M.I.T. Practical Exam

U19CS012

1. Write a 8086 Program to Implement the strcpy function:

void strcpy(char *src, char * dest, unsigned char n)

Use src and dest strings as 16-bit addresses, and n as a 8-bit number.
If the length of src string is less than n, the remainder of the destination string will be padded with nulls.

TASM Code:

```
; 5. Write a Program to Implement strcpy Function

.model small
.stack 100
.8086

.data
; 'n' in the Question
len db 05h  ; 1Fh = 31 characters (Length of String to be copied)
; Source
str1 db "MICROPROCESSOR AND INTERFACING$"
; Destination
str2 db "$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$"

.code
mov ax,@data
mov ds,ax

mov es,ax
mov ch,00h
mov cl,len  ; Initialize Counter

; Initialize [SI] & [DI]
mov si,offset str1
mov di,offset str2

; Clear Direction Flag
cld

up: movsb
loop up

; Print the Answer
mov ah,09h
mov dx,offset str2
```

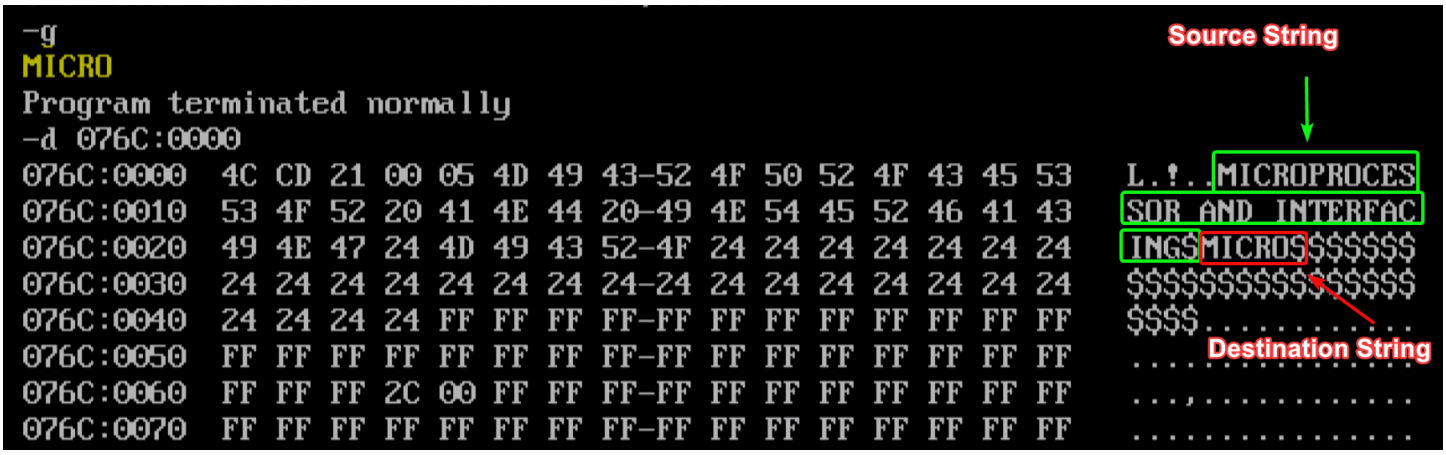
```
int 21h

mov ax,4c00h
int 21h
end
```

Input:

Source String: MICROPROCESSOR AND INTERFACING & n = 5

Output:

MICRO



USER INPUT PROGRAM:

TASM Code:

```
; 2. Write a Program to Implement strcpy Function

.model small
.stack 100
.8086

.data

;PRINT MACRO
print macro msg
mov ah,09h
mov dx,offset msg
int 21h
endm
```

```
; READ MACRO
read macro str
print msg4
mov ah,01h
int 21h
sub al,'0'
mov len1,al
mov cl,al
mov ch,00h
print msg5
print msg1
mov si,offset str
nextc: mov ah,01h
int 21h
mov [si],al
inc si
loop nextc
endm

str1 db "$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$"
msg1 db "Enter String : $"
msg4 db "Enter length : $"
msg2 db "Enter n : $"
msg5 db " $"

len1 db ?
; 'n' in the Question
len db 05h  ; 1Fh = 31 characters (Length of String to be copied)
; Source
; str1 db "MICROPROCESSOR AND INTERFACING$"
; Destination
str2 db "$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$"

.code
mov ax,@data
mov ds,ax

mov es,ax
mov ch,00h

; Take String Input
read str1
print msg5

print msg2
mov ah,01h
int 21h
sub al,'0'
mov len,al
```

```
mov cl,len  ; Initialize Counter

; Initialize [SI] & [DI]
mov si,offset str1
mov di,offset str2

; Clear Direction Flag
cld

up: movsb
loop up

; Print the Answer
mov ah,09h
mov dx,offset str2
int 21h

mov ax,4c00h
int 21h
end
```

Input:

Source String: MICROPRO & n = 9

Output:

MICRO

```
-g
Enter length : 9 Enter String : MICROPROC Enter n : 5MICRO
```

SUBMITTED BY:

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[U19CS012]