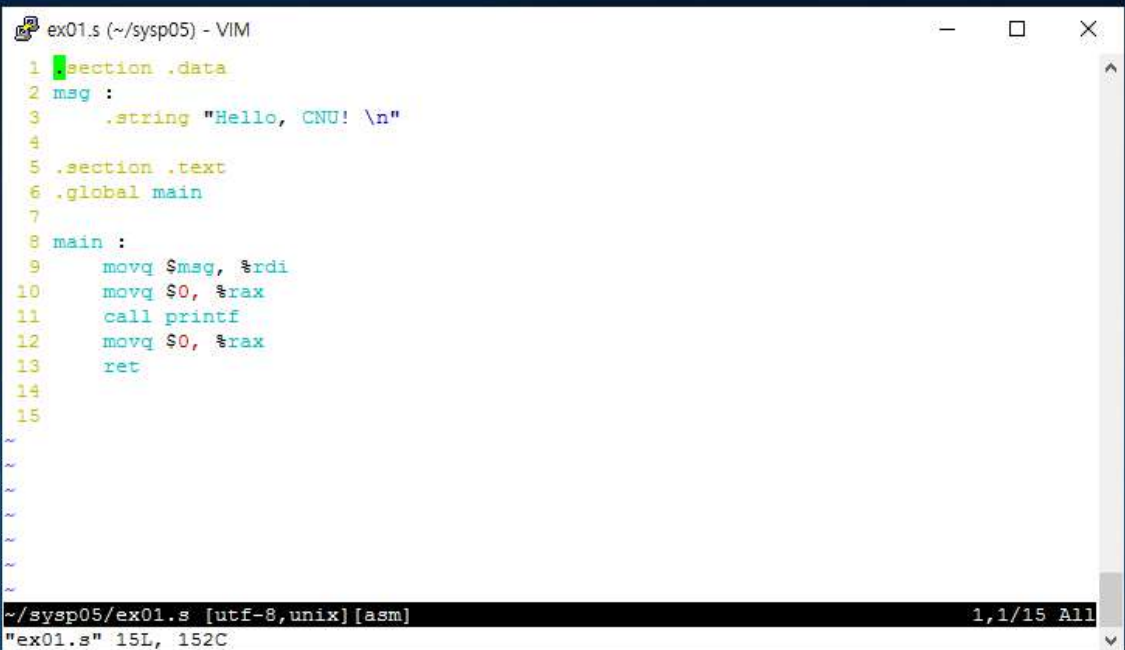


2016 시스템 프로그래밍
- 5주차 -

제출일자	2016.10.10
분 반	00
이 름	정 윤 수
학 번	201302482

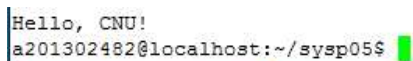
따라하기 1

소스코드 스크린샷
(putty 창이 보이게 스크린 샷)



```
ex01.s (~/sysp05) - VIM
1 section .data
2 msg :
3     .string "Hello, CNU! \n"
4
5 section .text
6 .global main
7
8 main :
9     movq $msg, %rdi
10    movq %0, %rax
11    call printf
12    movq %0, %rax
13    ret
14
15
~
~
~
~
~
~
~/sysp05/ex01.s [utf-8,unix] [asm] 1,1/15 All
"ex01.s" 15L, 152C
```

