微原第二次实验

实验报告

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实验 I - 串操作指令

Source Code

```
DSEG SEGMENT
    ORG  1000H
    AR1  DB
    ORG  2000H
    AR2  DB
DSEG ENDS

CODE SEGMENT
ASSUME CS:CODE, DS:DSEG, ES:DSEG
START:
    MOV  AX, DSEG
    MOV  DS, AX
    MOV  ES, AX
    CLD
    MOV  DI, 1000H
    MOV  AX, 55AAH
    MOV  CX, 0010H
    REP  STOSW
    MOV  SI, 1000H
    MOV  DI, 2000H
    MOV  CX, 0020H
    REP  MOVSB
    MOV  SI, 1000H
    MOV  DI, 2000H
    MOV  CX, 0010H
    REPZ CMPSW
CODE ENDS
END START
```

实验结果：

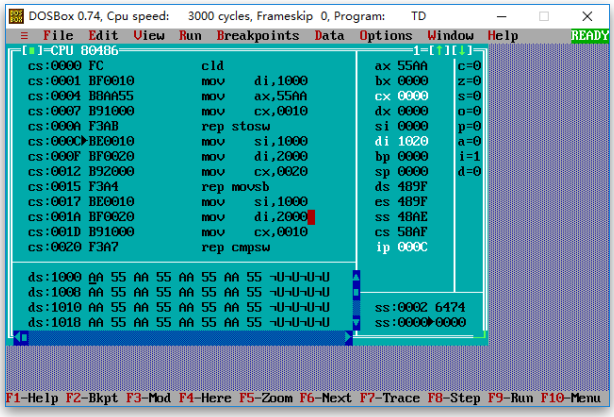

FIG 1.1

代码执行完后，ds:1000~ds:101F 被赋值

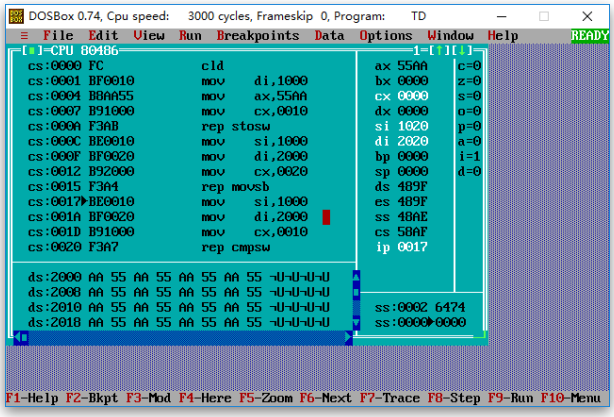

FIG 1.2

代码执行完后，ds:2000~ds:201F 被赋值

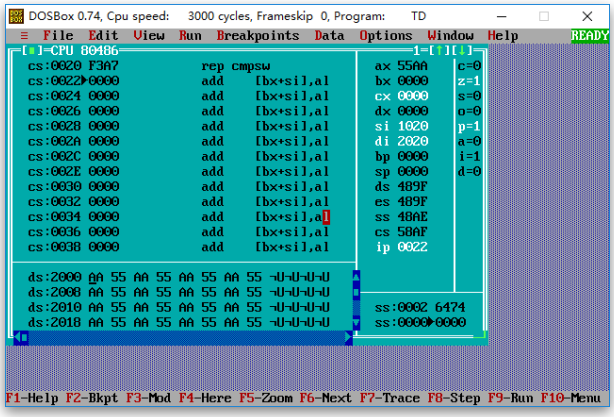

FIG 1.3

代码执行完后，ZF 的值为 True

实验 II (Optional) - 翻转字符串

Source Code

```
DSEG SEGMENT
    ORG  1000H
         DB "This is a string"
DSEG ENDS

CODE SEGMENT
    ASSUME CS:CODE, DS:DSEG, ES:DSEG
START:
    MOV  AX, DSEG
    MOV  DS, AX
    MOV  ES, AX
    MOV  SI, 100FH
    MOV  DI, 2000H
    MOV  CX, 0010H
L1:
    MOV  AX  ,  [SI]
    MOV  [DI],  AX
    INC  DI
    DEC  SI
    LOOP L1
FINAL:
    MOV  [DI],BYTE PTR "$"
    MOV  DX, 2000H
    MOV  AH, 09H
    INT  21H
    MOV  AH, 4CH
    INT  21H
CODE ENDS
END START
```

实验结果：

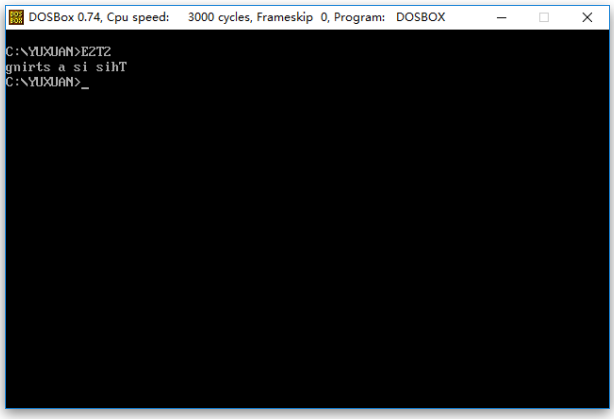

FIG 1.1

代码输出翻转后的字符串："gnirts a si sihT"