**Outline**

**Topics**

* Review
* Algorithm techniques:
  + Brute Force
  + Decrease-and-Conquer
* Analyses tool(s): Big �

**Part 0: Review**

* Algorithm techniques:
  + Brute Force: [Linear search](https://www.cs.usfca.edu/~galles/visualization/Search.html)
  + Decrease-and-Conquer: [Binary Search](https://www.cs.usfca.edu/~galles/visualization/Search.html)
  + Divide-and-Conquer
* [Big $O$](https://www.freecodecamp.org/news/big-o-cheat-sheet-time-complexity-chart/)
* [Recursion](https://recursion.vercel.app/) vs Iteration

**Grading/ Week (Points)**

* Week 1 (Max 10 points)
* Week 2 (Max 15 points)
* Week 3
  + Group Activities (Max 9 points)
  + Homework (Individual activities) (Max 9 points)
  + [Peer reviews (Max 7 points)](https://github.com/TT00FE39-3001/lecture3/blob/main/peer-assessment-template.xlsx)

**Part 1: Sorting using brute force**

* Algorithm techniques: **Brute Force**
  + Bubble sort
  + Selection sort
  + Big � analysis
* [Activity 1](https://github.com/TT00FE39-3001/lecture3/blob/main/activity1/README.md)

**Part 2: Sorting using decrease and conquer**

* Algorithm techniques: **decrease and conquer**
  + Insertion sort
  + Big � analysis
  + Average case vs worst case
* [Activity 2](https://github.com/TT00FE39-3001/lecture3/blob/main/activity2/README.md)

**Part 3: Introduction to Linked list**

* [Big O Complexity](https://web.stanford.edu/class/archive/cs/cs106b/cs106b.1176/handouts/midterm/5-BigO.pdf)
* Introduction to linked list
  + Queues
  + Stack
* [Activity 3](https://github.com/TT00FE39-3001/lecture3/blob/main/activity3/README.md)

**Misc**

* [Links](https://github.com/TT00FE39-3001/lecture3/blob/main/links.md)
* [Cheat Sheet: Mathematical Notation in Markdown](https://upyesp.org/posts/makrdown-vscode-math-notation/)

**About**

*No description, website, or topics provided.*

**Resources**

[Readme](https://github.com/TT00FE39-3001/lecture3#readme)

**Stars**

[**0** stars](https://github.com/TT00FE39-3001/lecture3/stargazers)

**Watchers**

[**0** watching](https://github.com/TT00FE39-3001/lecture3/watchers)

**Forks**

[**0** forks](https://github.com/TT00FE39-3001/lecture3/network/members)

[**Releases**](https://github.com/TT00FE39-3001/lecture3/releases)

No releases published

[**Packages**](https://github.com/orgs/TT00FE39-3001/packages?repo_name=lecture3)

No packages published

**Languages**

* [C++89.1%](https://github.com/TT00FE39-3001/lecture3/search?l=c%2B%2B)
* [Python10.9%](https://github.com/TT00FE39-3001/lecture3/search?l=python)

**Footer**

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