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Department of Computer Engineering

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Experiment No.	2

AIM:	To simulate the operation of COPY and PASTE in 8086 (MASM)
Program 1	
PROBLEM STATEMENT :	Copy input values within the segment (1000:0000 copy to 1000:2000)
PROGRAM:	<pre>DATA SEGMENT DATA ENDS CODE SEGMENT ASSUME CS:CODE, DS:DATA START: MOV AX,1000H MOV DS,AX MOV SI,0000H MOV DI,2000H MOV CL,0AH XYZ: MOV AX,[SI] MOV [DI],AX ADD SI,02 ADD DI,02 DEC CL JNZ XYZ MOV AH,4CH INT 21H CODE ENDS END START</pre>
RESULT:	

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DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG -
-e 1000:0000 21 12 0A 0C 32 54 32 11 71 A0
-d 1000:0000
1000:0000 21 12 0A 0C 32 54 32 11-71 A0 12 83 C4 02 89 46  ?...2T2.q.....F
1000:0010 FC 0B C0 75 05 9A 8E FA-A2 01 8B 5C 0C 8A 47 16  ....u.....\..G.
1000:0020 8B 5E FC 88 07 FF 74 0C-E8 29 1A 8B 46 FC 89 44  .^....t...F..D
1000:0030 0C C6 44 0E 01 C6 44 0B-02 80 7C 0B 02 75 5D 8A  ..D...D...!..u|.
1000:0040 44 0E 2A E4 89 46 F4 8B-5E 04 3B 47 02 73 30 FF  D.*..F..^.;G.s0.
1000:0050 77 02 FF 74 0C 9A 53 07-3B 12 83 C4 04 89 44 0C  w..t..S.;.....D.
1000:0060 03 46 F4 89 46 FC 8B 5E-04 8B 46 F4 39 47 02 76  .F..F..^...F.9G.v
1000:0070 22 8B 5E FC FF 46 FC C6-07 20 FF 46 F4 EB E7 8B  ".^..F... .F....
-g
AX=4CC0 BX=0000 CX=0000 DX=0000 SP=0000 BP=0000 SI=0014 DI=2014
DS=1000 ES=075A SS=0769 CS=076A IP=001D  NU UP EI PL ZR NA PE NC
076A:001D CC          INT      3
-d 1000:2000
1000:2000 21 12 0A 0C 32 54 32 11-71 A0 12 83 C4 02 89 46  ?...2T2.q.....F
1000:2010 FC 0B C0 75 00 00 00 00-F0 06 00 00 00 00 00 00  ....u.....
1000:2020 F8 06 00 00 00 00 00 00-00 07 00 00 00 00 00 00  .....
1000:2030 08 07 00 00 00 00 00 00-10 07 00 00 00 00 00 00  .....
1000:2040 18 07 00 00 00 00 00 00-20 07 00 00 00 00 00 00  .....
1000:2050 28 07 00 00 00 00 00 00-30 07 00 00 00 00 00 00  (.....0.....
1000:2060 38 07 00 00 00 00 00 00-40 07 00 00 00 00 00 00  8.....@.....
1000:2070 48 07 00 00 00 00 00 00-50 07 00 00 00 00 00 00  H.....P.....

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Program 2	
PROBLEM STATEMENT :	Copy input values to different segment (1000:0000 copy to 2000:0000)
PROGRAM:	<pre> ASSUME CS:CODE, DS:DATA DATA SEGMENT DATA ENDS CODE SEGMENT START: MOV AX,1000H MOV DS,AX MOV AX,2000H MOV ES,AX MOV SI,0000H MOV DI,0000H </pre>

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	MOV CL,0AH xyz: MOV AX,[SI] MOV es:[DI],AX ADD SI,02 ADD DI,02 DEC CL JNZ xyz MOV AH,4ch INT 21H CODE ENDS END START
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RESULT:

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C:\>debug copynum2.exe
-e 1000:0000 1 2 3 4 5 6 7 8 9 10
-d 1000:0000
1000:0000 01 02 03 04 05 06 07 08-09 10 12 83 C4 02 89 46 .....F
1000:0010 FC 0B C0 75 05 9A 8E FA-A2 01 8B 5C 0C 8A 47 16 ...u.....\..G.
1000:0020 8B 5E FC 88 07 FF 74 0C-E8 29 1A 8B 46 FC 89 44 .^....t...).F..D
1000:0030 0C C6 44 0E 01 C6 44 0B-02 80 7C 0B 02 75 5D 8A ..D...D...!..u|.
1000:0040 44 0E 2A E4 89 46 F4 8B-5E 04 3B 47 02 73 30 FF D.*..F..^.;G.s0.
1000:0050 77 02 FF 74 0C 9A 53 07-3B 12 83 C4 04 89 44 0C w..t..S.;....D.
1000:0060 03 46 F4 89 46 FC 8B 5E-04 8B 46 F4 39 47 02 76 .F..F..^..F.9G.v
1000:0070 22 8B 5E FC FF 46 FC C6-07 20 FF 46 F4 EB E7 8B ".^..F... .F....
-g
Program terminated normally
-d 2000:0000
2000:0000 01 02 03 04 05 06 07 08-09 10 12 83 C4 02 89 46 .....F
2000:0010 FC 0B C0 75 43 07 34 07-20 07 30 07 34 07 20 07 ...uC.4...0.4. .
2000:0020 38 07 39 07 2D 07 34 07-36 07 20 07 30 07 36 07 8.9.-.4.6. .0.6.
2000:0030 20 07 30 07 42 07 20 07-43 07 30 07 20 07 37 07 .0.B. .C.0. .7.
2000:0040 34 07 20 07 31 07 42 07-20 07 42 07 38 07 20 07 4. .1.B. .B.8. .
2000:0050 36 07 30 07 20 07 20 07-20 07 2E 07 2E 07 3B 07 6.0. . . . . .;..
2000:0060 2E 07 2E 07 2E 07 2E 07-2E 07 46 07 2E 07 2E 07 .....F....
2000:0070 2E 07 74 07 2E 07 2E 07-60 07 20 07 20 07 20 07 ..t.....' . . .
    
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CONCLUSION:

In this experiment, I got acquainted with the basics of 8086 assembly language programming, and solved the operation of copy pasting data within the segment and in different segments.