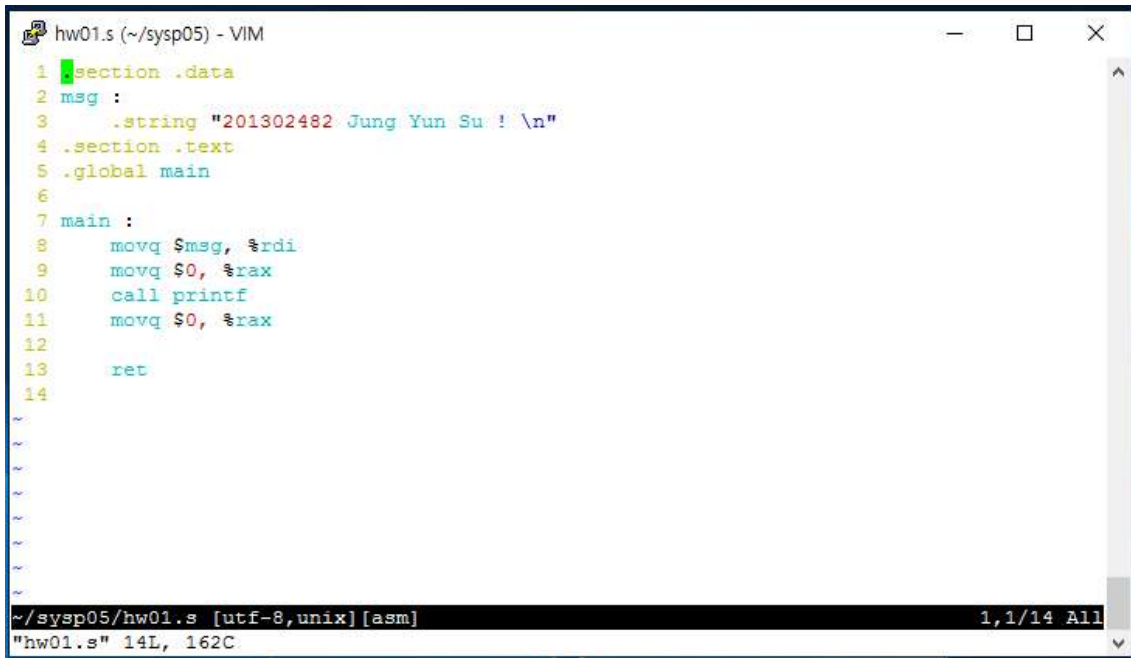
결과화면 캡처



```
Hello, CNU!
a201302482@localhost:~/sysp05$
```

실습 1

소스코드 스크린샷



```
hw01.s (~/sysp05) - VIM
1 section .data
2 msg :
3     .string "201302482 Jung Yun Su ! \n"
4 section .text
5 global main
6
7 main :
8     movq $msg, %rdi
9     movq $0, %rax
10    call printf
11    movq $0, %rax
12
13    ret
14

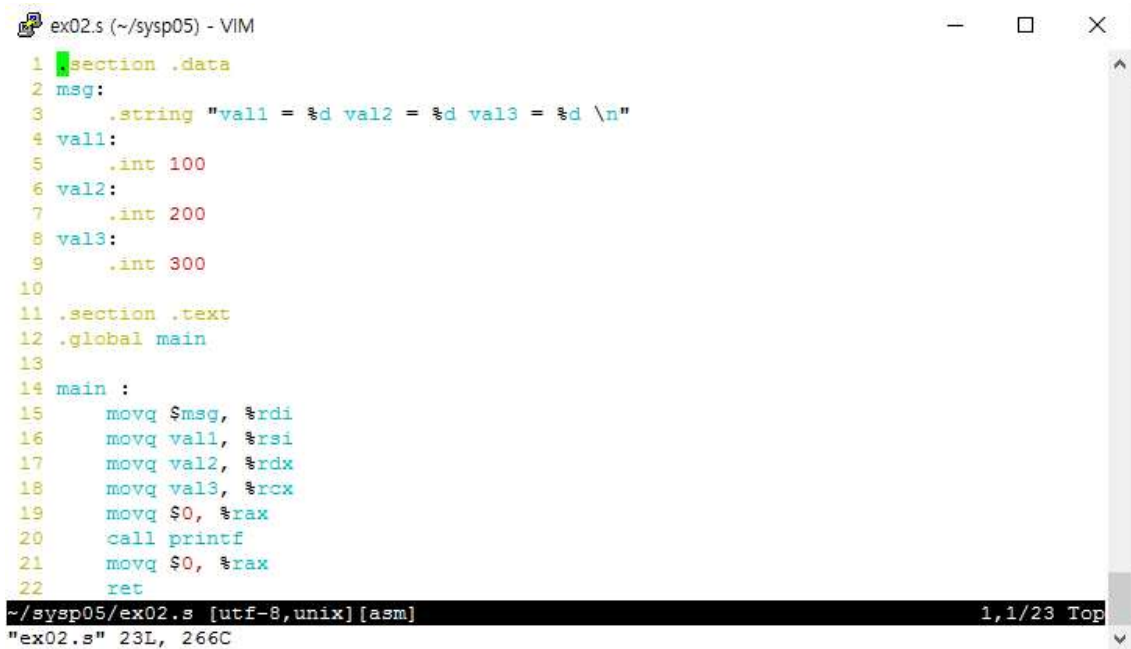
~/sysp05/hw01.s [utf-8,unix][asm] 1,1/14 All
"hw01.s" 14L, 162C
```

