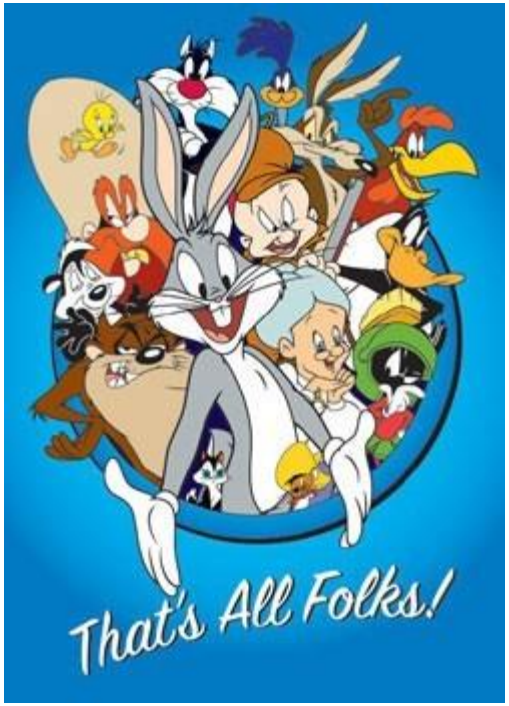
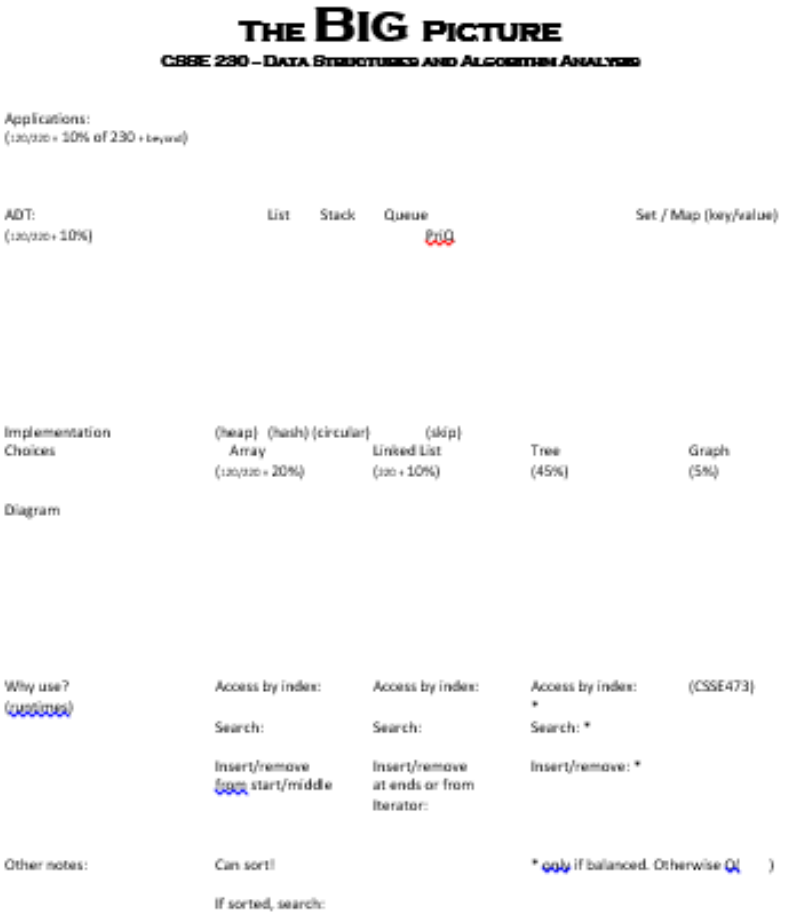


CSSE 230 Day 30

That's all folks.

Let's revisit the "Big picture", with understanding



THE BIG PICTURE

CSSE 230 – DATA STRUCTURES AND ALGORITHM ANALYSIS

Applications:
(120/220 + 10% of 230 + beyond)

ADT: (120/220 + 10%)	List	Stack	Queue PriQ		Set / Map (key/value)
Implementation Choices	(heap) (hash) (circular) Array (120/220 + 20%)		(skip) Linked List (220 + 10%)	Tree (45%)	Graph (5%)
Diagram					
Why use? (runtimes)	Access by index: Search: Insert/remove from start/middle		Access by index: Search: Insert/remove at ends or from Iterator:	Access by index: * Search: * Insert/remove: *	(CSSE473)
Other notes:	Can sort! If sorted, search:			* only if balanced. Otherwise O( )	

Course Evaluations on Banner

- Numbers are nice, but written explanations are much better
- Focus:
  - Did you learn a lot?
  - Are there things you know/can do now that you didn't/couldn't at the beginning of the term?
  - What about the course/instructor enhanced your learning?
  - What about the course/instructor were barriers to your learning?

  - Be as specific as possible.

Some Final Thoughts

- Data is at the heart of software.
  - The companies you may work for agree!
  - The data is the "irreducible complexity" of the code.
- This class has been very "heads down."
  - Getting the algorithms right.
  - Making good OO design choices.
  - There will be more course work like this (CSSE304, 473)
- You also need to be "heads up."
  - Like the ethics assignment you did.
  - Understanding requirements means knowing the clients and users! (CSSE 371)
- Most upper-level courses require some of each in projects

Final Exam Details

- Format same as previous exams.
- You can bring two sides of 8.5” x 11” paper.
- Comprehensive, but more focus on last 3 weeks
  - 60% paper, 40% programming (90/60 points)
- Best preparation:
  - Written problems
  - re-do programming problems you struggled with on homework/exams

Final Exam topics

- Reading, programs, in-class, written assignments.
- Foci:
  - Binary trees, including EBT, AVL, red/black, rank, and threaded trees
    - Traversals and iterators, numeric properties
  - PriorityQueues, Heaps and heapsort
  - Issues in Hash table implementation
  - Graphs
  - Recurrence relations
  - Sorting algorithms and analysis
    - Algorithm analysis (O, θ, ω) in general
  - OO programming, using various data structures (lists, stacks, queues, sets, maps, priority queues)
    - +/- with ADT implementation options (like we did for PQ last week – be specific with answers)

What's left?

- Finish sorting races by 11:59 PM Friday (late day until Saturday is OK)
  - SortingRaces eval is OPTIONAL
- Study, including taking the practice exam
  - Extra help meetings by appointment
- Final Exam Wednesday morning
  - A – Liut in O267
  - Lix4 – Z in O269
- We grade doublets, 2D Trees, and sorting races.
- I finalize all "non-final exam grades"