TIGPS

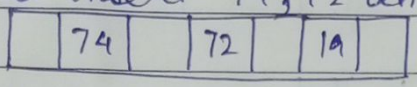
PRONAY BUHA 33

Page No.
Date :

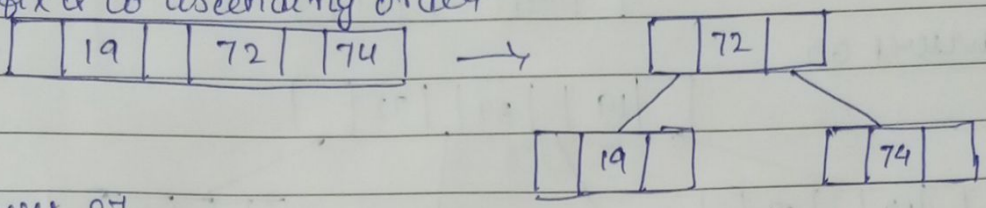
CLASS NOTE

① Show stages of growth of an order-4 B tree.

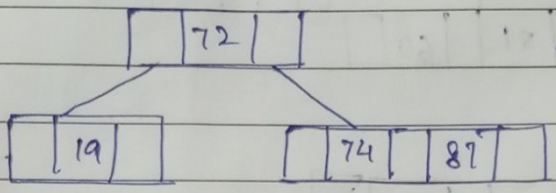
First insert 74, 72 and 19



↳ fix it to ascending order

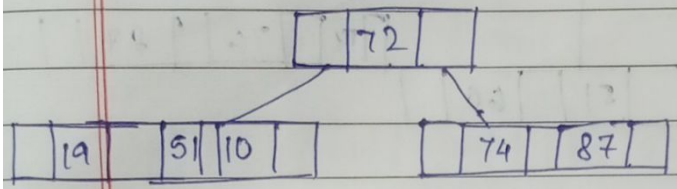


Insert 87

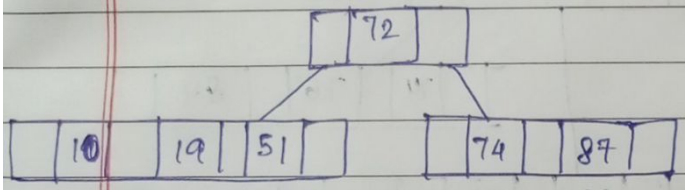


Since root node is full, it will first split into two, then 87 will be inserted.

