Object-Oriented Program Development in C

Alark Joshi
Contact Information

- Email: alarkjoshi@boisestate.edu
- Course Website: [http://cs.boisestate.edu/~alark/cs253](http://cs.boisestate.edu/~alark/cs253)
- Office: MEC 302A
- Office Hours: Tuesdays & Thursdays 3pm-5pm
TA and Grader

- Teaching Assistant - Nathan Riskey
  nathanriskey@u.boisestate.edu
- Grader - James Kress
  jameskress@u.boisestate.edu
- Office hours on class website
- Email for appointment
Syllabus

• Objectives
  • Programming in C
  • Shell programming
  • Tools for debugging and development
• Academic Dishonesty - Friend <-> Instructor
• Late policy - 20% deduction per day
Where does 253 fit?

• 253 is a prereq for
  • COMPSCI 450 - Programming lang translation
  • COMPSCI 453 - Operating systems
  • COMPSCI 430 - Parallel Computing
  • COMPSCI 425 - Intro to Computer Networks
Grading

- Programming Assignments
- Team-based learning approach
  - Individual quiz every Monday
  - Team quiz following individual quiz
- Mini-lecture/Team-based activities to reinforce learning and understanding
Team-based learning
Team-based learning

- Long lectures proven to be less effective
Team-based learning

- Long lectures proven to be less effective
- Team-based learning
  - Apply
  - Question
  - Reflect upon material and
  - Discuss content as a group
Team-based learning
Team-based learning

- Quiz every Monday unless specified
Team-based learning

• Quiz every Monday unless specified
• Each quiz will be taken first as an individual
  • Same quiz will be taken as a team
• Instant feedback for the team
Team-based learning

• Quiz every Monday unless specified
• Each quiz will be taken first as an individual
  • Same quiz will be taken as a team
• Instant feedback for the team
• TBL quizzes – individual vs team performance
Team-based learning

- Quiz every Monday unless specified
- Each quiz will be taken first as an individual
  - Same quiz will be taken as a team
- Instant feedback for the team
- TBL quizzes – individual vs team performance
- Meet team members and introduce yourself
Purpose of the course
Purpose of the course

• Why are you here? Reasons to learn C
Purpose of the course

• Why are you here? Reasons to learn C
• C/Java are the most commonly used languages in industry today
Purpose of the course

• Why are you here? Reasons to learn C

• C/Java are the most commonly used languages in industry today

• http://www.tiobe.com/index.php/content/paperinfo/tpci/index.html
Purpose of the course

• Why are you here? Reasons to learn C

• C/Java are the most commonly used languages in industry today
  
  • http://www.tiobe.com/index.php/content/paperinfo/tpci/index.html

• Interview questions are based mostly on what you learned in 125, 225, 253 and 342.
Purpose of the course

• Why are you here? Reasons to learn C
• C/Java are the most commonly used languages in industry today
  • http://www.tiobe.com/index.php/content/paperinfo/tpci/index.html
• Interview questions are based mostly on what you learned in 125, 225, 253 and 342.
• Time to learn the material is *now*
Resources

- Textbooks - K&R, Unix book (Required)
- Lecture Notes and handouts
- Learn from each other
Collaborative Learning

- Piazza invite sent out
- Use Piazza to help each other
- Ask questions anonymously
- Answer questions and doubts that everyone seems to be having
Working on assignments

• Similar to working assignments for 125 & 225
• C compiler available on Onyx - gcc
• You should use Eclipse with CDT
  • eclipse.org/cdt (C/C++ Development Tooling)
• Try downloading and configuring it before next class - Post questions on Piazza, come to office hours for help
#include <stdio.h>

int main(void)
{
    printf("Hello world!\n");
    return 0;
}

Compiling and Running

• gcc helloworld.c
• Creates an executable a.out
• Type ./a.out to run the program
• gcc helloworld.c -o helloworld
• To create an executable called helloworld
For next class

- Quiz on Pages 5-21 from K&R
- Activate Piazza account
- Configure Eclipse CDT (C/C++ Dev Tooling)
- Try to Install Linux (if you own a computer)
  - Use VirtualBox to set up a virtual linux machine (easier than dual boot)
Questions?
Quick Intro to Linux Environment

Refer to Unix/Linux Command Reference handout
Introductory Programs

Structure of C Programs & Demos