

Review: dynamic data structures

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CMPT14x

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Dynamic data structures

- Basic building blocks: arrays, pointers
 - Linked-lists
- Dynamic data structures:
 - Binary search trees (and other trees)
 - Stacks
 - Queues
- Implementing using arrays, pointers
- Choosing the right ADT for the right job:
 - The right abstraction
 - Algorithmic complexity

Quiz10

- Declare a Python **class** defining a node of a **circular doubly-linked list**
 - Draw a **diagram** representing a circular doubly-linked list with **four** nodes
- What does it mean for a binary search tree to be **balanced**? Why is this a **good** thing?
- **Insert** these items into a new BST in the following order: **6, 3, 4, 1, 12, 8, 10, 9**
 - Now **delete 6** from the tree
- **add(1), add(2), get(), add(3), get(), add(4), get(), get()**
 - What do the **get()**s return if this is a (a) **stack**, (b) **queue**

TODO

- Paper due tonight
- Lab10 due Wed 5Dec:
 - Implement one of your old Lab04-07 in M2
 - Full lab-writeup (may reuse parts of old writeup)
- Final exam this Sat 8Dec: 9-11am Neu37