ML Assignments

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Batch: S4 Comp

Assignment 8:

Code:

```
%macro display 2
    mov rax, 1
    mov rdi, 1
    mov rsi, %1
    mov rdx, %2
    syscall
%endm


global _start
section .data
    arr db 11h, 22h, 33h, 44h, 55h, 66h
    msg db "source array is:"
    msg_len equ $ - msg
    msg1 db "destination array is:"
    msg1_len equ $ - msg1

section .bss
    arr1 resb 6
    arr_ascii resb 14h
    arr1_ascii resb 14h

section .text
_start:
    mov rsi, arr
    mov rdi, arr1
    mov cl, 06
```

```asm
up:
    mov al, [rsi]
    mov [rdi], al
    inc rsi
    inc rdi
    dec cl
    jnz up
display msg, msg_len
mov rsi, arr
mov rdi, arr_ascii
call print
display arr_ascii, 14h
display msg1, msg1_len
mov rdi, arr1_ascii
call print
display arr1_ascii, 14h
mov rax, 60
mov rdi, 0
syscall

print:
    mov ch, 06

up2:
    mov al, [rsi]
    mov cl, 02

up1:
    rol al, 4
    mov bl, al
    and al, 0fh
    cmp al, 09
    ja add37
    add al, 30h
    jmp dn2
```

```
add37:
    add al, 37h

dn2:
    mov [rdi], al
    inc rdi
    mov al, bl
    dec cl
    jnz up1
    mov [rdi], byte ','
    inc rdi
    inc rsi
    dec ch
    jnz up2
ret
```
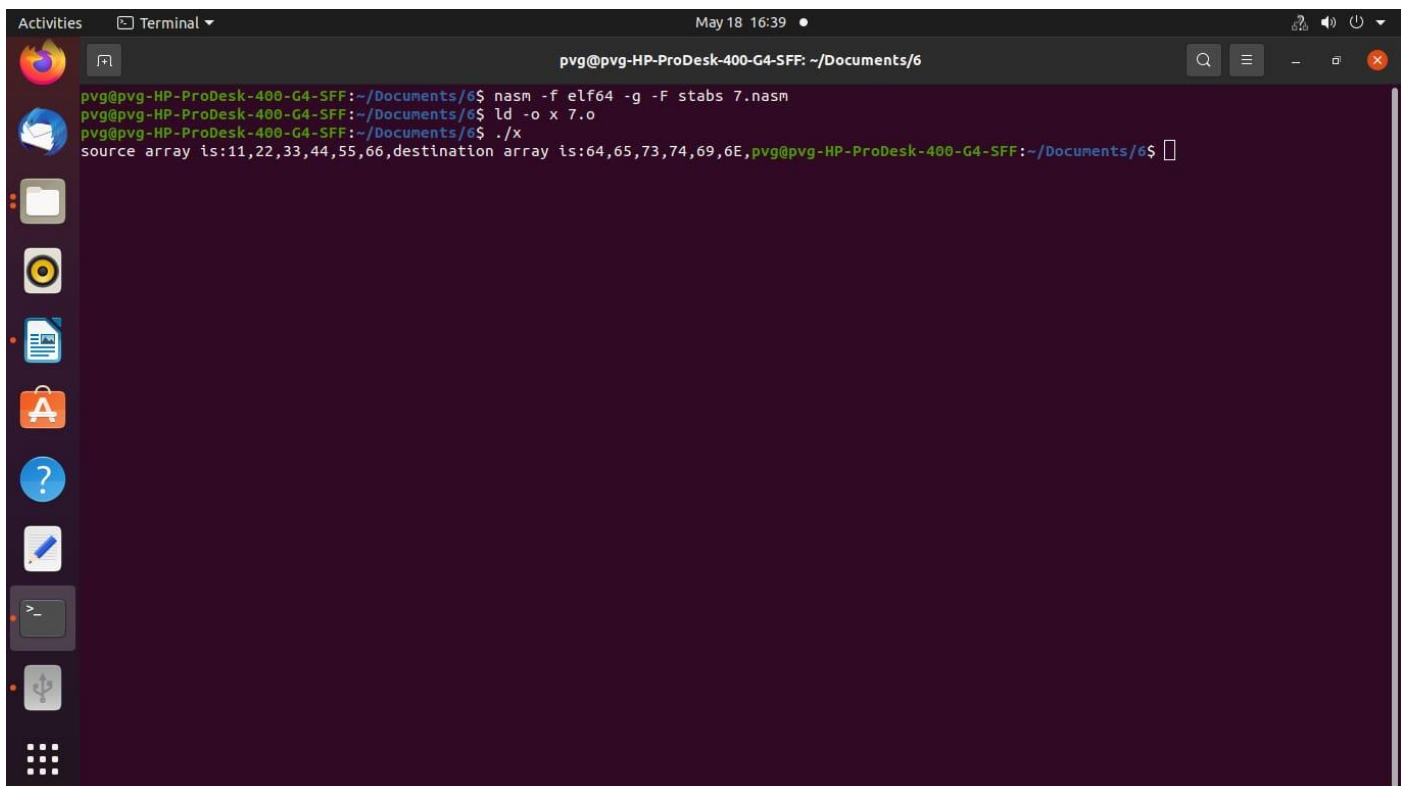
output:

source array is:11,22,33,44,55,66,destination array is:64,65,73,74,69,6E,