



CpSc 360: Distributed and Network Programming

Introduction

James Wang



What is this course?

- Network is the backbone of modern computer systems.
- Due to flourish of Internet and the WWW, network programming and Web programming have become more and more important.
- In this course, students will be introduced to distributed systems, network protocols, Web technologies.
- Network programming is the focus of this course. TCP/IP will be discussed in details.
- Web programming, such as CGI and PHP, will also be discussed.
- Some Internet protocols such as HTTP will be studied as well.
- The students will gain hands-on experience in these areas through programming assignments.



Prerequisite

- Got good grade in CpSc 215 is not enough.
- You need have Strong C/C++ programming skill.
- Or you become a very good C programmer in a week.
- Know how to login to department's UNIX systems.



General Information

- Class Time:** 4:00PM ~ 5:15PM, Monday and Wednesday.
- Location:** 408 Daniel Hall
- Instructor:** Dr. James (Zijun) Wang
- Office:** 305 McAdams Hall
- Phone:** 864-656-7678
- Email:** jzwang@cs.clemson.edu
- Office Hours:** 3:00PM ~ 4:00PM
- Web site:**

<http://www.cs.clemson.edu/~jzwang/0808360/cpsc360.htm>



What is this course about?

- It is not about distributed systems or networking.
- It is not about programming languages.
- It is about writing program using network protocols.
- Of course, we need understand basic concepts of network to write the program.
- It is about programming projects.



What can I expect from the instructor?

- You can't expect the instructor write program for you.
- You can't expect the instructor debug program for you.
- You can't expect the instructor give you high mark if you don't study hard.
- The instructor can only tell you what you need to do, and tell you what mistakes he made during years of programming career.





Evaluation

- 🌟 **Homework (50%):** Since this is a programming course, all assignments will be in form of programming project. Projects will be posted on the website and must be done individually.
- 🌟 **Midterm Exam (20%):** October 1.
- 🌟 **Test (20%):** Final exam may be waived if your average score in homework assignments, midterm exam and quizzes exceeds 90.
- 🌟 **Quizzes (10%):** There will be 5 quizzes at various points during the semester.
- 🌟 **Penalty Points (-10%):** Each tardy will be penalized with -1 point.



Policies

- 🌟 It is very important to attend the class. Failure to attend the course most likely leads to missing some information (especially programming experience) that won't show in lecture notes or textbook. Tardy will be punished by penalty points.
- 🌟 Any duplicate or near duplicate project submissions will result in a **zero (0)** grade in that assignment for all students involved and may result in a failure for the entire course. You may discuss projects with other students, but sharing of code in any form is not acceptable (this means that looking at another student's code or showing your code to another student is not permitted). If you need help with a project, send email to or see the instructor!
- 🌟 Please contact the instructor if there is any part of these policies you do not understand



More..

- 🌟 **Grading:**
A (90 - 100), B (80 - 89), C (70 - 79), D (60 - 69), F (0 - 59)
- 🌟 **Q&A:**
 - 🌟 Email questions to jzwang@cs.clemson.edu with subject "CP SC 360 Q&A";
- 🌟 **Textbook:**
 - 🌟 UNIX Network Programming: The Sockets Networking API, Volume 1, 3rd Edition. W. Richard Stevens, Bill Fenner, Andrew M Rudoff.



Website

- 🌟 **All course related materials will be posted on course website:**
<http://www.cs.clemson.edu/~jzwang/0808360/cpsc360.htm>
- 🌟 Announcements
- 🌟 Homework Assignments
- 🌟 Lecture Notes
- 🌟 Links to required readings
- 🌟 FAQs (for homework and tests)
- 🌟 Links to web resources



Programming Environment

- 🌟 Unix machines in CS department.
- 🌟 You should get an account from the CS department.
- 🌟 Don't mind if you write program in your personal computer. However it needs to pass the test in Solaris machines.



Homework

- 🌟 Homework assignments will be posted on course website.
- 🌟 Directions for submission will be posted on the course home page with the first assignment.
- 🌟 Submission guidelines will also be posted on the course web site
 - 🌟 what we expect: comments, Makefiles, etc.





Course Topics

- 🌟 Networking
- 🌟 TCP/IP
- 🌟 Sockets Programming
- 🌟 The Internet and Internet protocols
- 🌟 The WWW and Web programming
- 🌟 Security
- 🌟 Other Network Programming APIs



Project Grading

- 🌟 Correctness of the project.
- 🌟 It is expected that everyone is a good programmer.
- 🌟 Comments are required.
- 🌟 Structured, readable code is required.
- 🌟 Unreadable code may result in zero(0).



What kind of code is expected?

- 🌟 Is the code easy to understand?
- 🌟 How hard would it be to make a small change to the functionality?
- 🌟 Are all possible error situations handled?
- 🌟 Can the code handle unexpected input?

Scott will kick you out of CS machines if your code breaks his network!!!!



Academic Integrity (Again)

- 🌟 All programming projects need to be done individually!
- 🌟 Discussion is encouraged though.
- 🌟 No sharing of code in any form.
- 🌟 looking at code is a form of sharing!



Lecture Notes

- 🌟 The instructor will post the lecture notes before each class on the website.
- 🌟 The information on lecture notes are adopted from various sources, including textbook, Internet or notes from other professors. Therefore, don't expect everything is consistent with what textbook says.
- 🌟 If you are confused with the information, please ask questions.



Need Help?

- 🌟 Send email to: jzwang@cs.clemson.edu
- 🌟 Discuss anything with anyone!
- 🌟 **DO NOT SHARE CODE IN ANY FORM.**

