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DISPLAY A STRING

Aim:

To program and execute case conversions using 8086 microprocessor using DOSBOX.

Programs:

Algorithm:

- Initialise message in data segment.
- Use DOS function and offset of message to output the string.
- Terminate the program.

PROGRAM	COMMENT
DATA SEGMENT	INITIALISE THE DATA SEGMENT
MESSAGE DB "message$"	
DATA ENDS	
CODE SEGMENT	
ASSUME CS:CODE,DS:DATA	
START: MOV AX,DATA	
MOV DS,AX	DOS FUNCTION #9
MOV AH,9	
MOV DX,OFFSET MESSAGE	OFFSET OF THE STRING
INT 21H ;	DISPLAY IT
MOV AH,4CH	TERMINATE THE PROGRAM
INT 21H	
CODE ENDS	
END START	

Unassembled Code:

```
-u
076C:0000 B86A07        MOV     AX,076A
076C:0003 8ED8          MOV     DS,AX
076C:0005 B409          MOV     AH,09
076C:0007 BA0000        MOV     DX,0000
076C:000A CD21          INT     21
076C:000C B44C          MOV     AH,4C
076C:000E CD21          INT     21
076C:0010 F9            STC
076C:0011 B700          MOV     BH,00
076C:0013 D1E3          SHL     BX,1
076C:0015 8B87AE16      MOV     AX,[BX+16AE]
076C:0019 3B46FE        CMP     AX,[BP-02]
076C:001C 7709          JA      0027
076C:001E 8946FE        MOV     [BP-02],AX
```

Snapshot of sample input and output:

INPUT:

```
-d 076a:0000
076A:0000  54 48 49 53 20 49 53 20-54 48 45 20 53 54 52 49   THIS IS THE STRI
076A:0010  4E 47 24 00 00 00 00 00-00 00 00 00 00 00 00 00   NG$.............
076A:0020  B8 6A 07 8E D8 B4 09 BA-00 00 CD 21 B4 4C CD 21   .j.........!.L.!
076A:0030  F9 B7 00 D1 E3 8B 87 AE-16 3B 46 FE 77 09 89 46   .........;F.w..F
076A:0040  FE 8A 46 F9 88 46 F8 FE-46 F9 EB C9 8A 5E F8 B7   ..F..F..F....^..
076A:0050  00 8A 87 48 2F D0 D8 73-17 E8 B6 00 8A 5E F8 B7   ...H/..s.....^..
076A:0060  00 8A 87 48 2F D0 D8 73-07 53 B0 01 50 E8 73 01   ...H/..s.S..P.s.
076A:0070  A0 B6 2C 3A 46 F8 74 7E-C7 46 FA 00 00 8A 46 F8   ..,:F.t~.F....F.
```

OUTPUT:

```
-g
THIS IS THE STRING
Program terminated normally
-d 076a:0000
076A:0000  54 48 49 53 20 49 53 20-54 48 45 20 53 54 52 49   THIS IS THE STRI
076A:0010  4E 47 24 00 00 00 00 00-00 00 00 00 00 00 00 00   NG$.............
076A:0020  B8 6A 07 8E D8 B4 09 BA-00 00 CD 21 B4 4C CD 21   .j.........!.L.!
076A:0030  F9 B7 00 D1 E3 8B 87 AE-16 3B 46 FE 77 09 89 46   .........;F.w..F
076A:0040  FE 8A 46 F9 88 46 F8 FE-46 F9 EB C9 8A 5E F8 B7   ..F..F..F....^..
076A:0050  00 8A 87 48 2F D0 D8 73-17 E8 B6 00 8A 5E F8 B7   ...H/..s.....^..
076A:0060  00 8A 87 48 2F D0 D8 73-07 53 B0 01 50 E8 73 01   ...H/..s.S..P.s.
076A:0070  A0 B6 2C 3A 46 F8 74 7E-C7 46 FA 00 00 8A 46 F8   ..,:F.t~.F....F.
```

Result:

The assembly level programs were written to perform the above specified system operations and the output was verified.