Insert 51 and 10

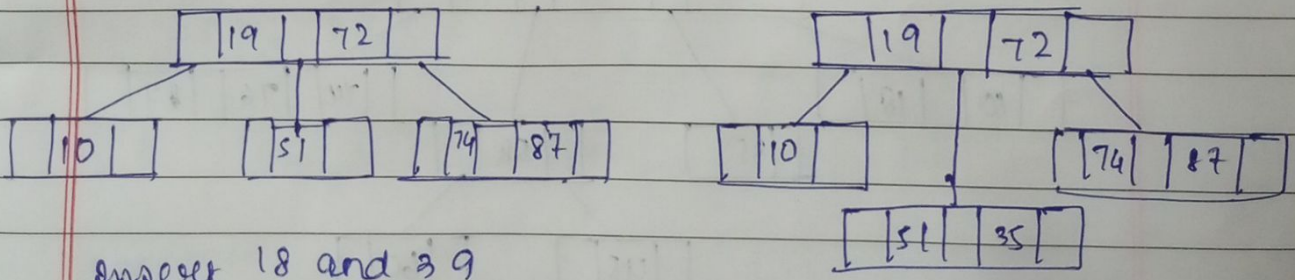


Again ascending order rule is violated so

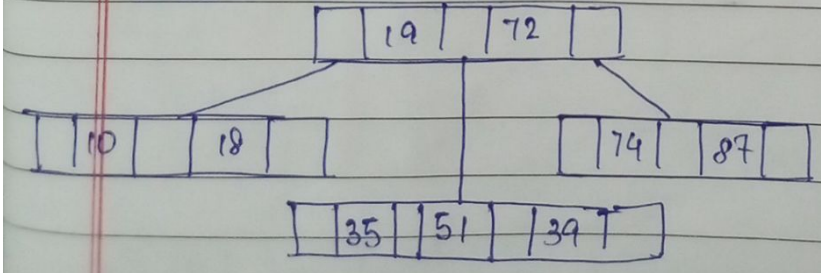


Insert 35

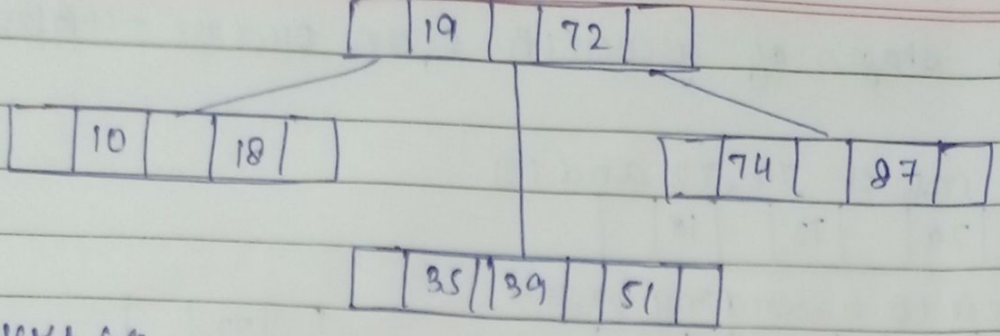
Next it requires to split the child. The middle key will go up to the parent



