

Interfaces and APIs

CSSE 221

Fundamentals of Software Development
Honors

Rose-Hulman Institute of Technology

Announcements

- Homework due now
- Any problems committing JavaEyes to Subversion?
- Tuesday is "Tie Day"
- Roll call: for pronunciation
- Delvin Defoe, Andrew Siegle, Travis Baumbaugh, Jeremy Tramm, Steven Moyes
- Last class: Eclipse and SVN
- Any questions?
 - Course mechanics? Syllabus? Angel?
 - Homework?

Student-led research and presentation: Capsules

- Opportunity for Honors students
 - Deeper understanding
- Three total per student:
 - Weeks 2-3: Research, summarize, and create a short quiz and answer key
 - Weeks 4-6: & create a demo & activity
 - Weeks 7-8: & present it to your classmates

Capsule topics

Research & Summary

- Inheritance
- Polymorphism
- 1D and 2D Arrays and ArrayLists
- GUI using Swing
- EventListeners
- Shape classes

+ Demo & Activity

- Lists & Iterators
- Stacks & Queues
- Sets & Maps
- Recursion
- File IO
- Threads

+ Presentation

- Insertion and Selection Sorts
- Advanced GUIs
- Advanced Graphics
- MergeSort
- Animation
- Searching algorithms
- Function objects and Comparators

- We will work in teams of 3.
- Choose ones you want to learn most about.

This week: BigRational assignment

- Today
 - API (Application Programming Interface)
 - Interfaces: writing to a contract
- Tomorrow
 - Unit Testing: searching for logic errors
 - Introduction to efficiency analysis: “big-Oh”
- Thursday
 - Exceptions: throwing and catching

Two views of interfaces

1. As a user

- Application Programming Interface (API)

2. As an implementer

- Obligation to implement certain methods

A contract

Doesn't include fields

– Interface = Method signatures

Onto the assignment

- See Homework 2 and its link to **BigRational**