

실습 코드를 실행시키기 위한 Makefile 코드

```
obj-m = hello.o
KVERSION = $(shell uname -r)
all:
    make -C /lib/modules/$(KVERSION)/build M=$(PWD) modules
clean:
    make -C /lib/modules/$(KVERSION)/build M=$(PWD) clean
```

make 실행 결과

```
turtle@turtle:~/practice$ make
make -C /lib/modules/4.13.0-37-generic/build M=/home/turtle/practice modules
make[1]: 디렉터리 '/usr/src/linux-headers-4.13.0-37-generic' 들어감
CC [M] /home/turtle/practice/hello.o
Building modules, stage 2.
MODPOST 1 modules
CC /home/turtle/practice/hello.mod.o
LD [M] /home/turtle/practice/hello.ko
make[1]: 디렉터리 '/usr/src/linux-headers-4.13.0-37-generic' 나감
```

sudo insmod hello.ko이후 dmesg 실행 화면

```
LD [M] /home/turtle/practice/hello.ko
make[1]: 디렉터리 '/usr/src/linux-headers-4.13.0-37-generic' 나감
turtle@turtle:~/practice$ ls
Makefile Module.symvers hello.c hello.ko hello.mod.c hello.mod.o hello.
turtle@turtle:~/practice$ sudo insmod hello.ko
turtle@turtle:~/practice$ dmesg
```

```
[ 1704.191733] hello: loading
[ 1704.191917] hello: module ver
[ 1704.192966] Loading Module
turtle@turtle:~/practice$
```

simple_init함수가 작동하여
Loading Module 메시지가
출력된 것을 확인할 수 있다

sudo rmmod simple 실행후 dmesg 실행화면

```
turtle@turtle:~/practice$ sudo rmmod hello
turtle@turtle:~/practice$ dmesg
```

```
[ 1704.191917] hello: module ver
[ 1704.192966] Loading Module
[ 1774.286049] Removing Module
turtle@turtle:~/practice$
```

simple_exit함수가 작동하여
Removing Module이 출력된 것을
확인할 수 있다