COSC 350: System Software

Lecture: Tu. Th. (09:30 A.M. ~ 10:45 A.M.)
Lab: M. or F. (08:00 A.M. ~ 09:40 A.M.)
Prerequisite: COSC 220 and COSC 250 with grades of C or better.
Class Room: Devilbiss Hall # 109, Lab: Henson Hall # 143
Instructor: Dr. Sang-Eon Park
   Email: sxpark@salisbury.edu
   Office: Henson Hall Room 126
   Homepage: http://faculty.salisbury.edu/~sxpark
   Office Hour: M.W.F. 11:00 A.M. ~ 01:00 P.M.

Description: To help students deepen their understanding of C programming and program development in a Linux environment, and develop familiarity with the Linux operating system and script programming. Three hours lecture, two hours lab per week.

Reference:

Topics:
- The UNIX/Linux Operating System Basics
  UNIX/Linux basic commands, login scripts and environment set up, C programming environment, introduction to basic shell scripts
- Working with files
  File and directory structure, low level file access, standard I/O library, formatted input and output.
- Process
  Basic concepts of Linux process and process attributes, process control using fork, exec and wait, process relationship.
- Signals
  Concept of signals, usage of signal between processes, process functions
- Threads
  Thread concepts, thread creation, termination, synchronization, thread control, thread attributes
- Inter-process Communication
  Basic concepts of inter-process communication using Signals, PIPE, FIFO, Shared Memory, Semaphores, Mutex, Conditional Variable and so on.
• **Socket Programming**
  Basic concepts of socket communication, network information and multiple clients

**Grade:** Test 1: 20 %, Test 2: 20 %, Final: 30 %, Lab/Mini Test – 15/15 %. Your final grade will be based on the standard formula

- A: $90 \leq \text{Total}_\text{Average}\_\text{score}$
- B: $80 \leq \text{Total}_\text{Average}\_\text{score} < 90$
- C: $70 \leq \text{Total}_\text{Average}\_\text{score} < 80$
- D: $60 \leq \text{Total}_\text{Average}\_\text{score} < 70$
- F: $\text{Total}_\text{Average}\_\text{score} < 60$

**Lab policy:**

- Lab material will be provided at the beginning of each lab class.
- Each student is required to attend a lab session each week and start working on new lab. Each lab must be done by the beginning of the next lab class. Instructor will check and collect the copy of each student’s works during the lab hour. Each student must be ready to show his/her works at the beginning of each lab class.
- Students are expected to work independently on each lab. I have no problem with students discussing assignments to help understand a problem, learn how to use language features, or debug a program. However, copying code is strictly prohibited. Copying code from another student or any other source (e.g., a web site) is considered plagiarism and will be prosecuted under the Code of Student Conduct at Salisbury University. If two students have identical or similar work, both will be given a failing grade.
- Late lab work will not be accepted without special permission.

**Exam Policy:** There will be an announcement one week before each exam. And also, it will be posted on my web page. There will be no make-ups or rescheduling of exams for individual cases (except emergency cases with evidence).

**Attendance:** Each student is expected to be present each lecture and lab. Attendance will be checked for each class. If a student misses lectures more than 4 times without any reason with evidence, he/she will lose 3% from the total average score. If a class must be missed, however, students are responsible for all material, assignments, and announcements made during class.

**No Laptop and Smartphone during Lecture:** cannot use his/her own laptop and smartphone during a lecture without special permission