汇编语言程序设计课程作业（七）

姓名：袁昊男　　学号：2018091618008

问题 7.9

编程，将 datasg 段中每个单词的前 4 个字母改为大写字母。

```
assume cs:codesg,ss:stacksg,ds:datasg

stacksg segment
    dw 0,0,0,0,0,0,0,0
stacksg ends

datasg segment
    db '1. display      '
    db '2. brows        '
    db '3. replace      '
    db '4. modify       '
datasg ends

codesg segment
    start:
codesg ends

end start
```
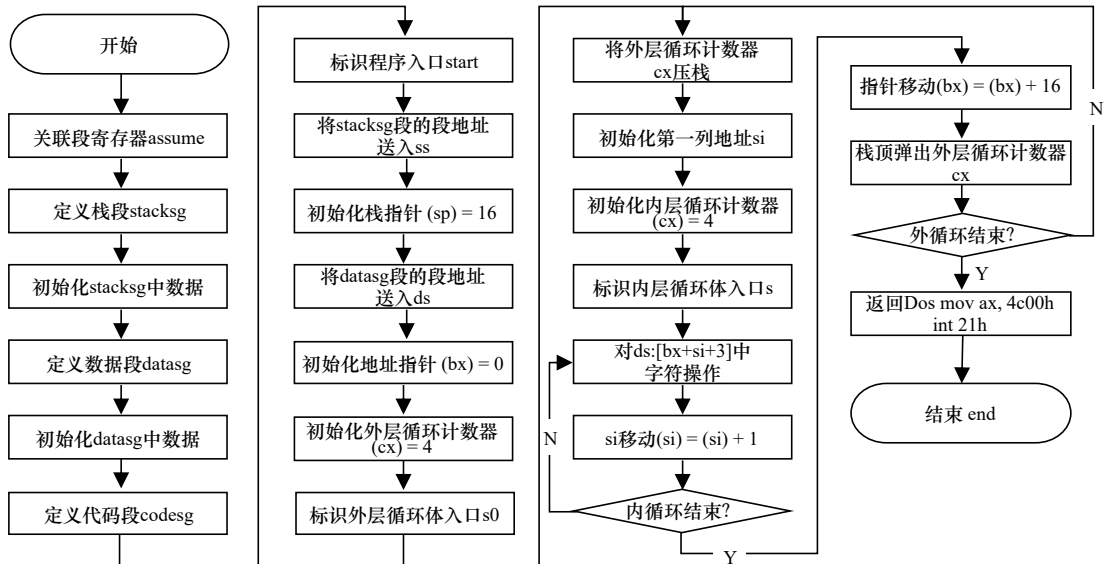
(1) 程序流程图：

(2) 补全代码：

```
start: mov ax,stacksg
       mov ss,ax
       mov sp,16

       mov ax,datasg
       mov ds,ax
       mov bx,0

       mov cx,4
```
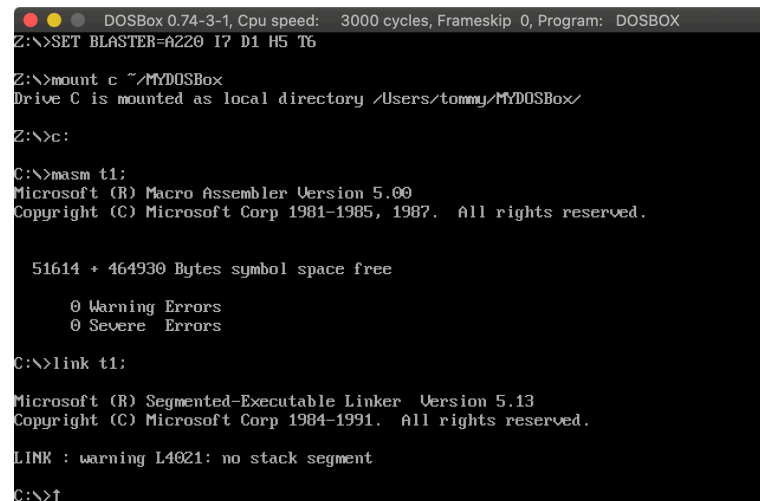
```
s0: push cx
    mov si,0
    mov cx,4

s:  mov al,[bx+si+3]
    and al,11011111b
    mov [bx+si+3],al
    inc si
    loop s

    add bx,16
    pop cx
    loop s0

    mov ax,4c00h
    int 21h
```

(3) 编译、连接：

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

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

Z:\>mount c ~/MYDOSBox
Drive C is mounted as local directory /Users/tommy/MYDOSBox/

Z:\>c:

C:\>masm t1;
Microsoft (R) Macro Assembler Version 5.00
Copyright (C) Microsoft Corp 1981-1985, 1987. All rights reserved.

