

CS165 LAB

B+ TREE MANIPULATION

For the following exercise, use:

Keys per index node – 4

Keys per leaf node – 4

Tree order = 2

1. Using the bulk loading technique, build a B+ tree using the following sequence and a 75% fill factor on the leaf nodes. Show your work to the TA upon completion.

2,4,5,6,10,12,15,16,20,21,25, 29, 42, 44, 47, 50, 56, 58, 61, 62, 67, 70, 75, 77, 78, 81, 83

2. With the tree from #1, show the result tree after inserting 8 and 11 (without rotation).

3. With the tree from #2, show the result tree after deleting 50 (without rotation).

4. With the tree from #3, show the result tree after deleting 58. (without rotation).

5. With the tree from #3, show the result tree after deleting 58 (with rotation).

6. With the tree from #3, show the result of adding 85 and 86.