

Today: B-trees; § 19.8.

Next class: Priority queues and binary heaps; §§ 21.*.

1. Write your group members' names 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

¹Mark Allen Weiss, *Data Structures and Problem Solving Using Java*, 4th edition (Addison-Wesley, 2010), §19.8.

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