



Homework 2

CS386D Database Systems
Created on 2/5/20
Version: 1.0

Assigned: 2/5/20

Due: 2/12/20 11:59PM submit to Canvas as a single pdf file.

Reading: textbook

- 8.3, 8.4, 14.1, 14.2
- <https://www.cs.usfca.edu/~galles/visualization/BPlusTree.html>

Problems:

Part A from the text

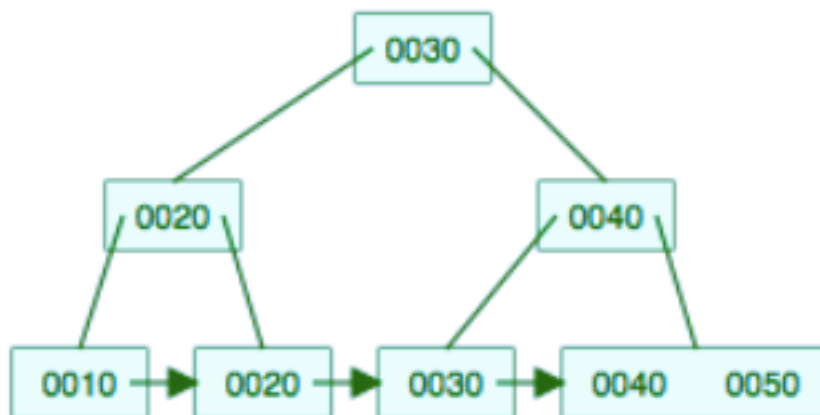
- (pg 359) 8.4.1, 8.4.2
- (pg 631) 14.1.1
- (pg 646) 14.2.1 b, c, 14.2.2 b, c,
- Consider – but do not hand anything in: 14.2.5 a, c, f, g

Part B:

For this question you need to use the B+ tree visualization provided at

<https://www.cs.usfca.edu/~galles/visualization/BPlusTree.html>

Consider the height 2 B+ tree with maximum degree 3 created by inserting the numbers, 10, 20, etc. in sequence.



Determine a sequence of additional inserts such that the root of the B+ tree splits and the value of the last insert is promoted (appears in) the root node.

Turn in your sequence of inserts and 2 screen shots; A screen shot of the final visualization of the tree and a screen shot of the tree immediately prior to the last insert.