**CS6456 (F2015) Operating Systems**

**Project 1**

**Points: 5**

**Due: September 7, 2015 (11:00 a.m.)**

Write a program in C to solve the problem for Part II (p. 99) shown in the textbook.

(1) You should first be familiar with Part I of the project (p. 97) and understand how a module can be loaded into the **Debian** kernel using the sample module (i.e. **simple.c** in folder **ch2**) coming with the **Debian** operating system downloaded from the publisher's web site. Just follow the instructions shown in the textbook to learn how to (i) compile **simple.c** into the **simple.ko** module using the makefile, (ii) load the module into the kernel, and (iii) examine if the module is loaded into the kernel successfully.

(2) Once you get Part I done, start working on Part II by writing a program in C which will be loaded into the **Debian** kernel. Since your program has to access those functions contained in the header file **list.h** (<http://lxr.freeelectrons.com/source/include/linux/list.h>), make sure you are familiar with those functions needed by your program.

(3) You need to use a makefile to compile your program. Just modify the makefile coming with the sample program (i.e. **simple.c**) to the one that is appropriate for Part II.

(4) Turn your project in via **collab** in a **tar** file (created using the **tar** command) consisting of (i) all headers (you probably don't need to include any headers other than **list.h** for this project); (ii) source code file for project 1; and (iii) a makefile. The **tar** file should be named as follows: **p1**, followed by the first letter of your first name, followed by your last name, and followed by the file extension (i.e. **tar**). For example, the tar file turned in by **John Smith** should be named **p1jsmith.tar**.

(5) Your program should be successfully compiled. Programs failing to compile will not get any points.