

course_content



Data Structures and Algorithms

Recursion

Week 6

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W6: Recursion

W8: Trees

W9: Graphs

W10: Heaps

W13: Sorting and Searching

W14: Greedy Algorithms

Class Quiz!

Time:
5 min

bit.ly/DSA1920Quiz6

If you are finished: go to **bit.ly/DSA1920Feedback**

Peer Projects - Abstracts

- An **abstract** is a **1 paragraph summary** of your problem. (Not your solution)
- E.g. In this project, we would like to build an entertaining game that can be hosted locally and keeps users engaged. It should give users multiple options at each step and the game should be finished within 30 minutes of playing. The game should promote coordination skills within the user. A 5 year old should be able to play it.
- E.g. In this project, we would like to build an application that can allow customers to know what products are available, which items are in stock and allow them to place orders while also giving the company a way to manage their orders.

Implementations

- Generally, looks good so far
- Keep writing unit tests - think about all the cases when your code might fail.
What are the edge cases? Research on Google - how to write good unit tests?
- Make sure you analyse the complexity of your code.
- This is now **your code**. You can use it for anything. (Assignments, Summative, Projects, Jobs etc). You never have to build a linked-list/stack/queue class in python anymore!
- Note: Olivier is providing your feedback. I will grade them once at end of

Programming Assignment

- These are tough, please don't be disappointed.
- Yes, the questions are a bit ambiguous/hard to understand
- Look for **edge cases** to understand why you fail some tests
- The more problems you solve, the better you will get (**Try CodeSignal!**)
- Read and understand other people's solutions on CodeSignal.
- Write things down **on paper**. What are the objects you have? How do they relate? Most of the time, you can't go straight to code.
- Try to write $O(1)$, $O(\log n)$ code if possible or $O(n)$, $O(n \log n)$ code if necessary

No time for work!! Ok, how about now?

- ☐ Submit an abstract for summative? 24th Feb
- ☐ Commit weekly implementations? 21st Feb (and 6th March)
- ☐ Review first 6 weeks? Larger review quiz after mid-term break
- ☐ Programming Assignment 1 Resubmission? 24th Feb 5pm

Finished and up-to-date?

- Solve Tower of Hanoi Recursion Problem - Ask me to explain
- Read Chapters 1-4 on Course Textbook (material covered so far)
- Programming Assignment 2 is ready - Ask for an invite if you want it now.

Time:
1 min

Questions? Enjoy your break!