Operating Systems

Some history and advice as we begin our adventure. . . .
Some Final Grades

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There were no incompletes.
There won’t be this time either. Don’t even ask.

CMPT 424 - Operating Systems
## Some Midterm vs. Final Grades

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<thead>
<tr>
<th>Mid-term Value</th>
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<th>Change from Midterm to Final</th>
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**Total Change:** -24.9
Advice

- Attend every class. Don’t miss even one.
- Put your devices away and pay attention in class.
- Take notes in class (in pencil) on paper.
- Rewrite your class notes into a new notebook as a form of studying.
- Do every lab. Write them up in LaTeX.
- Work on your project every day. Commit to GitHub at least once a day if not more frequently.
ADVICE from Dr. Helen Rothberg

- **Action** — Do more, say less. Pursue your interests. Ask for help when you need it.

- **Determination** — Stick to it and get things done.

- **Vision** — What are you trying to become? What do you want to do with your life? How will you get there?

- **Integrity** — Tell the truth all the time. Don't create or participate in drama.

- **Communication** — Be attentive and dig in, even if it's hard.

- **Empathy** — Dare to care about yourself and others.
Do Not Make Excuses

- I love Chris Algozzine, but I don’t give a damn about Capping.

- These people failed this class.

--- Original message -----
To: Alan Labouseur/FAC/Marist@Marist
Subject: Projects
Date: Sun, Dec 9, 2018 8:33 PM

Also, I wanted to say sorry for the subpar work. I've just been incredibly overwhelmed by capping. I enjoy having you as a professor and I don't want you to think I'm just blowing your class off, I've just been trying to keep my head above water.

--- Original message -----
To: Alan Labouseur/FAC/Marist@Marist
Subject: Projects

I chose to dedicate my productive hours towards my capping project, due to the fact that I prioritize my team's performance highly.

- Work on your OS every day.
Do Not Make Excuses

- This is not acceptable:

  ----- Original message -----
  To: Alan Labouseur/FAC/Marist@Marist
  Subject: RE: Projects

  Hi Professor Labouseur,

  I just looked at my email this morning, I'm surprised you didn't get my work. I thought I pushed it Sunday, But I now realize I didn't set upstream origin for the branch, so it didn't actually get pushed. I've just re-pushed this morning so you can review it.

- I did not “review it”. The grade remained the same.

- If you cannot figure out GitHub, you do not deserve a Computer Science degree.

- Speaking of GitHub . . . .
GitHub Commit Graphs

A

A-

B
GitHub Commit Graphs

C

D

F
GitHub Commits

Commits on Oct 26, 2020

- Fixed the functionality of the first couple of op codes: load accumul... committed 14 hours ago
- Added a utility to convert from hex to decimal and fixed the load acc... committed yesterday
- Reworked the way that PCBs are created (for the better i think) committed yesterday
- Moved memory accessing functionality to the memoryAccessor committed yesterday
- My brain is melting but the load now really loads into memory for real... committed yesterday

Commits on Sep 29, 2020

- Started to flesh out PCBs that are created and added some more commen...
Academic Honesty

- These are individual projects. All work must be your own.

- Any violation of this will result in your **immediate** and **automatic** failure of this class.

- This is your only warning. The next time we talk about this it will be in the context of me telling you that you have failed this class.

- I am serious. Ask prior students.
Academic Honesty

- I will be checking all your code against...
  - your class
  - other classes
  - all past projects
  - the hall of fame
  - and...

Past Project Hall of Fame

2017
- TionminatOS by Tien Liengtiraphan
- KaiOS by Kai Wong
- EXZOS by Zack Recolan
- ChaOS by Jack Grzechowiak

2016
- The Oppy by Brendan Boldt
- Krat-OS by Sami Elougani
- Uranus OS (GLaDOS enabled) by Kyle Bradshaw
- HAXOS (GLaDOS enabled) by Liam Harwood (run in Chrome)

2015
- PhazonOS by Chris Barnett
- WesterOS by Zack Meath
- NathanOS by Nathan Fahmmer
- Joe/S by Joe Archer
- CheiOS by Nikol Pettline

2014
- ciOS by Anthony Barranco
- MysterOS Bloop by Rebecca Murphy

2013
- SvegOS by Justin Svegliato
- MS-SOS by Robert Nisco
- Charon by Daniel Rogers
- ChronOS in OmniChron by Chris Cordisco

2012
- ChronOS by Chris Cordisco
- J(OS)EPH by Joey Cabibbo
Academic Honesty

- I will be checking all your code against...
  - your class
  - other classes
  - all past projects
  - the hall of fame
  - and...
  - GitHub
Academic Honesty

- I will be using MOSS to help detect cheaters. See theory.stanford.edu/~aiken/moss/

**Moss**

**A System for Detecting Software Similarity**

**UPDATES**

- Feb 1, 2018  *And even more community contributions have been added!*
- Nov 9, 2017  *More community contributions have been added below...*
- Aug 31, 2017  *Thanks to Christophe Troestler for an OCaml client for Moss.*
- May 18, 2014  *Community contributions (including a Windows submission GUI from Shane May, thanks!) are now in their own section on this page.*
- May 14, 2014  *And here is a Java version of the submission script. Thanks to Bjørn Zielke!*  
- May 2, 2014  *Here is a PHP version of the submission script. Many thanks to Phillip Rehs!*  
- June 9, 2011  *There were two outages over the last couple of days that lasted no more than an hour each (I think). I've made some changes to the disk management software that should prevent these problems from recurring.*  
- April 29, 2011  *There was an outage lasting a few hours today, the first since last summer, but everything is back up.*  
- August 1, 2010  *Everything is back to normal.*  
- July 27, 2010  *The Moss server is back on line. There may be some more tuning and possibly downtime in the coming weeks, but any outages should be brief. New registrations are not yet working, but people with existing accounts can submit jobs.*  
- July 25, 2010  *As many (many!) people have noticed, the Moss server has been down for all of July. Unfortunately the hardware failed while I was away on a trip. I am hopeful it will be back up within a few days.*

**What is Moss?**

Moss (for a Measure Of Software Similarity) is an automatic system for determining the similarity of programs. To date, the main application of Moss has been in detecting plagiarism in programming classes. Since its development in 1994, Moss has been very effective in this role. The algorithm behind moss is a significant improvement over other cheating detection algorithms (at least, over those known to us).
Write Original Code

- Infuse your code with your personality.
  - comments
  - variable names
  - code conventions and style
  - structure
  - modularization

- List collaborators, references, and sites consulted in a comment block at the top of each file.

CMPT 424 - Operating Systems
Before asking me for help

- Review your code yourself by reading it from the perspective of someone seeing it for the first time.
  - Consider your variable names — are they descriptive?
  - Did you write plentiful comments about why you made those choices rather than what the code does?
  - Examine your code conventions and style — is it consistent?
  - Fix anything that’s missing, unclear, or confusing.
Before asking me for help

- Set a break point in your browser or IDE and step through your code line by line for several test cases.
  - This is the first thing I’m going to ask you to do, so you might as well do it preemptively.
  - You will be amazed at how many mistakes, bugs, and off-by-one errors you’ll find that way.
When asking me for help

- Explain the problem clearly. Context matters.
- Describe several test cases that illustrate the problem.
- Tell me what you observed when stepping through your code line by line.
- Make sure the latest version is committed on GitHub and include a link to it in your e-mail.