

问题 1.3

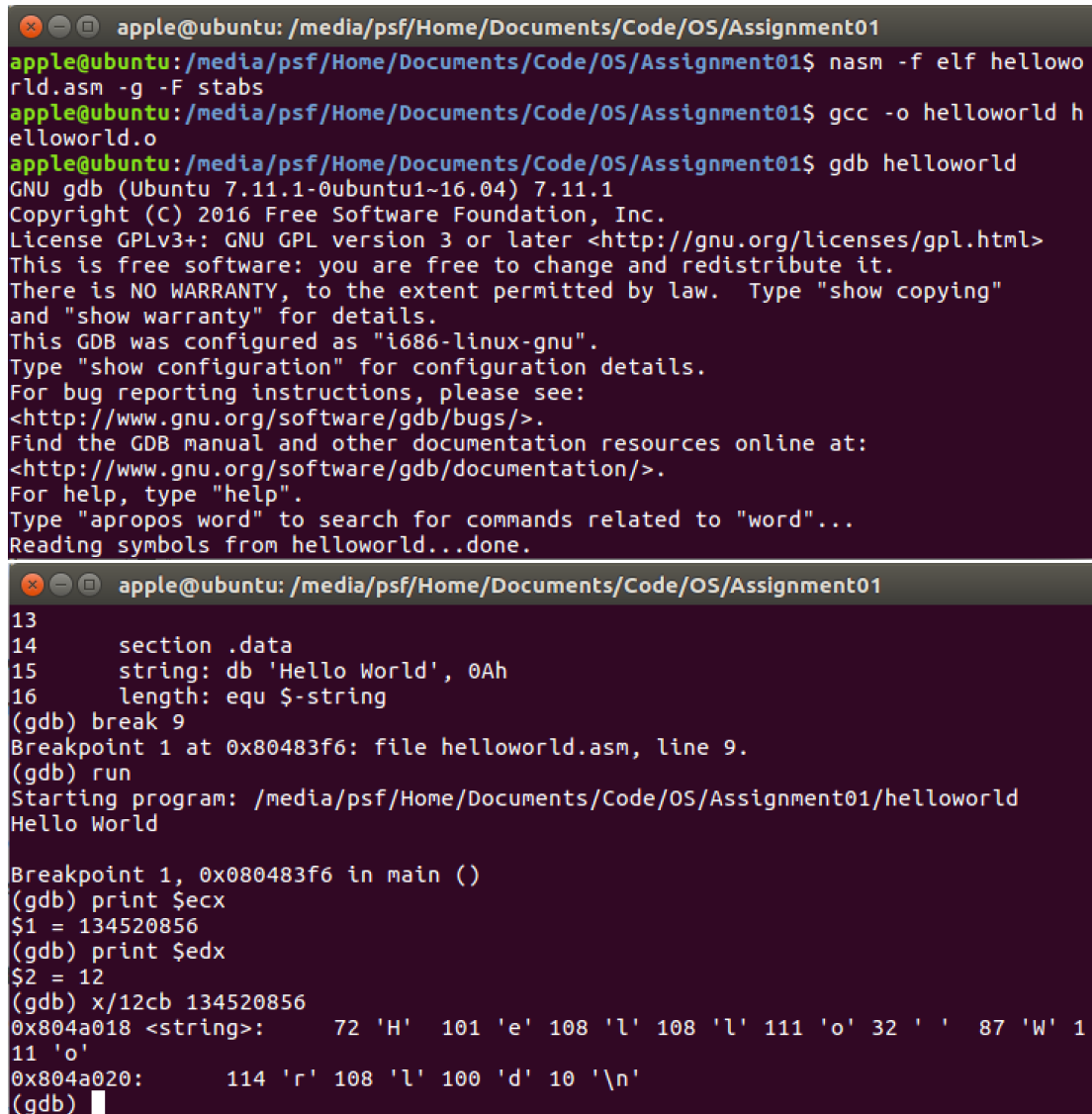
回答：

(1)int 10h 根据 ES:BP 获得串地址，串首地址被传至 ax，再传进 bp

(2)07c0eh

(3)绝对地址

实验截图：



```
apple@ubuntu: /media/psf/Home/Documents/Code/OS/Assignment01
apple@ubuntu: /media/psf/Home/Documents/Code/OS/Assignment01$ nasm -f elf helloworld.asm -g -F stabs
apple@ubuntu: /media/psf/Home/Documents/Code/OS/Assignment01$ gcc -o helloworld helloworld.o
apple@ubuntu: /media/psf/Home/Documents/Code/OS/Assignment01$ gdb helloworld
GNU gdb (Ubuntu 7.11.1-0ubuntu1~16.04) 7.11.1
Copyright (C) 2016 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.html>
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law. Type "show copying"
and "show warranty" for details.
This GDB was configured as "i686-linux-gnu".
Type "show configuration" for configuration details.
For bug reporting instructions, please see:
<http://www.gnu.org/software/gdb/bugs/>.
Find the GDB manual and other documentation resources online at:
<http://www.gnu.org/software/gdb/documentation/>.
For help, type "help".
Type "apropos word" to search for commands related to "word"...
Reading symbols from helloworld...done.

13
14     section .data
15     string: db 'Hello World', 0Ah
16     length: equ $-string
(gdb) break 9
Breakpoint 1 at 0x80483f6: file helloworld.asm, line 9.
(gdb) run
Starting program: /media/psf/Home/Documents/Code/OS/Assignment01/helloworld
Hello World

Breakpoint 1, 0x080483f6 in main ()
(gdb) print $ecx
$1 = 134520856
(gdb) print $edx
$2 = 12
(gdb) x/12cb 134520856
0x804a018 <string>:      72 'H'  101 'e' 108 'l' 108 'l' 111 'o' 32 ' ' 87 'W' 1
11 'o'
0x804a020:      114 'r' 108 'l' 100 'd' 10 '\n'
(gdb)
```

实践说明：

访问寄存器 ecx 中地址，发现 HelloWorldOS，说明存储的为绝对地址