I7 D1 H5 T6
Z:\>mount n C:\AssmSoft
Drive N is mounted as local directory C:\AssmSoft\
Z:\>n:
N:\>nasm cs401.asm -o cs401.com -l cs401.list
N:\>afd cs401.com


DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: AFD
AX 0000 SI 0000 CS 19F5 IP 0100 Stack +0 0000 Flags 7202
BX 0000 DI 0000 DS 19F5 +2 20CD
CX 003A BP 0000 ES 19F5 HS 19F5 +4 9FFF OF DF IF SF ZF AF PF CF
DX 0000 SP FFFE SS 19F5 FS 19F5 +6 EA00 0 0 1 0 0 0 0 0
CMD >
0100 E91400 JMP 0117
0103 0200 ADD AL,[BX+SI]
0105 0000 ADD [BX+SI],AL
0107 0000 ADD [BX+SI],AL
0109 0400 ADD AL,00
010B 0000 ADD [BX+SI],AL
010D 0100 ADD [BX+SI],AX
010F 0200 ADD AL,[BX+SI]
1 0 1 2 3 4 5 6 7
DS:0000 CD 20 FF 9F 00 EA F0 FE
DS:0008 AD DE 1B 05 C5 06 00 00
DS:0010 18 01 10 01 18 01 92 01
DS:0018 01 01 01 00 02 FF FF FF
DS:0020 FF FF FF FF FF FF FF FF
DS:0028 FF FF FF FF EB 19 C0 11
DS:0030 A2 01 14 00 18 00 F5 19
DS:0038 FF FF FF FF 00 00 00 00
DS:0040 05 00 00 00 00 00 00 00
DS:0048 00 00 00 00 00 00 00 00
2 0 1 2 3 4 5 6 7 8 9 A B C D E F
DS:0000 CD 20 FF 9F 00 EA F0 FE AD DE 1B 05 C5 06 00 00
DS:0010 18 01 10 01 18 01 92 01 01 01 01 00 02 FF FF FF
DS:0020 FF FF FF FF FF FF FF FF FF FF FF FF EB 19 C0 11
DS:0030 A2 01 14 00 18 00 F5 19 FF FF FF FF 00 00 00 00
DS:0040 05 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1 Step 2ProcStep 3Retrieve 4Help ON 5BRK Menu 6 7 up 8 dn 9 le 10 ri


DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: AFD
AX 0000 SI 0000 CS 19F5 IP 0100 Stack +0 0000 Flags 7202
BX 0000 DI 0000 DS 19F5 +2 20CD
CX 003A BP 0000 ES 19F5 HS 19F5 +4 9FFF OF DF IF SF ZF AF PF CF
DX 0000 SP FFFE SS 19F5 FS 19F5 +6 EA00 0 0 1 0 0 0 0 0
CMD >
0120 813F0000 CMP [BX],0000
0124 7402 JZ 0128
0126 0307 ADD AX,[BX]
0128 81C30200 ADD BX,0002
012C 81E90100 SUB CX,0001
0130 75EE JNZ 0120
0132 A31500 MOV [0015],AX
0135 B8004C MOV AX,4C00
0138 CD21 INT 21
1 0 1 2 3 4 5 6 7
DS:0000 CD 20 FF 9F 00 EA F0 FE
DS:0008 AD DE 1B 05 C5 06 00 00
DS:0010 18 01 10 01 18 01 92 01
DS:0018 01 01 01 00 02 FF FF FF
DS:0020 FF FF FF FF FF FF FF FF
DS:0028 FF FF FF FF EB 19 C0 11
DS:0030 A2 01 14 00 18 00 F5 19
DS:0038 FF FF FF FF 00 00 00 00
DS:0040 05 00 00 00 00 00 00 00
DS:0048 00 00 00 00 00 00 00 00
2 0 1 2 3 4 5 6 7 8 9 A B C D E F
DS:0000 CD 20 FF 9F 00 EA F0 FE AD DE 1B 05 C5 06 00 00
DS:0010 18 01 10 01 18 01 92 01 01 01 01 00 02 FF FF FF
DS:0020 FF FF FF FF FF FF FF FF FF FF FF FF EB 19 C0 11
DS:0030 A2 01 14 00 18 00 F5 19 FF FF FF FF 00 00 00 00
DS:0040 05 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1 Step 2ProcStep 3Retrieve 4Help ON 5BRK Menu 6 7 up 8 dn 9 le 10 ri