Data Structures (CS 206A)

Lecturer: Otfried Cheong

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Lecture time: Wed, Fri 10:30–11:45

Course webpage: http://otfried.org/courses/cs206

Where to post course announcements?

From previous course evaluations:

- 도대체 왜 Piazza를 사용하는겁니까? KLMS를 사용하면 좀 더 접근성이 있고,
- 교수님께서 공지를 klms가 아닌 piazza로 하시거나 강의시간에 하시는 경우가 많은데 그러다보니 공지가 잘 전달되지 않아 학생들의 불만사항이 꽤 있었던 것 같습니다.
- Piazza is too inconvenient. I think it would be nice if you use KLMS instead.

If you think registering for another system is too inconvenient, I'm willing to put the announcements on KLMS (but Q&A will still be on Piazza).

Administrative

No textbook

But we have lecture notes, copies of the slides, example code, and Wikipedia articles. I expect you to take some notes during the lecture.

Piazza Q&A

I use Piazza (see webpage) for answering all questions about the course contents or the homeworks. Students can ask questions anonymously. You can ask questions in English or Korean.
You can access Piazza online or through the Piazza app.

Announcements

In previous years, I made all announcements (class changes, exams, homeworks) on Piazza.
If you register on Piazza, you can have them emailed to you automatically.

Why Q&A on Piazza?

- Nice Wiki format, where users can work together to answer a question. Student answer / instructor answer.
- Notifications and smartphone app let me answer questions very quickly.
- Students can ask questions anonymously.
- I'm teaching two new courses this semester, and I work with Piazza much more efficiently.

Grading and Homework

Homework

Graded programming projects (1 – 3 weeks time),

Homework requirement

You must submit all programming projects. Fail to submit one project and you fail the course.

Participation

We will take attendance in every class. You have four missed classes free—use this for doctor appointments, interviews, etc. You do not need to send me email about missing a class.

Grading Policy

Programming projects (20%), Midterm exam (30%), Final exam (40%), Participation (10%).

What is this class about?

Improving your programming skills!

Know about standard data structures and can use them in your own programs.

Understand how to implement simple efficient data structures.

Programming is fun!

Can you recognize beautiful program code, and ugly one? An elegant solution and a bungled one?

Topics

- Abstract data types (ADT)
- Linked data structures
- Recursion
- Basics of algorithm analysis
- Standard ADT: Lists, stacks, queues, maps
- Applications of stacks, queues, and maps
- Implementation of data structures using lists, trees and hash tables

Programming language

We will use Python, which all of you already know.

More precisely, we will be using Python 3. The differences between Python 2 and 3 are small, but for a smooth running of the course it's important everybody has Python 3 on their computer.

First project (until Friday!): Install Python 3 on your computer, following the instructions on the website.

I just use an editor and run scripts from the command line. If you prefer, you can use an IDE like IDLE or Wing IDE.

If you have difficulties getting Python 3 to run on your computer, go to the TA office hour!