

CSDS 233 Spring Session 9

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Disclosure: This is a supplement to class, not a replacement. This should not be your only study activity for exams, it should aid you in studying. I do not have access to the actual exam so questions here will differ from those on the exam.

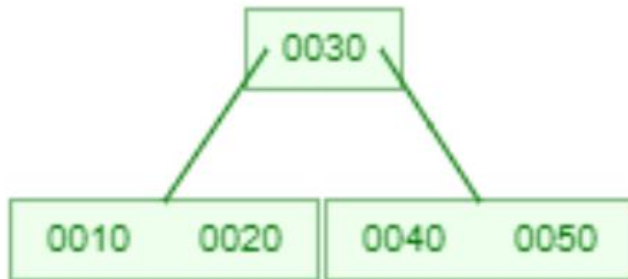
Session Objectives:

- 1) Be Able to solve B-Tree diagram questions that involve addition of new values
- 2) Be Able to solve B-Tree diagram questions that involve deleting of existing values

Questions

- 1) Solve the following
 - a. What is the minimum number of keys per node (in terms of M excluding the root)
 - b. What is the maximum number of keys (in terms of M)

- 2) Draw the B-Tree after adding 60, 70, then 80 in that order ($m = 3$). Also what is the minimum number of keys for a node (excluding root)? What is the maximum number of keys for a node?



- 3) Draw the B tree of $m = 2$ and add the value 50.

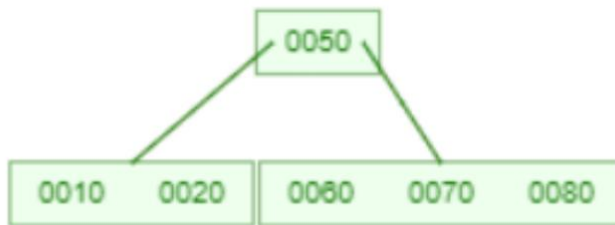


- 4) Draw B-Trees for the following operation in the following order: 10, 5, 4, 2, 7, 8, 12, 11 with $m = 2$

- 5) Draw the same B-tree from the previous question but $m = 3$

6) Draw a B tree of the following additions 1 3 4 5 7 10 2 -1 15 and -2 with a m of 3

7) Delete 60 m = 3



8) Delete 50 m = 3



9) Delete 30 m = 2

