Lecture 0: Course Overview

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Overview

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  - Expectations

- Logistics
  - Structure of Lectures
  - Homework & Exams
  - Student drop-in hours
  - Piazza

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- expand your algorithmic toolkit (divide-and-conquer, greedy, dynamic programming, graph algorithms)
- limitations (hard problems): NP-complete problems   (complexity)

What to expect from me?

Here is what you can expect from me:

- Give lectures
- Provide homework which helps you understand the material better
- Be very present/interactive during student drop-in hours
- Occasionally be on Piazza (more on this later)

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I care much more about your **learning** rather than your **grades**.

What to expect from the TAs and myself

- This class, albeit difficult, is not designed in an adversarial format

  We are here to help you learn and grow, and we are very happy and excited to do so!

- Use us (and one another) as a resource for this class!

- Ask questions in class

- Come to office hours and ask questions

- *Start your work early*!! This has many benefits:
  - Allows you to ask us questions if you don't understand the homework problem statements
  - Your brain will be unconsciously working on the material
  - You have more chances to come to office hours and ask questions
  - You will minimize your stress of clutch-time homework solving (which is not great for your learning)

- Also use office hours for feedback on how to write solutions (this is also an important part of learning)

What do I expect from you?

If you are taking the class, I expect that you:

- Do the homework
- Participate in class (asking questions, correcting me, etc.)
- Always ask yourself: "why is this important? Why should I care?"
- Have fun exploring the topics!
- Always keep an open mind!
- Be kind to your classmates, to the TA and myself
- Participate a lot on Piazza (asking questions, answering your classmates' questions if you know the answer)
- Provide us feedback on how the course is going
- Let us know if any problems arise during the term, so we can help as soon as possible.

There will be no participation points.

Purpose of Lectures and Homework

The purpose of a story is not to hold your attention,
but to put you back doing your work, inner and outer.
A story is not for presenting some explicit meaning,
and it is not for anyone's entertainment.

- Shams of Tabriz (Soul fury, poem 4)

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Purpose of lectures: NOT to exhaustively explain the entirety of a concept,
but to give you a basic understanding of the material
and instigate your own exploration, of the material and of yourself.

Purpose of homework isn't to automatically repeat what was taugh,
but for you to go further in your understanding and (meta-) skills.

Homework

We will have 5 sets of homework for this class. See *assignments* section in

https://student.cs.uwaterloo.ca/~cs341/.

All sections have *same* assignments, midterm and final

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Due dates (tentative):

- September 25th
- October 6th
- November 6th
- November 20th
- December 4th

Please list sources used and collaborators.

NOT ALLOWED to use ChatGPT or similar sources!

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In addition, we will (try to) post practice problems (won't be graded/don't turn in) which are selected so that you can get a better understanding of the material. I am a strong believer that we only *learn by doing*.

Homework Submissions

- We will use crowdmark for homework submissions
- We strongly recommend you to write your solutions in LaTeX.
- If you are handwritting your solution, please:
  1. Write in a *clearly legible* manner
  2. Take a very good picture of your solution (one where we can clearly read and understand what you wrote)
  3. Illegible solutions will be given a *zero* mark

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  3. Illegible solutions will be given a *zero* mark
- Solutions will be (tentatively) posted within 2 days after the homework is due.
- We will do our best to grade your homework within *7 days after submission*
- Check course webpage for late submission policy

Exams

This course will have a midterm and a final exam

- Midterm: October 20th   (worth 20% of your grade)
- Final: TBD   (worth 40% of your grade)

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More details on course webpage by early October.

Student drop-in hours

Office hours: Tuesdays from 4pm-5pm
at DC 3144 (unless otherwise noted over Piazza)

Piazza Policy

- We strongly encourage everyone to interact a lot on Piazza
- Whenever you have a question about the material or the HW, please ask them in public mode (as chances are other students also have same question).
- To encourage participation, the TAs and myself will sporadically check Piazza, so that you have a chance to collaboratively work through it before we look over the question.
- I will do my best to answer lecture-related questions on piazza
- Please **do not expect** the TA and myself to be active on Piazza at specific hours (especially late hours, say from 10pm until 9am)
- **Do not expect** anyone to answer Piazza questions *over the weekend*.

Questions?