

Practice Project 1
CSC 4320/6320 - Operating Systems
Spring 2018

Due Date: Sunday 11:59 pm, 1/31/2018

Read through Programming Project from Page 96 to 101 of textbook.

Part 1 (5 pts):

Finish installing Ubuntu in VirtualBox.

Submission: provide a screenshot of the installed system in virtualBox (see Project1_Report_Sample in iCollege)

Part 2 (5 pts):

Finish the requirements in Part I assignment of textbook. Follow the steps and create a kernel module **simple** and then try to load and remove it. You can download *simple.c* and corresponding makefile *Makefile_1* (no need to change the content of the makefile except for the name; see Note 1 below) from iCollege.

Submission: Right after loading and removing module, check the contents of kernel log buffer using command **dmesg** and provide a screen shot for each result (see Project1_Report_Sample in iCollege).

Part 3 (15 pts):

Download an incomplete version of *simple-solution.c* and the corresponding makefile *Makefile_2* (no need to change the content of the makefile except for the name; see Note 1 below) from iCollege. Follow the content in Part II of the textbook and add code in *simple-solution.c* to finish the Part II assignment. **Note that we have changed the struct birthday by adding a string element "name". In your program, the name of the first struct birthday element should be your full name.**

Submission:

- (1) Right after loading and removing module, check the contents of kernel log buffer using command **dmesg** and provide a screen shot for each result (see Project1_Report_Sample in iCollege).
- (2) The completed *simple-solution.c*.

Note:

- 1) Use two directories for the two parts when testing your program. Make sure there is no space in the directory name, otherwise problems may happen when using command make to compile your program. You need to change the name of the makefiles to "Makefile" (without file name extension) in each directory.
- 2) Upload the file *simple-solution.c* and a project report (named as "*Project1.pdf*" or "*Project1.doc*") to iCollege. The project report should include the required screenshots **and source code of simple-solution.c**. For details about project report, please refer to the project report sample.