CS5231 System Security Homework 1

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# Code

#include <linux/sched/signal.h>

static int \_\_init helloworld\_lkm\_init(void) {

size\_t processes;

struct task\_struct\* task\_list;

time64\_t seconds;

printk(KERN\_INFO "Hello, CS5231 Student!\n");

// Print number of processes running in the system

processes = 0;

for\_each\_process(task\_list) {

processes++;

}

printk(KERN\_INFO "Number of process: %zu\n", processes);

// Print current time in seconds since epoch

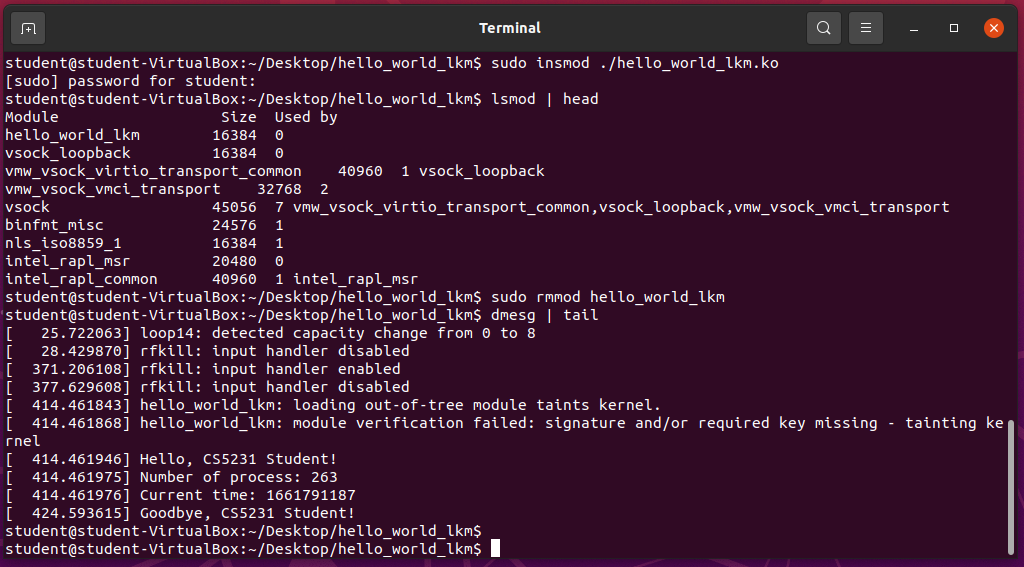
seconds = ktime\_get\_real\_seconds();

printk(KERN\_INFO "Current time: %llu\n", seconds);

return 0;

}

# Screenshot



# References

Elixir Bootlin - Definition for for\_all\_process: <https://elixir.bootlin.com/linux/latest/source/include/linux/sched/signal.h#L645>

Elixir Bootlin - Example usage of for\_all\_process: <https://elixir.bootlin.com/linux/latest/source/arch/um/kernel/reboot.c#L25>

Linux Kernel documentation – ktime accessors:  
<https://docs.kernel.org/core-api/timekeeping.html#c.ktime_get_real_seconds>