Data Structures & Programming

Overview

Golnar Sheikhshab

Course Info

CMPT 225
Data Structure and Programming
Fall 2017

Instructor: Golnar Sheikhshab <gsheikhs@sfu.ca>

TAs: Bita Azari <bazari@sfu.ca>;
        Logan Born <loborn@sfu.ca>;
        Boris Shabash <bshabash@sfu.ca>

Textbook:

Data Structures & Algorithms in C++, 2nd Ed., Goodrich, Tamassia and Mount, Wiley, 2011

Course Outline

- C++ Programming Reminder
- Object Oriented Design and Abstract Data Types
- Important Data Structures (Stack, Queue, Tree, Heap, Hash tables, ...)
- Time and Space Complexity Analysis
- Sorting Algorithms
- Graph Algorithms
- Strings and Dynamic Programming (time permitting)
- Memory Management and B-Trees (time permitting)

Grading

- Programming portion
  - 6 programming assignments (5 best)   25%
  - 10 lab assignments 10%
- Exams portion
  - 2 midterms 20%
  - 1 final 45%

- Important
  - Students must attain an overall passing grade on the programming portions of assignments in order to obtain a clear pass (C- or better).
  - Students must attain an overall passing grade on the weighted average of exams in the course in order to obtain a clear pass (C- or better).

Assignments/Exams/Labs

- Assignments are Given on Mondays
  - Dates: Sep 18th, Oct 2nd, Oct 16th, Oct 30th, Nov 13th, Nov 27th

- Assignments are due on Sundays at 11:59 PM
  - Dates: Oct 1st, Oct 15th, Oct 29th, Nov 12th, Nov 26th, Dec 10th

- Labs are due at the end of tutorial sessions
  - Dates: Sep 11th, Sep 18th, Sep 25th, Oct 2nd, Oct 16th, Oct 23rd, Oct 30th, Nov 6th, Nov 20th, Nov 27th, Dec 4th

- Two in-class midterms on two Fridays
  - Dates: Oct 13th and Nov 17th

- Final exam is also on a Friday
  - Date: Dec 15th
  - All topics are included

Plagiarism

- Absolutely not tolerated

- We use MOSS to detect similar code

- Both giver and receiver will be penalized

- Penalty:
  - 0 on that assignment
  - -5% of final grade

- How to avoid?
  - Start the assignments early
  - Keep your code (electronic and hard copy) to yourself
  - Have only high-level discussions with your classmates

Classroom Etiquette

- Do not talk or whisper

- Do not use computers (it will disturb people around you)

- Keep your cell phone devices silent and out of sight

- Raise your hands before attempting to ask a question or make a comment

- Speak only with permission

- Respect your classmates

How to do well?

- Review the slides before attending the lectures

- Attend the lectures even if you think you know it all

- Use slides as guidelines to read the book

- Do the assignments yourself (try not to get even the high level idea from others)

- If you didn't do well on an assignment, make sure you understand what went wrong

- Watch out for sample problems on the course website and Try solving them on your own

- Make sure your answers are correct by writing a program and testing it

Office hours

5 hours in total

- Instructor office hours
  - Fridays 12:00-14:00 (starting from Sep 15th)
- TA office hours
  - Wednesdays 14:00-17:00 (starting from Sep 13th)

- Please refrain from asking questions right after the class sessions as I'd have to run to other classes/meetings/etc.

Distribution of Information

Announcements at or emails from https://courses.cs.sfu.ca

Slides will be shared at course homepage