CSMC 412

Operating Systems
Prof. Ashok K Agrawala

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Set 1
Course Overview
Today

• Review Syllabus
  – read the warning about the size of the project
• Class Grades Server
  – Grades.cs.umd.edu
• Web Page
• Piazza
  – https://piazza.com/class/keaorzni1x61e0?cid=6
Catalog Description

• A hands-on introduction to operating systems, including topics in –
  – multiprogramming,
  – communication and synchronization,
  – memory management,
  – IO subsystems, and
  – resource scheduling polices.

• The laboratory component consists of constructing a small kernel, including functions for device IO, multi-tasking, and memory management.
Prerequisites

• Minimum grade of C or better - in
  – CMSC330, and
  – CMSC351
• 1 course with a minimum grade of C- from
  – CMSC414,
  – CMSC417,
  – CMSC420,
  – CMSC430,
  – CMSC433,
  – CMSC435,
  – ENEE440,
  – ENEE457
Teaching Assistants

- Deepti Bisht
- Hana Hailu
- Haoran Zhou
- Shreya Suresh
- Zejun Liu
- Elijah Grubb
- Benjamin Black
- Joy Wongkamjan
Class Overview

• Class Web Page

• Piazza
  – https://piazza.com/class/k5ihb0ezfcw227
Text

• Required
    Siberschazt, Galvin and Gagne,
  – John Wiley 2018

• Available
  – [https://www.wiley.com](https://www.wiley.com) – E-Book $ 76.00
    • May rent at lower price
  – [https://hubetext.com/shop](https://hubetext.com/shop) - PDF $8.00
Class Grades Server

http://grades.cs.umd.edu

• Complete grade information
• Interface for requesting regrades on exams and projects
Programming Projects:

• Understanding operating system concepts is a hands-on activity. This class will include several substantial programming projects that will require students to read and understand provided code, write new modules, and debug the resulting system. *The programming assignments will be time consuming and students taking this class should plan their class schedules accordingly.*

• The instructor reserves the right to fail, regardless of overall numeric score, students who do not submit a *good faith attempt* to complete all programming assignments.
Class Scheduled Times

• Lecture
  – Tu Th 11:00 AM to 12:15 PM

• Recitation
  – Section 0101
    • MW 12:00 PM to 12:50 PM
  – Section 0102
    • MW 1:00 PM to 1:50 PM
Online Operation

• Lectures
  – Videos will be posted on M W scheduled
  – Must watch before the next scheduled Zoom Session
  – Class is organized in 4 Groups A, B, C, and D

• Zoom Session times
  – 11:00 for Group A Section 0101 Last Names between A and Ka
  – 11:15 for Group B Section 0101 Last Names between Ki and Z
  – 11:30 for Group C Section 0102 Last Names between A and Moh
  – 11:45 for Group D Section 0102 Last Names between Moo and Z
Online Operations

• Projects and Recitations
  – Projects will be posted as per scheduled
  – Project discussions will take place in recitation sessions (also Zoom Sessions)
    • Details will be posted on Piazza

• Office Hours
  – All TA Office Hours will be via Zoom
  – Schedule will be posted
  – Will use Quuly to manage the office hours
Class Schedule
Grading

• Regular Quizzes and short exams
• Dates for exams will be announced
• Programming Assignments
• Class Participation
  – Watching Videos
  – Attending Class Zoom Sessions
  – Attending Recitation Zoom Sessions
  – ...

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Some Useful Videos
By Dr. Neil Spring

• Review of 216
  – Sizes - Necessary distinction between sizeof and strlen.
  – Malloc - Model for how malloc tracks memory, how to interpret memory errors.
  – Timing - Reminder of user / kernel separation.

• Synchronization Topics
  – Synchronization Overview - The basics
  – Semaphore Interface - How Semaphores can be used.
  – Semaphore Implementation - How Semaphores are built (so you know what they are and don't reinvent them).

• Would require UMD CAS for Box Access