

## Experiment No. 8: Case conversion

Date: 16-10-2020

NAME: Gayathri M

REG.NO: 185001050

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:

```
DOSBox 0.74-3-1, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
D:\>debug 8.EXE
-u
076A:0100 B86A07      MOV     AX,076A
076A:0103 8ED8        MOV     DS,AX
076A:0105 B91000      MOV     CX,0010
076A:0108 B401        MOV     AH,01
076A:010A CD21        INT     21
076A:010C 3C60        CMP     AL,60
076A:010E 7304        JNB     0114
076A:0110 0420        ADD     AL,20
076A:0112 EB02        JMP     0116
076A:0114 2C20        SUB     AL,20
076A:0116 B402        MOV     AH,02
076A:0118 8AD0        MOV     DL,AL
076A:011A CD21        INT     21
076A:011C E2EA        LOOP   0108
076A:011E B44C        MOV     AH,4C
```

```
DOSBox 0.74-3-1, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
-d 076a:0000
076A:0000  00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00  .....
076A:0010  00 00 00 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  .....
076A:0030  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  .....
076A:0050  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  .....
076A:0070  00 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00  .....
-g
bByYdDhHaaSsKkyYoOpPwwQqZzGgrRtT
Program terminated normally
```

## RESULT:

Thus case conversion of letters has been performed.

## Experiment No. 9: Floating point operations

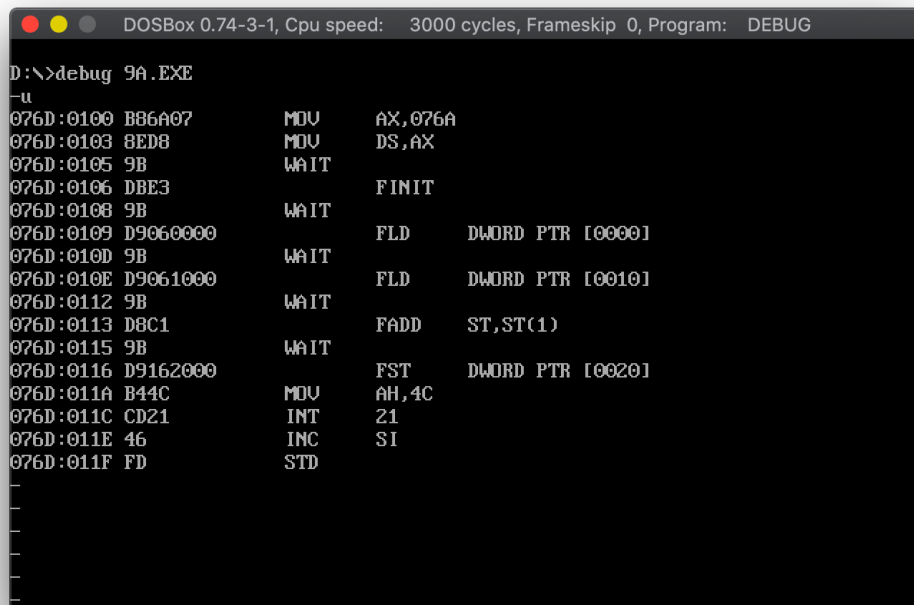
### A. AIM:

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



```
DOSBox 0.74-3-1, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
D:\>debug 9A.EXE
-u
076D:0100 B86A07      MOV     AX,076A
076D:0103 8ED8          MOV     DS,AX
076D:0105 9B           WAIT
076D:0106 DBE3          WAIT     FINIT
076D:0108 9B           WAIT
076D:0109 D9060000        FLD     DWORD PTR [0000]
076D:010D 9B           WAIT
076D:010E D9061000        FLD     DWORD PTR [0010]
076D:0112 9B           WAIT
076D:0113 D8C1          FADD    ST,ST(1)
076D:0115 9B           WAIT
076D:0116 D9162000        FST     DWORD PTR [0020]
076D:011A B44C          MOV     AH,4C
076D:011C CD21          INT     21
076D:011E 46           INC     SI
076D:011F FD           STD
```

```

DOSBox 0.74-3-1, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
-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  .....

```

## 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:

```
DOSBox 0.74-3-1, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
D:\>debug 9b.EXE
-u
076D:0100 B86A07      MOV     AX,076A
076D:0103 8ED8        MOV     DS,AX
076D:0105 9B          WAIT
076D:0106 DBE3        FINIT
076D:0108 9B          WAIT
076D:0109 D9061000      FLD     DWORD PTR [0010]
076D:010D 9B          WAIT
076D:010E D9060000      FLD     DWORD PTR [0000]
076D:0112 9B          WAIT
076D:0113 D8E1        FSUB     ST,ST(1)
076D:0115 9B          WAIT
076D:0116 D9162000      FST     DWORD PTR [0020]
076D:011A B44C        MOV     AH,4C
076D:011C CD21        INT     21
076D:011E 46          INC     SI
076D:011F FD          STD
```

```
DOSBox 0.74-3-1, Cpu speed: 3000 cycles, Frameskip 0, Program: DEBUG
-d 076a:0000
076A:0000 00 80 A3 41 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 ...>.....
076A:0020 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 .....
076A:0040 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 .....
076A:0060 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 .....
-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 ...A.....
076A:0010 00 00 00 3E 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 ...A.....
076A:0030 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 .....
076A:0050 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 .....
076A:0070 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 .....
_
```

## RESULT:

Thus floating point subtraction has been performed.