Homework1:Helloworld

Part1: 传统方式

详情见仓库中的文件，代码示例如下：

```
STKSEG SEGMENT STACK
DW 32 DUP(0)
STKSEG ENDS

DATASEG SEGMENT
    MSG DB "Hello World$"
DATASEG ENDS

CODESEG SEGMENT
    ASSUME CS:CODESEG,DS:DATASEG
MAIN PROC FAR
    MOV AX,DATASEG
    MOV DS,AX
    MOV AH,9
    MOV DX,OFFSET MSG
    INT 21H
    MOV AX,4C00H
    INT 21H
MAIN ENDP
CODESEG ENDS
    END MAIN
```

Part2: 另类方式

通过直接写内存方式执行代码，步骤如下：

1.debug hello.exe：

```
DOSBox 0.74-3, Cpu speed:    3000 cycles, Frameskip  0, Progra...

Z:\>f:

F:\>debug hello.exe
-u
076F:0000 B86E07        MOV     AX,076E
076F:0003 8ED8          MOV     DS,AX
076F:0005 B409          MOV     AH,09
076F:0007 BA0000        MOV     DX,0000
076F:000A CD21          INT     21
076F:000C B8004C        MOV     AX,4C00
076F:000F CD21          INT     21
076F:0011 0000          ADD     [BX+SI],AL
076F:0013 0000          ADD     [BX+SI],AL
076F:0015 0000          ADD     [BX+SI],AL
076F:0017 0000          ADD     [BX+SI],AL
076F:0019 0000          ADD     [BX+SI],AL
076F:001B 0000          ADD     [BX+SI],AL
076F:001D 0000          ADD     [BX+SI],AL
076F:001F 0000          ADD     [BX+SI],AL
-r
AX=FFFF  BX=0000  CX=0061  DX=0000  SP=0040  BP=0000  SI=0000  DI=0000
DS=075A  ES=075A  SS=076A  CS=076F  IP=0000   NV UP EI PL NZ NA PO NC
076F:0000 B86E07        MOV     AX,076E
-
```

2.数据段的位置是076E，

写数据”Hello$”对应的 ASCII 码 48 65 6c 6c 6f 24 写入内存：
Debug 下用-e 076e：0 回车 一次写入

```
-r
AX=FFFF  BX=0000  CX=0061  DX=0000  SP=0040  BP=0000  SI=0000  DI=0000
DS=075A  ES=075A  SS=076A  CS=076F  IP=0000   NV UP EI PL NZ NA PO NC
076F:0000 B86E07        MOV     AX,076E
-e 076e:0
076E:0000  48.48   65.65   6C.6C   6C.6C   6F.6F   20.24_
```

3.写代码的机器码 b8 6b 07 be d8 ba 02 00 b4 09 cd 21 b8 00 4c cd 21（17 个字节）写入内存

Debug 下用-e 076a：0 回车 一次写入，

并修改cs=076a

```
-E 076a:0
076A:0000  00.b8   00.6b   00.07   00.be   00.d8   00.ba   00.02   00.00
076A:0008  00.b4   00.09   00.cd   00.21   00.b8   00.00   00.4c   00.cd
076A:0010  00.21

-r cs
CS 076F
:076a
```

4.运行查看结果

```
-g
Hello
F:\>_
```