

INT 80h

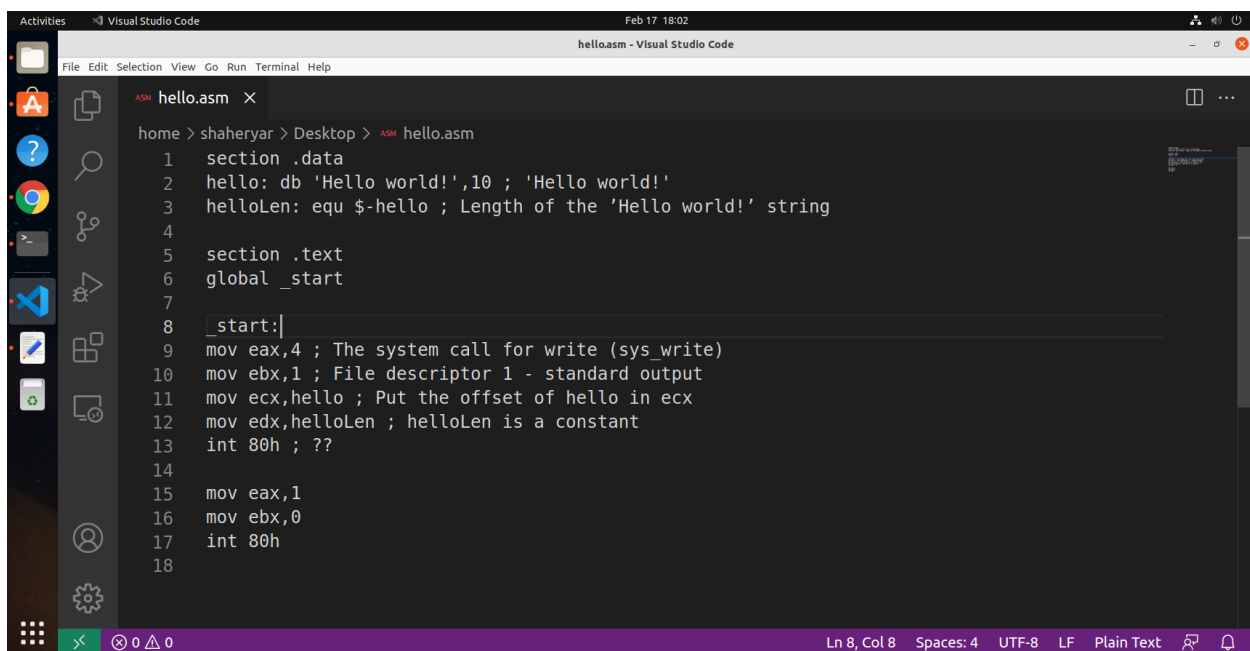
0x80/80h interrupt handler is used to make **system calls** to the kernel by other programs. The kernel is notified about system call the program wants to make by examining the value in the register (**EAX, EBX**)

EAX=4 in case of hello.asm file which is a system call for **write mode**.

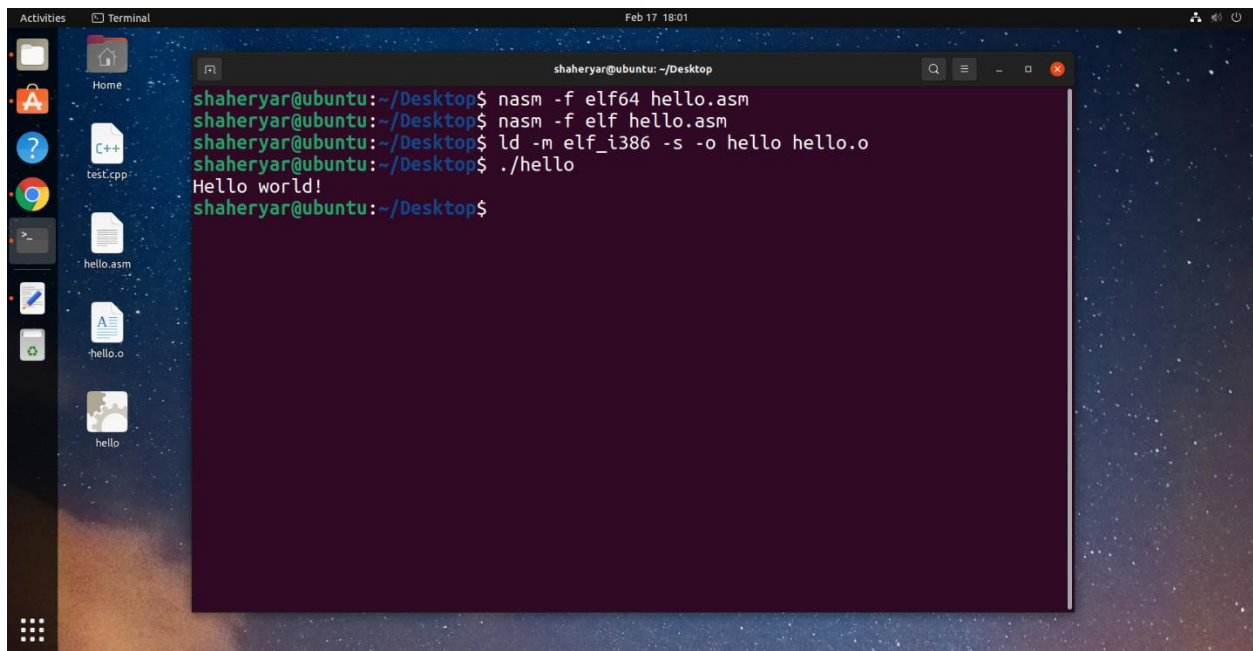
EBX=1 is used for standard output.

When we call int 80h **kernel** checks the **register** and then performs the required functions.

SCREENSHOTS



```
home > shaheryar > Desktop > ASM hello.asm
1  section .data
2  hello: db 'Hello world!',10 ; 'Hello world!'
3  helloLen: equ $-hello ; Length of the 'Hello world!' string
4
5  section .text
6  global _start
7
8  _start:
9  mov eax,4 ; The system call for write (sys_write)
10 mov ebx,1 ; File descriptor 1 - standard output
11 mov ecx,hello ; Put the offset of hello in ecx
12 mov edx,helloLen ; helloLen is a constant
13 int 80h ; ??
14
15 mov eax,1
16 mov ebx,0
17 int 80h
18
```



The screenshot shows a Linux desktop with a dark blue space-themed wallpaper. On the left is a vertical dock with icons for Home, Applications, Dash, and several files: test.cpp, hello.asm, hello.o, and hello. A terminal window is open in the center, titled 'shaheryar@ubuntu: ~/Desktop'. The terminal shows the following commands and output:

```
shaheryar@ubuntu:~/Desktop$ nasm -f elf64 hello.asm
shaheryar@ubuntu:~/Desktop$ nasm -f elf hello.asm
shaheryar@ubuntu:~/Desktop$ ld -m elf_i386 -s -o hello hello.o
shaheryar@ubuntu:~/Desktop$ ./hello
Hello world!
shaheryar@ubuntu:~/Desktop$
```