결과화면

```
a201302482@localhost:~/sysp05$ ./hw01.out
201302482 Jung Yun Su !
a201302482@localhost:~/sysp05$
```

따라하기 2

소스코드 스크린샷



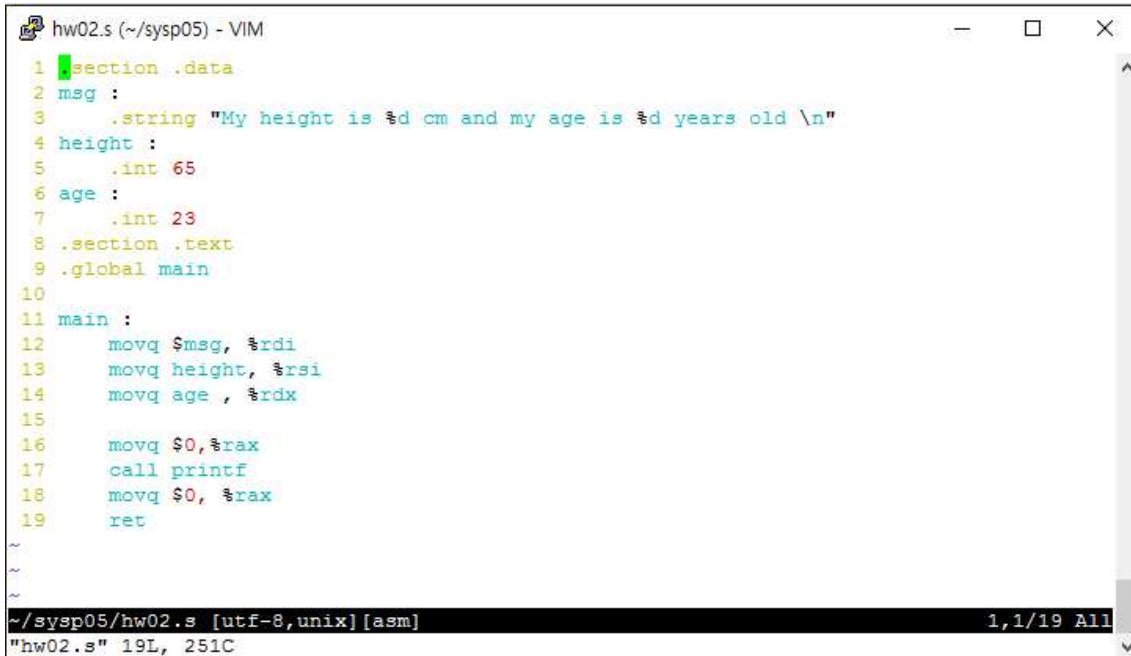
```
ex02.s (~/sysp05) - VIM
1  .section .data
2  msg:
3      .string "val1 = %d val2 = %d val3 = %d \n"
4  val1:
5      .int 100
6  val2:
7      .int 200
8  val3:
9      .int 300
10
11 .section .text
12 .global main
13
14 main :
15     movq $msg, %rdi
16     movq val1, %rsi
17     movq val2, %rdx
18     movq val3, %rcx
19     movq $0, %rax
20     call printf
21     movq $0, %rax
22     ret
~/sysp05/ex02.s [utf-8,unix][asm] 1,1/23 Top
"ex02.s" 23L, 266C
```