  51614 + 464930 Bytes symbol space free

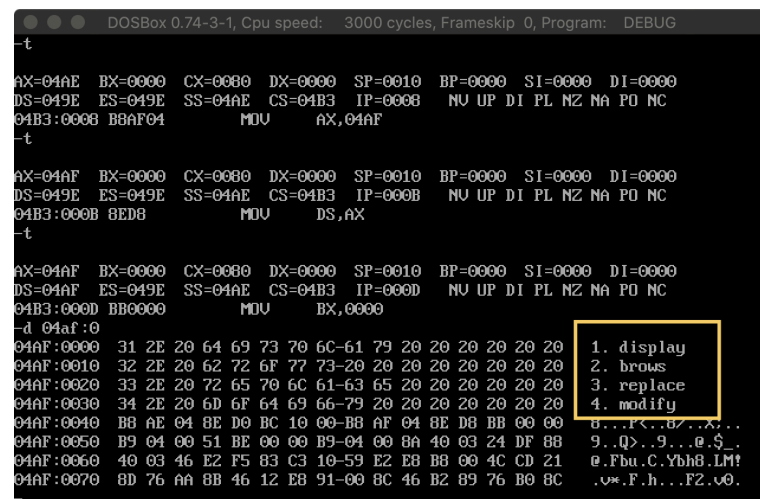   0 Warning Errors
     0 Severe Errors

C:\>link t1;

Microsoft (R) Segmented-Executable Linker Version 5.13
Copyright (C) Microsoft Corp 1984-1991. All rights reserved.

LINK : warning L4021: no stack segment

C:\>

(4) 跟踪、调试：

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

AX=04AE BX=0000 CX=0080 DX=0000 SP=0010 BP=0000 SI=0000 DI=0000
DS=049E ES=049E SS=04AE CS=04B3 IP=0008   NV UP DI PL NZ NA PO NC
04B3:0008 B8AF04   MOV   AX,04AF
-t

AX=04AF BX=0000 CX=0080 DX=0000 SP=0010 BP=0000 SI=0000 DI=0000
DS=049E ES=049E SS=04AE CS=04B3 IP=000B   NV UP DI PL NZ NA PO NC
04B3:000B 8ED8   MOV   DS,AX
-t

AX=04AF BX=0000 CX=0080 DX=0000 SP=0010 BP=0000 SI=0000 DI=0000
DS=04AF ES=049E SS=04AE CS=04B3 IP=000D   NV UP DI PL NZ NA PO NC
04B3:000D BB0000   MOV   BX,0000
-d 04af:0
04AF:0000 31 2E 20 64 69 73 70 6C-61 79 20 20 20 20 20 20   1. display
04AF:0010 32 2E 20 62 72 6F 77 73-20 20 20 20 20 20 20 20   2. brows
04AF:0020 33 2E 20 72 65 70 6C 61-63 65 20 20 20 20 20 20   3. replace
04AF:0030 34 2E 20 6D 6F 64 69 66-79 20 20 20 20 20 20 20   4. modify
04AF:0040 B8 AE 04 8E D0 BC 10 00-B8 AF 04 8E D8 BB 00 00   8...F<..8/..X...
04AF:0050 B9 04 00 51 BE 00 00 B9-04 00 8A 40 03 24 DF 88   9..Q>..9...@.$_.
04AF:0060 40 03 46 E2 F5 83 C3 10-59 E2 E8 B8 00 4C CD 21   @.Fbu.C.Ybh8.LM!
04AF:0070 8D 76 AA 8B 46 12 E8 91-00 8C 46 B2 89 76 B0 8C   .v*.F.h...FZ.v0.

（运行前）

（运行后）