CSE 332
Data Abstractions
Autumn 2013

Instructor: Ruth Anderson
Email: rea at cs.washington.edu
Office Location: Allen Center (CSE) 360
Office Hours: TBA

Teaching Assistants: (Office Hours time and location TBA)

Hye In Kim (kainby87 at cs.washington.edu)

David Swanson (swansond at cs.washington.edu)

William McNamara (mcnawi11 at cs.washington.edu)

Christopher Tjong (ctjong at cs.washington.edu)

Lecture:	MWF	12:30-1:20	SIG 134
Sections:	AC Th	12:30-1:20	MUE 155
	AA Th	1:30-2:20	EEB 003
	AB Th	2:30-3:20	EEB 045

Note: Sections **will** meet the first week (Thurs Sept 26th)

Course Web Page: http://www.cs.washington.edu/332/

Catalog Description: Covers abstract data types and structures including dictionaries, balanced trees, hash tables, priority queues, and graphs; sorting; asymptotic analysis; fundamental graph algorithms including graph search, shortest path, and minimum spanning trees; concurrency and synchronization; and parallelism.

Prerequisites: either CSE 311 or CSE 321

Course Text: *Data Structures and Algorithm Analysis in Java* 3rd Ed., Mark Allen Weiss, Addison Wesley: 2012, ISBN-10: 0132576279. (We will also try to support the 2nd edition: Addison Wesley: 2007, ISBN: 0-321-37013-9.) Readings (and occasionally homework problems) will be assigned from the textbook. As lecture does not provide enough time to cover all material in detail, you will be expected to read the textbook to clarify topics and find more examples as well as to examine Java implementations of the data structures and algorithms discussed during lecture. Copies will also be on reserve at the Engineering library. We also recommend a Java reference book of your choice, one is: Core Java(TM), Volume I--Fundamentals, Cay S. Horstmann and Gary Cornell, Prentice Hall.) We will use a set of on-line notes for the material on parallelism and concurrency.

Assignments: Assignments will be a mix of written/typed exercises (eight) and programming projects (three). Written assignments will be due at the BEGINNING of lecture on the day they are due. Programming assignments will be submitted electronically via the web. Exact dates and deadlines will be specified on each assignment.

Exams: We will have one midterm exam during lecture (Monday Oct 28, 2013) and a final exam (8:30-10:20am Thursday, December 12, 2013). Makeup exams will only be offered under

extraordinary circumstances; you should plan to attend the exams when they are given. Exams will normally be closed-book, closed-notes, and calculators will not be allowed.

Late Policy: **Written assignments**: Due *promptly* at the BEGINNING of lecture, late assignments will not be accepted. If you cannot attend lecture please arrange to turn in your homework earlier to the instructor or have a classmate turn it in for you during lecture. The purpose of strict adherence to this policy is not to be a pain, but so that students do not skip lecture to finish their homework.

Programming projects: Programming projects will be turned in electronically (at a time announced for each assignment). Once per quarter you may use your "late day" to buy an extra 24 hours. You must email your TA before the deadline to specify that you will be using your late day so he or she can make appropriate arrangements. If you have used up your late day, a penalty of 25% off per 24-hours late will be assessed.

If unusual circumstances that are truly beyond your control prevent you from submitting an assignment or attending an exam on time, you should discuss this with the instructor, preferably in advance. (Even if you're sick in bed at home, you should still be able to make a phone call or send an email.)

Grading and Evaluation: Grades will be computed *approximately* as follows (weights may be modified):

- 25% - Written Homework Assignments
- 25% - Programming Projects
- 20% - Midterm Exam
- 25% - Final Exam
- 5% - Best of the four items above

Academic Integrity: Unless otherwise specified, you are to complete assignments individually. You may discuss the assignment in general terms (see description of Gilligan's Island rule on the course web page), but the code you write must be your own. You are encouraged to discuss ideas, approaches, concepts, bugs, etc., in English, but you may not show or give your code to anyone except this course's TAs and instructor. You are not allowed to write code with another student on an assignment or to show another student your solution to an assignment. Referring to solutions found on the web or solutions from this or other courses from previous quarters is also considered cheating.

Communications: The course message board is a good medium for discussing the course, getting help on assignments, and staying in touch outside of class hours. You can also email the course staff or go to office hours. In addition, the course staff will occasionally post announcements to the course email list. You will be automatically subscribed to the course email list if you are registered for the course and will be held responsible for anything posted there.

Computing Resources: We will use Java 7 for programming assignments. We recommend although will not require that you use the Eclipse development environment. Links for downloading and installing Java and Eclipse can be found on our course web page.
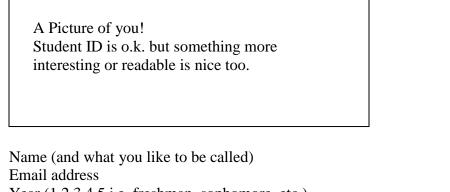
CS 332 – First Day Assignments

0) **Review Java and explore Eclipse** – Instructions for installing on your home machine are on our course web page. Now would be a good time to review material from CSE 143!

1) **Project #1** – Your first programming project will be posted by **Wednesday evening**. Look for an email announcing its arrival to verify you are on the course mailing list!

2) **Preliminary Survey**: Please fill out the preliminary survey posted on our course web page (posted by end of day today) by the evening of **Thursday Sept 26th**. (Course home page = http://www.cs.washington.edu/332/)

3) **Information Sheet**: Please bring a sheet of paper with the following information with you to lecture on or before **Friday Sept 27th**.

A Picture of you!
Student ID is o.k. but something more
interesting or readable is nice too.

Name (and what you like to be called)
Email address
Year (1,2,3,4,5 i.e. freshman, sophomore, etc.)
Hometown
Interesting Fact about yourself and/or what you did over summer/winter/spring break.

4) **Reading** in *Data Structures and Algorithm Analysis in Java*, by Weiss (Reading is same in both 2nd Edition and 3rd Edition)
- For this week:
  - › (Today) Weiss 3.1-3.7 –Lists, Stacks, & Queues (Topic for Project #1)
  - › (Fri) Weiss 1.1-1.6 –Mathematics Review and Java
  - › (Mon) Weiss 2.1-2.4 –Algorithm Analysis