Data Structures 12/9/2016

0145-343-001

Note Taker: Jai Punjwani

ANNOUNCEMENTS

Final Topics:

* 1/3 material before midterm
* 2/3 material after midterm
* Know searching and sorting (refer back to prior notes). Know the complexity (Big-Oh) of each sort’s case (best, worst, and average)
* tracing some code
* Given a list of numbers, create a heap and then use a heap sort (draw out each step of creating the heap, and then the sort).
* Creating B-tree of a given order

Notes:

PowerPoint: <http://home.adelphi.edu/~siegfried/cs343/343l8.pdf>

Topic: Review for Final

* In class exercise: given a list of numbers, create a heap and then sort it. Something similar will be given on the exam
* process of creating heap: we add left to right, top to bottom, filling each level. This process has order ***O***(n log n)
* In the event that we add an element who is greater than its parent, we switch the child and the parent, and then continue to adjust the heap so that it maintains this relationship
* Creating B-tree: (say order 3) – we split whenever a node becomes size 3
* we insert elements that are less than our parent to the left, otherwise to the right