Lecture 02a: Introduction to C++
August 29th, 2017

Computer Science Department Picnic

Welcome to the 2017-2018 Academic year!
Meet your faculty, department staff, and fellow students in a social setting. Food and drink will be provided.

When: Saturday, September 2nd
Time: 1pm – 4pm
Where: Rolland Moore Park
Shelter #2

Announcements

• Office Hours
  – David White: 1-3 M -> 2-4 M
• Reading
  – Reading/Quiz on Chapter 1 due this morning
  – Chapter 2 for next Tuesday
  – Some may benefit from reading 9.4, 9.5, 9.7
    • Input / Output
  – Some benefit from reading 4.11, 4.12
    • .h, .cpp, ifndef, endif
• Recitations this week
  – Makefiles (required for PA1)
• PA1 is now available on the class website
  – Due 1 week from today
  – Let’s discuss it…

Review

• Last week we talked about
  – Goals of the course
    • Build & maintain large programs
    • Understand what’s “under the hood”
    • Learn C++, learn more about Java
  – Differences between C++ & Java
    • Motivated by goals of the languages
    • C++: Legacy code, access to hardware, machine efficiency
    • Java: Security, portability, programmer efficiency

When do we learn C++?

• Starting today (right now)
• But you don’t learn your 2nd language the way you learned your 1st
  – No spoon feeding
  – You already know how an if-statement works…
  – C++ is similar to Java
• How do you learn another language?
  – Step 1: goals & context language
  – Step 2: summary or list of differences
  – Step 3: dive in – learn by example

Picking an example

• Not too complex
• Similar to your task (if possible)
• Good style
  – The goal is not to write Java in C++
• My example: a complex number class
  – Complex.h
  – Complex.cpp
  – main.cpp
Let's Examine The Code

• Topics not to skip:
  – classes
  – #define idiom
  – using
  – I/O
  – File decomposition
  – Main, its arguments, and its return value
  – Object design for PA1
  – Program decomposition
  – Comments