First Day Admin

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http://www.cs.odu.edu/~mweigle/CS455-S13/

Intro to Networks and Communications
First Things First…

- Weigle
  - pronounced "Why-gull"
- CS 455/555 - split undergrad/grad course
  - grad students will have more homework problems, harder exam questions, and a different final assignment

Intro to Networks and Communications
First Things First…

- Course website
  - http://www.cs.odu.edu/~mweigle/CS455-S13
  - syllabus
  - announcements, clarifications, FAQs posted
    - check website before emailing me a question
  - lecture notes and assignments will be posted on the schedule page before class
    - read lecture notes before class
    - bring lecture notes to class and take additional notes
      - save a tree - print double-sided!

Intro to Networks and Communications
First Things First…

- Blackboard
  - posting grades
  - possibly used for submitting assignments (instructions will come with first assignment)
- Email
  - sign up for the class mailing list *today!*
    - http://list.odu.edu/mailman/listinfo/cs455-mcw
    - use an email address that you check every day
- Unix Computer Account
  - you must have a CS department Unix account
  - create one online - https://sysweb.cs.odu.edu/online/index.php

Intro to Networks and Communications
So, what things will we learn?

- How does the web work?
  - How does a client find a random web server?
  - How does a request make its way from a web browser to a web server and how does the reply makes it back?
  - How is it that all data transmitted arrives intact and in order?
  - How insecure is the connection and how secure is a secure connection?
- Why do we get the level of performance that we do?
  - How do the millions of web requests and responses that transit the ODU campus network every second share the capacity of the network?
  - Can one control or even improve the performance of their network connections?

What is this course about?
The Internet food chain of technology

- Application-level protocols
  - HTTP, FTP, SMTP (e-mail), and the Domain Name System (DNS)
- Socket programming and client/server computing
- Transport protocols TCP and UDP
- Congestion control principles and algorithms
- The Internet Protocol IP and Internet routing architecture and algorithms

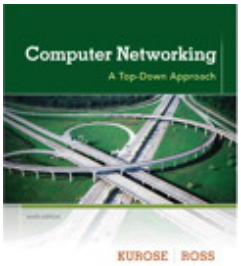
Administrivia
Prerequisites

- CS 270 - Computer Architecture
- STAT 330U - Intro to Probability and Stats
- Good knowledge of Java or Python
  - or enough confidence in your programming skills to be able to learn Java or Python
    - we'll mainly be using simple constructs
- Program function/operation will be described using UNIX terminology
  - You should be comfortable with the UNIX file system, file I/O, I/O redirection, basic UNIX program development
  - Example:

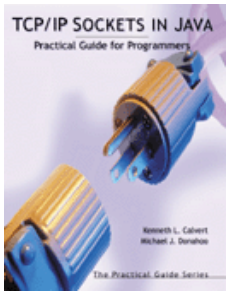
```
% java prog1 < testScripts/foo > ../bar &
```


Administrivia
Textbook

- Required
  - Computer Networking: A Top-Down Approach Featuring the Internet
    - 6th edition, by James F. Kurose and Keith W. Ross, Addison Wesley, 2009
    - 4th or 5th editions also acceptable



- Potentially Useful
  - TCP/IP Sockets in Java
    - by Donahoo and Calvert



Administrivia
Honor Code

- All assignments, unless explicitly specified, are to be completed on your own
- All students are responsible for knowing the rules
- Any evidence of cheating or plagiarism will result in a 0 grade for the assignment/exam, and the incident will be submitted to the department for further review
  - guilty finding could result in notation on your transcript

Administrivia
Honor Code

- No sharing of code is allowed. This includes discussion about the design of a programming assignment solution.
- Tips to avoid cheating (even inadvertently)
  - Don't start at the last minute
  - Don't sit next to each other in the lab and talk about the assignment while you're working on it
  - Ask the instructor if you're stuck
    - which means that you can't start at the last minute…
  - Late policy: 5% per day
    - I'd rather you turn in something late than cheat

Honor Code

What is Cheating/Plagiarism?

- Turning in another student's work
- Especially for the final paper:
  - Copying material from a source text without proper acknowledgment
  - Copying material from a source text, supplying proper acknowledgment, but leaving out quotation marks
  - Paraphrasing material from a source text without appropriate acknowledgement or authorization
  - "In your own words" means that the text should be your own and not a paraphrase of others' work

When in doubt, ask!

