CSC301 Data Structures (in Java) II
Syllabus for Summer II 2016

Corin Pitcher

8 July 2016

Overview

This is the second course in a two-course sequence on data structures using Java. The course focuses mainly on the following data structures, their analysis, and their applications: trees (search trees, balanced search trees), associative arrays, hash tables, and undirected/directed graphs. The implementation of the basic operations on each data structure are discussed and analyzed in terms of their efficiency. The applications discussed highlight and exploit the unique characteristics of the different data structures, and emphasize problem solving and recursive thinking.

Instructor Information

- **Instructor** Dr. Corin Pitcher

- **Loop Office** 835, CDM Building, 243 S. Wabash Avenue

- **Email** cpitcher@cs.depaul.edu

- **Tel** +1 312 362 5248

- **Instructor's Homepage**
  http://fpl.cs.depaul.edu/cpitcher/

- **Course's Homepage**
  http://fpl.cs.depaul.edu/cpitcher/courses/csc301/
  (for lectures slides, assignments, reading schedules, examples)

- **LMS Homepage**
  http://d2l.depaul.edu
  (for grades, quizzzes, and video recordings)

- **Office Hours** : http://www.cdm.depaul.edu/about/Pages/People/
  facultyinfo.aspx?fid=104

Prerequisites

If you are not sure that you have satisfied the prerequisites, speak to the instructor before the second lecture.

Prerequisite Courses

- **Data Structures (in Java) I** (CSC300). C- or better.

Piazza Forum

The Piazza forum linked from the course homepage is used for course announcements and class discussion.

You **must** subscribe to the Piazza forum. Do it as soon as possible.

The Piazza forum is an extension of our time in class. This is particularly great for students in the online section or students that miss the live lecture. If you are watching the class online, you should write down any questions that arise, including the time from the recording for reference. Then send the list of questions to the instructor, who will post a reply to the forum.

Textbook

Algorithms 4e [Amazon] by Robert Sedgewick and Kevin Wayne.

The book has a great companion site. Do not get any prior edition! Available online via Safari.

Objectives

- Basic OO programming techniques

- Use of testing

- Understanding correctness of programming

- Understanding performance characteristics of programs

- Competence with iterative and recursive solutions to problems

- Understanding of trees

- Understanding of hash tables

- Understanding of graphs

- (To the extent that time permits) Understanding of string algorithms

Assessment

The course grade will be based on:

Item	Weight
Attendance	5%
Homework assignments	25%
Online quizzes	20%
Final exam	50%

- The final exam is comprehensive, i.e., requires knowledge of the material covered in the entire course (in addition to prerequisite programming and data structures).

- You must complete the final exam to pass the course.

- To provide the same testing environment for in-class and Online Learning students, the instructor will not answer questions during the exams.

Policies I

Changes to Syllabus

This syllabus is subject to change as necessary during the quarter. If a change occurs, it will be addressed during class, posted under Announcements in D2L, and posted on Piazza.

Attendance

1. Students not in an Online Learning section must attend class.

2. Students in an Online Learning section must watch the online recording within 48 hours of its publication online.

3. Students are expected to subscribe to the Piazza forum, and read messages in a timely fashion.

4. The final exam date is posted on the schedule on the course homepage. You must attend the final exam. A medical note will be required for an absence. Business trips or vacations are not valid reasons for missing the exam.

5. Online Learning students must ensure that they can take the exams within the window specified on COL before the drop date. Please register for the exam as soon as possible.

6. **Lecture slides are a supplement to lectures only.** The slides are not intended to be read in lieu of listening to the lecture.

Homework

1. Students must keep backup copies of all submitted homework.

2. Homework assignments will be distributed and submitted via repositories using the Git distributed version control system. Students must use their personal Git repository to retrieve and submit each assignment. Students will need to:

   - Create a (free) personal BitBucket account.
   - Install Git.

- Clone your personal repository.

3. Source code submitted via homework repositories must compile correctly with the build/test system (or be parsed without error in the case of non-compiled languages). Homework submissions with source code that does not compile with the build/test system will receive 0 points.

4. Students must verify that homework has been submitted correctly, i.e., by logging in to the BitBucket web interface to check that their modifications have been uploaded.

5. This summer class is on a tight schedule. **Late homework submissions will not be accepted at all.**

6. Homework submissions must be submitted online via the Git repository. **Email submissions will not be accepted at all.**

7. Submitted work must be worked on individually. You must not use or look at anyone else's solution, and you must clearly acknowledge any code that you obtain from other sources (such as books, magazines, or the Internet). If you are in any doubt, contact the instructor well before the submission date for advice. You may use as much code as you like (without acknowledgement) from the examples discussed in class. Plagiarism will result in penalties up to and including failing the course.

Expectations

1. The course requires that students actively engage the material on your own. Students should not only read the notes and example programs, but also do self-tests, modify code, and run it. As always, figure out what you can definitely code, code it, try it, and then consider extending the boundaries.

2. Students must keep up with the assigned textbook reading.

3. Students are strongly encouraged to ask questions and offer comments relevant to the day's topic.

4. All electronic interactions are an extension of the classroom and should be treated as such. While disagreement can be part of the discourse,

online communication should remain respectful and appropriate rather than demeaning and/or unprofessional.

5. Classroom use of a laptop or tablet must normally be restricted to class-related tasks such as note taking, checking references, testing code examples, etc.

Policies II

Retro-Active Withdrawal

CDM understands certain extenuating circumstances can hinder one's ability for academic success and completion of course work. Please see `http://www.cdm.depaul.edu/Current%20Students/Pages/Enrollment-Policies.aspx` for additional information.

Absence Notifications

In order to petition for an excused absence, students who miss class due to illness or significant personal circumstances should complete the Absence Notification process through the Dean of Students office. The form can be accessed at `http://studentaffairs.depaul.edu/dos/academicprocesses.html`. Students must submit supporting documentation alongside the form. The professor reserves the sole right whether to offer an excused absence and/or academic accommodations for an excused absence.

Academic Integrity and Plagiarism

This course will be subject to the university's academic integrity policy. More information can be found at `http://academicintegrity.depaul.edu/`. If you have any questions be sure to consult with your professor.

Academic Policies

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the University Academic Calendar. Information on enrollment, withdrawal, grading and incompletes can be found at: `http://cdm.depaul.edu/enrollment`

Incomplete Grades

An incomplete grade is defined in the Student Handbook as follows (note that the policy in the undergraduate student handbook applies to both undergraduate and graduate students): A temporary grade indicating that the student has a satisfactory record in work completed, but for unusual or unforeseeable circumstances not encountered by other students in the class and acceptable to the instructor is prevented from completing the course requirements by the end of the term. Please see http://www.cdm.depaul.edu/Current%20Students/Pages/Grading-Policies.aspx for additional information.

Students with Disabilities

Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential. To ensure that you receive the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities (CSD) at: mailto:csd@depaul.edu

- Lewis Center 1420, 25 East Jackson Blvd.

- Phone number: 312 362 8002

- Fax: 312 362 6544

- TTY: 773 325 7296

Dean of Students' Office

The Dean of Students' Office (DOS) helps students navigate the college experience, particularly during difficulty situations such as personal, financial, medical, and/or family crises. For a list of support services and advocacy information, please visit http://studentaffairs.depaul.edu/dos/.

Online Course Evaluations

Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. The evaluations are anonymous; the instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the student's identity. Since 100% participation is our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the evaluation. Students complete the evaluation online in CampusConnect.