결과화면

```
a201302482@localhost:~/sysp05$ ./ex02.out
val1 = 100 val2 = 200 val3 = 300
a201302482@localhost:~/sysp05$
```

실습 2

소스코드 스크린샷



```
hw02.s (~/sysp05) - VIM
1 section .data
2 msg :
3     .string "My height is %d cm and my age is %d years old \n"
4 height :
5     .int 65
6 age :
7     .int 23
8 section .text
9 global main
10
11 main :
12     movq $msg, %rdi
13     movq height, %rsi
14     movq age, %rdx
15
16     movq $0, %rax
17     call printf
18     movq $0, %rax
19     ret
~
~
~/sysp05/hw02.s [utf-8,unix][asm] 1,1/19 All
"hw02.s" 19L, 251C
```

결과화면

```
a201302482@localhost:~/sysp05$ ./hw02.out
My height is 65 cm and my age is 23 years old
a201302482@localhost:~/sysp05$
```

문제 1

소스코드 스크린샷



```
experiment1.s (~/sysp05) - VIM
1 section .data
2
3 .section .text
4 .global main
5
6 main :
7     movabsq $0x0011223344556677, %rax
8     movb $-1,%al
9     movw $-1,%ax
10    movl $-1,%eax
11    movq $-1,%rax
12    movb $0xAA,%dl
13    movb %dl,%al
14    movsbq %dl,%rax
15    movzbq %dl,%rax
16
17    ret
18
~
~
~
~
~/sysp05/experiment1.s [utf-8,unix][asm] 1,1/18 All
"experiment1.s" 18L, 218C
```

결과화면

```
a201302482@localhost: ~/sysp05
<http://www.gnu.org/software/gdb/documentation/>.
For help, type "help".
Type "apropos word" to search for commands related to "word"...
Reading symbols from experiment1.out...done.
(gdb) break main
Breakpoint 1 at 0x4004ed: file experiment1.s, line 7.
(gdb) run
Starting program: /home/sys00/a201302482/sysp05/experiment1.out

Breakpoint 1, main () at experiment1.s:7
warning: Source file is more recent than executable.
7      movabsq $0x0011223344556677, %rax
(gdb) p/x $rax
$1 = 0x4004ed
(gdb) next
8      movb $-1,%al
(gdb) p/x $rax
$2 = 0x11223344556677
(gdb) next
9      movw $-1,%ax
(gdb) p/x $rax
$3 = 0x112233445566ff
(gdb) next
10     movl $-1,%eax

(gdb) p/x $rax
$4 = 0x1122334455ffff
(gdb) next
11     movq $-1,%rax
(gdb) p/x $rax
$5 = 0xffffffff
(gdb) next
12     movb $0xAA,%dl
(gdb) p/x $rax
$6 = 0xffffffffffffffff
(gdb) next
13     movb %dl,%al
(gdb) p/x $rax
$7 = 0xffffffffffffffff
(gdb) next
14     movsbq %dl,%rax
(gdb) p/x $rax
$8 = 0xffffffffffffffaa
(gdb) next
15     movzbq %dl, %rax
(gdb) p/x $rax
$9 = 0xffffffffffffffaa
(gdb) next
main () at experiment1.s:17
17     ret
(gdb) p/x $rax
$10 = 0xaa
(gdb)
```