Plagiarism

The Only Two Rules You Need to Know

- First: If anything except turning off your computer happens after you have highlighted text and pressed "Control-C" then you are plagiarizing.
  - unless you put that text in quotation marks
    - this should only be rarely used
- Second: If you find yourself trying to paraphrase someone else's words to avoid plagiarizing then you are plagiarizing.
  - unless you include a citation at the end of the sentence
    - this should not be done for entire paragraphs

http://gentlemansc.blogspot.com/2011/08/more-you-know.html

Administrivia
Grading

- Programming Assignments (~5) 20%
- Written Homework Assignments (~4-5) 20%
- Mid-Term Exam 20%
- Final Exam 25%
- Undergrad Paper / Grad Presentation 10%
  - more details will come later in the semester
- Participation / Quizzes 5%
  - some quizzes may be unannounced

Administrivia
Assignments

- Written homework (anything where a hard copy is submitted) is due at the start of class on the due date
  - Anything handed in after I start lecturing is considered late (don't be late for class!)
- Electronically submitted projects are due before midnight on the due date
  - Unexcused absences on a project due date will count against your participation grade
    - Don't skip class to finish your assignment!
- Penalty:
  - 0-24 hours late: -5%
  - 25-48 hours late: -10%
  - over 48 hours late: not accepted, grade = 0
  - weekends count

Administrivia
Attendance

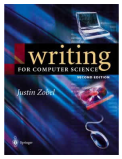
- Arrive on time to class
  - your grade will be affected if you are consistently tardy
- If you are absent, first check the course webpage for missed notes and/or assignments
  - Don't come ask me, "Did I miss anything important?"
    - The answer is "Yes!"

Administrivia
Policies

- Turn off cell phones before coming to class
- Make-up work is only given with a written medical or university excuse
- No individual extra credit work is given

Administrivia
Seeking Writing Help

- Buy two inexpensive books
  - *Writing for Computer Science* by Justin Zobel
  - *The Elements of Style* by Strunk and White



- Look at online information from ODU's Writing Tutorial Services
  - http://al.odu.edu/wts/students/
- Contact ODU's Graduate Writing Assistance Program
  - http://al.odu.edu/gwap

Administrivia
Seeking Help

- Ask questions in class!
- Check the course website
  - FAQs, lecture notes, assignments, useful links
- Come to office hours
  - Mon 1:30-3pm, Thurs 9:30-10:45am in E&CS 3214
  - if you can't make office hours, send me an email to setup another time
- Send email
  - but only for short, clarifying questions
  - don't depend on an immediate answer
  - include the phrase "CS 455" or "CS 555" in your subject line

Administrivia
How to do well in this course

- Attend class regularly
  - Ask questions!
  - Exercise your understanding of course material on a daily basis
- Rigorously test your programs before submitting them
  - Think of pathological test cases – I certainly will
- Read over lecture notes before class
  - Take more notes during class
- Study the homework and in-class "thought" problems
  - Don't just "do" the homework
- Take (and study your) notes!

How To Do Well
Last Things

- Coding on Unix machines
  - easiest to use XWin (displays Unix windows on your PC) and an editor like emacs
- Note the "Links" listed on the course webpage
  - especially Unix, Java, Python, emacs tutorials
  - don't ask me questions that you can quickly find the answers to yourself (i.e., don't ask me to be Google for you)
    - example: How do I use the indexOf method in the String class?
- Get started early!

Program 1

- Assigned: today
- Due: next Tuesday
  - start early!
  - if you have trouble completing this, or it takes you more than 2 hours, please see me during office hours this week (so, start early!)
- Write a Java or Python program to handle command-line arguments and do some simple String processing
- Details on course webpage
  - Schedule > *Today's date* > Assignment

Introductions

- About Me
  - I'm from Louisiana
    - so, I'm a huge Saints, LSU, and college football fan
  - I got my PhD from UNC
    - I'm a pretty big Tarheel fan, too

  - My research interests are networking, web science, and info vis

Introductions

- Your Turn!
  - Name
  - Home town/state/country
  - undergrad/grad
  - Why you're taking this course
  - Something interesting about yourself