COS 226 Fall 2014 Class Exercise 7 2 questions; 3 pgs. 2014-10-16

Today: B-trees. §19.8.
Next class: Binary heaps. §§19.*.
Reminder: Read material before and after class.

1. List the members of your group below. Underline your name.
2. Depict the result of inserting the following keys, in the order presented, into an initially empty $B$-tree with parameters $M=4$ and $L=3$, based on the definitions and methods in the textbook. ${ }^{1}$ (The tree is thus a $B^{+}$-tree.)

$$
70,50,60,65,40,75,62,63,41,42,51,52,53,54
$$

Depict some intermediate states of the tree, including at least the states after each node-splitting operation.
Similarly, depict the result of deleting the following keys, in this order, depicting at least the intermediate states after each node-merging operation.

$$
40,41,52,63
$$

[^0][additional space for answering the earlier question]
[additional space for answering the earlier question]


[^0]:    ${ }^{1}$ Mark Allen Weiss, Data Structures and Problem Solving Using Java, 4th edition (Addison-Wesley, 2010), §19.8.

