

Experiment 6 [2]

Separate the positive and negative numbers, copy them to the PDATA array, put the positive numbers in front and the negative numbers in the back , and count the positive and negative numbers separately .

This question takes ARRAY: 1,2,3,4,5,7, - 8 ,-9 as an example code:

DATA SEGMENT

PTABLE DW 1,2,3,4,5, 7 , -8 , -9

DATAS ENDS

EXTRAS SEGMENT

 PDATA DW 16 DUP(?)

 A DB 30H

 B DB 30H

EXTRAS ENDS

CODES SEGMENT

 ASSUME CS:CODES,DS:DATAS,ES:EXTRAS

START:

 MOV AX,DATAS

 MOV DS,AX

 MOV AX,EXTRAS

 MOV ES,AX

 LEA BX,PTABLE

 LEA SI,PDATA

 MOV CX,8

 MOV DX,0

 T:

 MOV AX,[BX]

 TEST AX,8000H

 JZ P

 POP AX

 ADD A,1

 ADD DX,1

 JMP L

 P:

 MOV ES:[SI],AX

 ADD B,1

 ADD SI,2

 L:

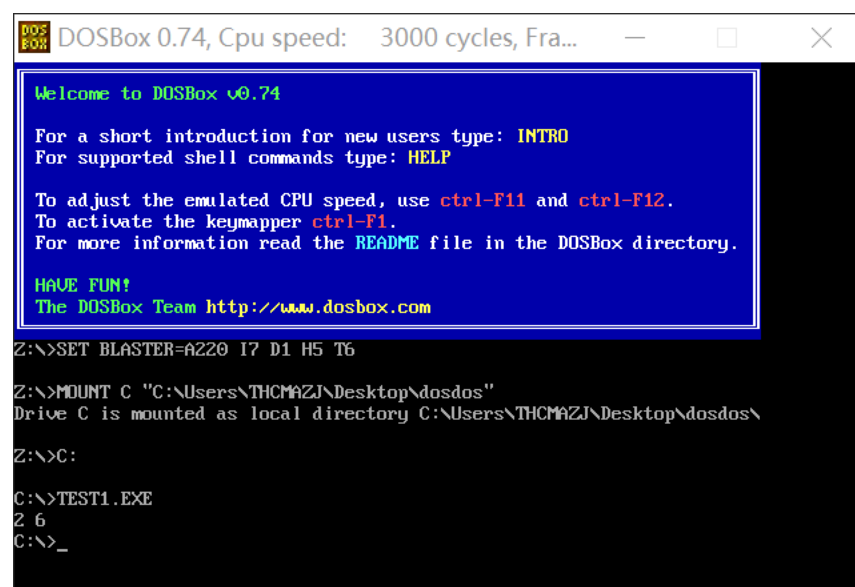
 ADD BX,2

 LOOP T

```

MOV CX,DX
M:
PUSH AX
MOV ES:[SI],AX
ADD SI,2
LOOP M
MOV DL,A
MOV AH,2
INT 21H
MOV DL,20H
MOV AH,2
INT 21H
MOV DL,B
MOV AH,2
INT 21H
MOV AH,4CH
INT 21H
CODES ENDS
END START

```



The screenshot shows a DOSBox 0.74 window. The title bar reads "DOSBox 0.74, Cpu speed: 3000 cycles, Fra...". The main window has a blue background with white text. It displays a welcome message from the DOSBox Team, including instructions on how to use the program (e.g., using `ctrl-F11` and `ctrl-F12` for CPU speed, and `ctrl-F1` for the keymapper). Below the welcome message, the command prompt shows the following commands and output:

```

Z:\>SET BLASTER=A220 I7 D1 H5 T6

Z:\>MOUNT C "C:\Users\THCMAZJ\Desktop\dosdos"
Drive C is mounted as local directory C:\Users\THCMAZJ\Desktop\dosdos\

Z:\>C:

C:\>TEST1.EXE
2 6
C:\>_

```

实验 7 [3]

Input a two-digit hexadecimal number from the keyboard, convert it to a binary number and display the output.

code:

```

DATA SEGMENT
STR1 DB 'Input A Hexadecimal Num: $'
DATAS ENDS

```

STACKS SEGMENT

;

STACKS ENDS

CODES SEGMENT

ASSUME CS:CODES,DS:DATAS,SS:STACKS

START:

MOV AX,DATAS

MOV DS,AX

LEA DX, STR1 ;'INPUT'

MOV AH, 9 ; display string

INT 21H

MOV CH,02H

MOV CL,04H

MOV BX,0

L1:

MOV AH,01H

INT 21H

SUB AL,30H

CMP AL,0AH

JL L2

SUB AL,07H

L2:

SHL BX,CL

OR BL,AL

DEC CH

JNZ L1

SHL BX,CL

SHL BX,CL

MOV DL,0DH

INT 21H

MOV DL,0AH

MOV AH,2

INT 21H

MOV CX,0008H

R:

SHL BX,1

JB PRINT1

JNB PRINT0

PRINT1:

MOV DL,31H

MOV AH,2

```

        INT 21H
    JMP L
PRINT0:
    MOV DL,30H
    MOV AH,2
    INT 21H
L:
    LOOP R
    MOV AH,4CH
    INT 21H
CODES ENDS
END START

```

Screenshot of the experiment:

```

C:\>TN2
Input A Hexadecimal Num: FF

11111111
C:\>TN2
Input A Hexadecimal Num: 45

01000101
C:\>TN2
Input A Hexadecimal Num: AB

10101011
C:\>TN2
Input A Hexadecimal Num: 9C

10011100

```

```

DOS
BOX
DOSBox 0.74, Cpu speed: 3000 cycles, Fra...
Z:\>MOUNT C "C:\Users\THCMZJ\Desktop\dosdos"
Drive C is mounted as local directory C:\Users\THCMZJ\Desktop\dosdos\

Z:\>C:

C:\>TEST2.EXE
Input A Hexadecimal Num: FF

11111111
C:\>TEST2
Input A Hexadecimal Num: 9C

10011100
C:\>TEST2
Input A Hexadecimal Num: 96

10010110
C:\>TEST2
Input A Hexadecimal Num: 22
00100010
C:\>TEST2
Input A Hexadecimal Num: AC

10101100
C:\>_

```