

Experiment No. 8: Case conversion

Date: 16-10-2020

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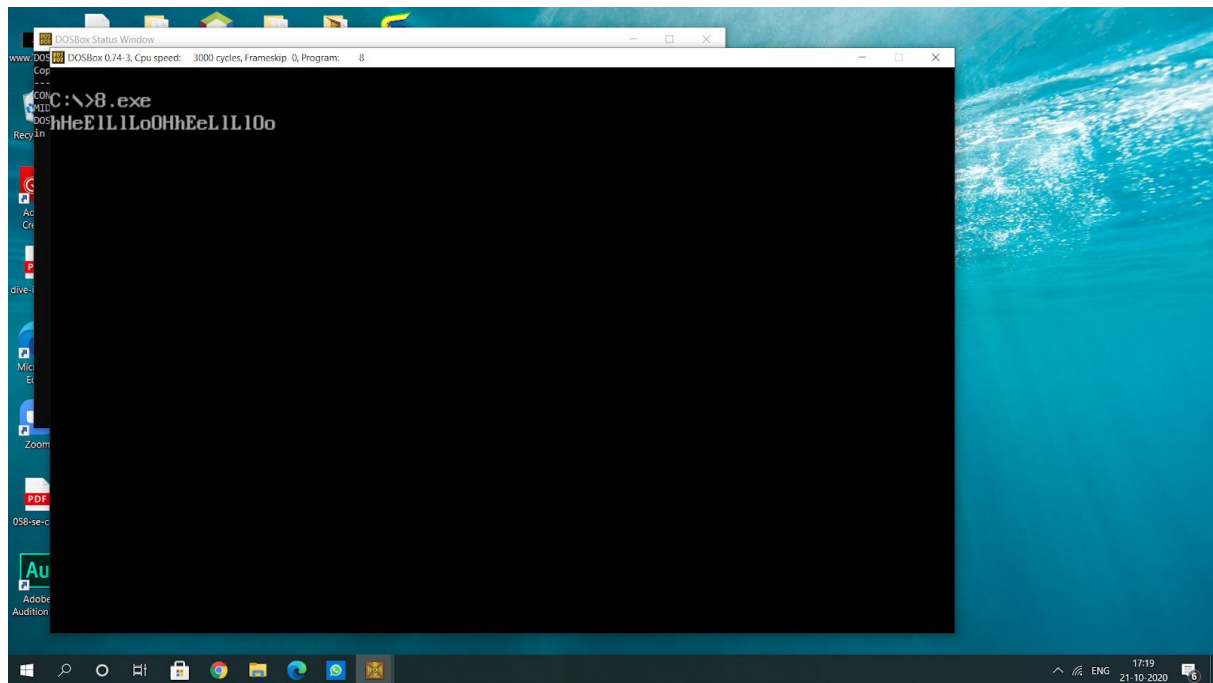
AIM:

Program for case conversion of letters.

PROGRAM:

PROGRAM	COMMENTS
START: MOV AX,data MOV DS,AX MOV CX,COUNT	Transferring address of data segment to ds Move count value to cx register
L1: MOV AH,1 INT 21H CMP AL,60H JNC UPPER ADD AL,20H JMP SKIP	Read the letters with echo Compare the values of al with 60H Jump to upper if there is no carry generated al=al+20h Jump to skip
UPPER: SUB AL,20H	al=al-20h
SKIP: MOV AH,2 MOV DL,AL INT 21H LOOP L1 MOV Ah,4CH INT 21H	Character output function Load al to dl Display character to output device Repeat loop l1 Terminate the program

SAMPLE INPUT/OUTPUT:



RESULT:

Thus case conversion of letters has been performed.

Experiment No. 9: Floating point operations

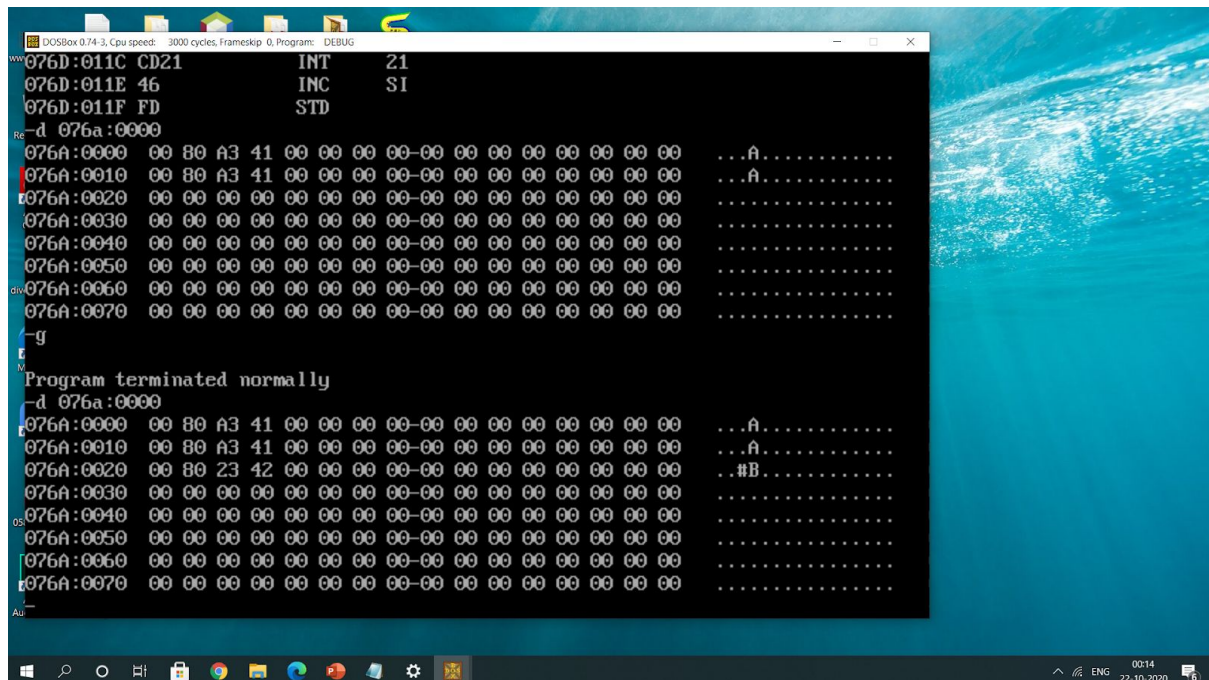
A. AIM:

Program for performing floating point addition.

PROGRAM:

PROGRAM	COMMENTS
start: MOV AX,DATASEG MOV DS,AX FINIT FLD X FLD Y FADD ST(0),ST(1) FST SUM MOV AH,4CH INT 21H	Load data segment to ds Initialize 8087 stack Load floating point value X into ST(0) Load floating point value Y into ST(0) $ST(0) = X+Y$ store ST(0) in sum Terminate the program

SAMPLE INPUT/OUTPUT



The screenshot shows a DOSBox window with a debugger interface. The assembly window displays the following instructions:

```
076D:011C CD21      INT     21
076D:011E 46        INC     SI
076D:011F FD        STD
-d 076a:0000
076A:0000  00 80 A3 41 00 00 00 00-00 00 00 00 00 00 00 00 00  ...A.....
076A:0010  00 80 A3 41 00 00 00 00-00 00 00 00 00 00 00 00 00  ...A.....
076A:0020  00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00  .....
076A:0030  00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00  .....
076A:0040  00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00  .....
076A:0050  00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00  .....
076A:0060  00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00  .....
076A:0070  00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00  .....
-g
Program terminated normally
-d 076a:0000
076A:0000  00 80 A3 41 00 00 00 00-00 00 00 00 00 00 00 00 00  ...A.....
076A:0010  00 80 A3 41 00 00 00 00-00 00 00 00 00 00 00 00 00  ...A.....
076A:0020  00 80 23 42 00 00 00 00-00 00 00 00 00 00 00 00 00  ...#B.....
076A:0030  00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00  .....
076A:0040  00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00  .....
076A:0050  00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00  .....
076A:0060  00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00  .....
076A:0070  00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00  .....
```

The memory dump shows the state of memory at 076A:0000. The first two lines show the value 0A (hex) at addresses 0000 and 0010. The third line shows the value 23 (hex) at address 0020, which is labeled as #B. The rest of the memory dump shows zeros.

RESULT:

Thus floating point addition has been performed.

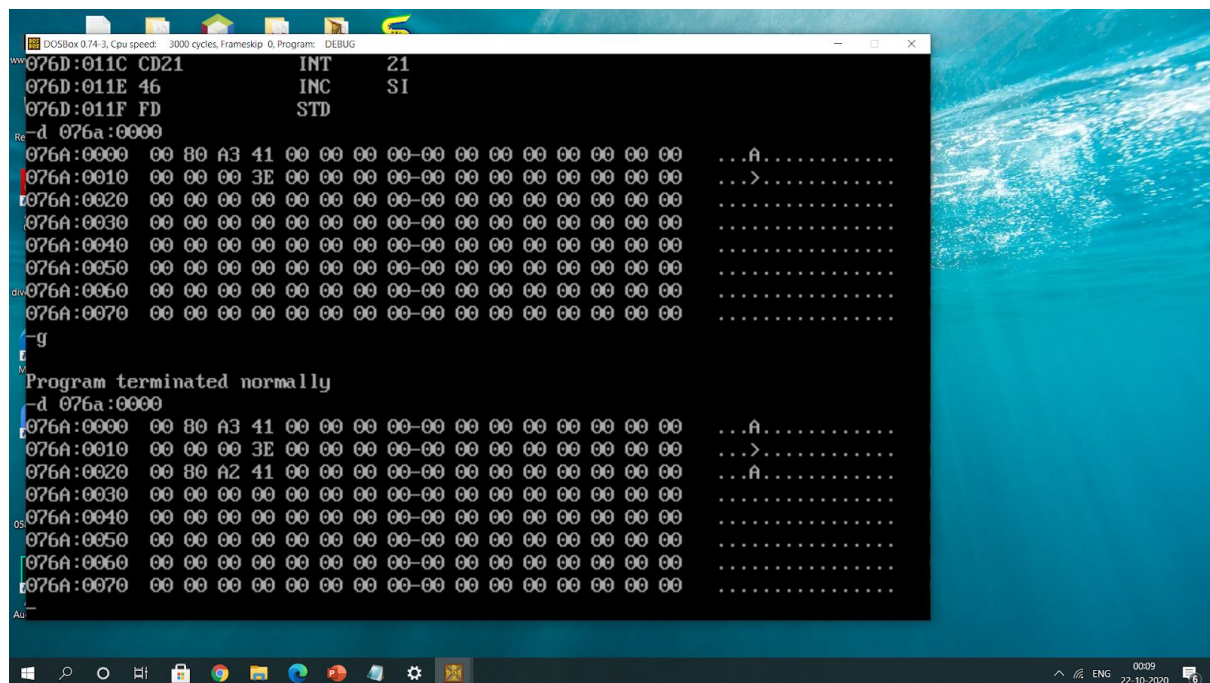
B. AIM:

Program for performing floating point subtraction.

PROGRAM:

PROGRAM	COMMENTS
start: MOV AX,DATASEG MOV DS,AX FINIT FLD X FLD Y FSUB ST(0),ST(1) ; FST SUM MOV AH,4CH INT 21H	 Load data segment to ds Initialize 8087 stack Load floating point value X into ST(0) Load floating point value Y into ST(0) ST(0) = X-Y store ST(0) in sum Terminate the program

SAMPLE INPUT/OUTPUT:



The screenshot shows a DOSBox window with a debugger interface. The assembly window displays the following code:

```
076D:011C CD21      INT     21
076D:011E 46        INC     SI
076D:011F FD        STD
-d 076a:0000
076A:0000 00 80 A3 41 00 00 00 00-00 00 00 00 00 00 00 00 00 ...A.....
076A:0010 00 00 00 3E 00 00 00 00-00 00 00 00 00 00 00 00 00 ...>.....
076A:0020 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00 .....
076A:0030 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00 .....
076A:0040 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00 .....
076A:0050 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00 .....
076A:0060 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00 .....
076A:0070 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00 .....
-g
Program terminated normally
-d 076a:0000
076A:0000 00 80 A3 41 00 00 00 00-00 00 00 00 00 00 00 00 00 ...A.....
076A:0010 00 00 00 3E 00 00 00 00-00 00 00 00 00 00 00 00 00 ...>.....
076A:0020 00 80 A2 41 00 00 00 00-00 00 00 00 00 00 00 00 00 ...A.....
076A:0030 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00 .....
076A:0040 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00 .....
076A:0050 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00 .....
076A:0060 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00 .....
076A:0070 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00 .....
Au
```

The status bar at the bottom indicates the program is running in DOSBox 0.74-3, with a CPU speed of 3000 cycles/frame and a date of 22.10.2020.

RESULT:

Thus floating point subtraction has been performed.