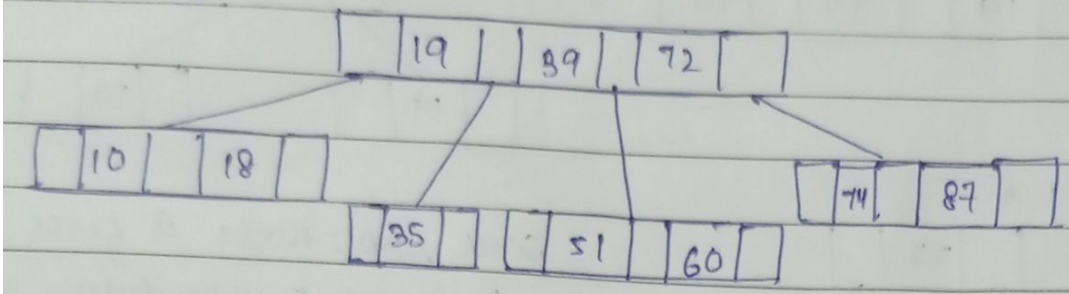
Insert 18 and 39



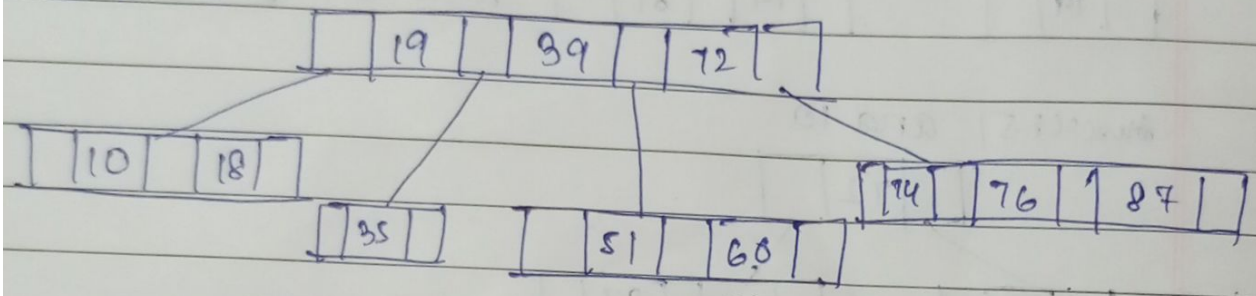
Teacher's Signature



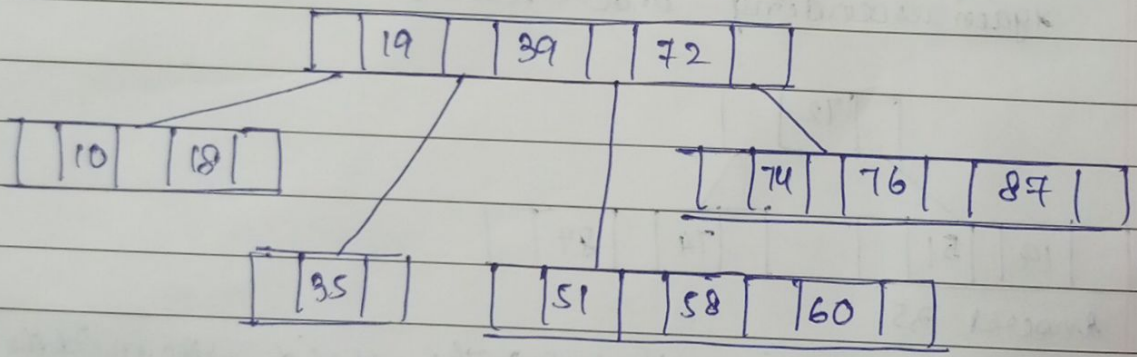
insert 60



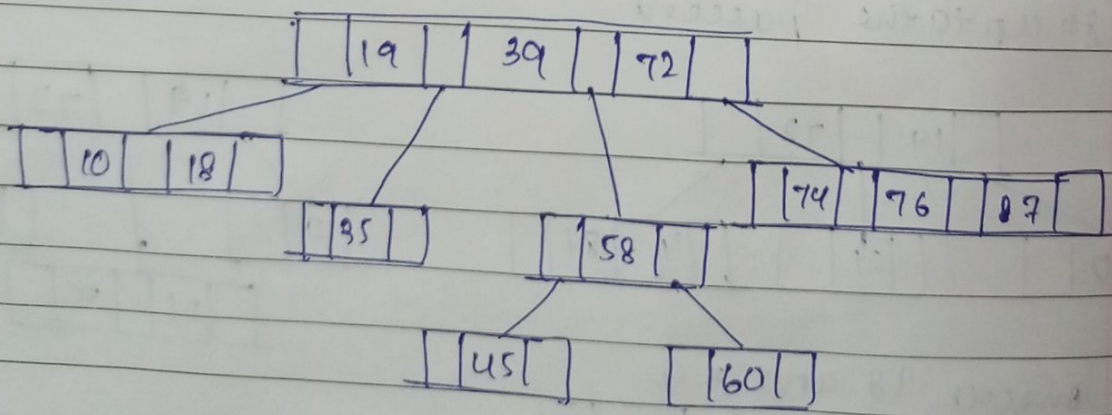
insert 76.



insert 58

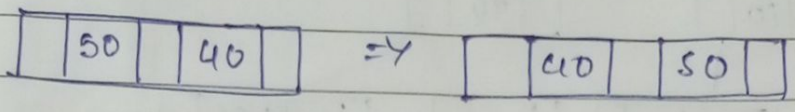


insert 45

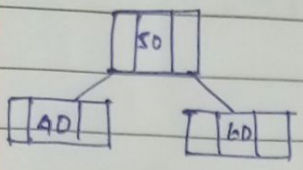


(2) Order 3 insert 50, 40, 60, 30, 70, 20, 80, 10, 90, 9, 99.
Delete 90, 30, 70, 10.

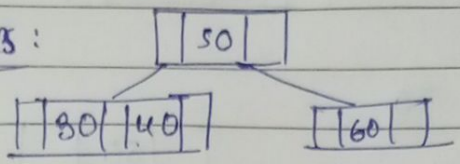
step 1:



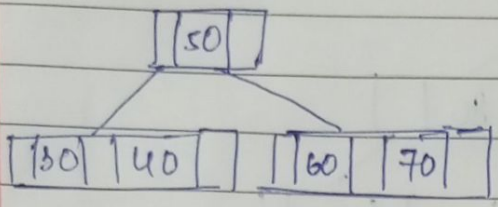
step 2:



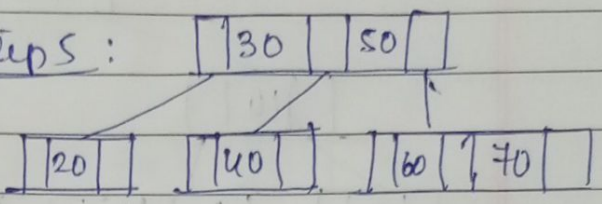
step 3:



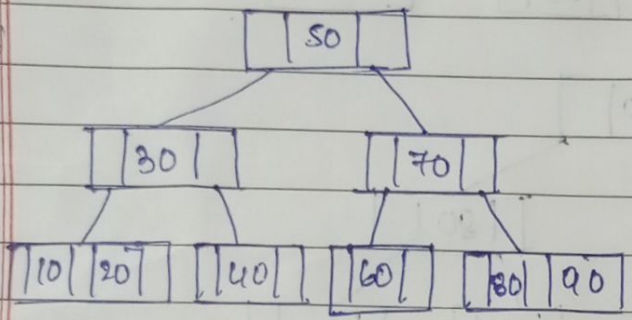
step 4:



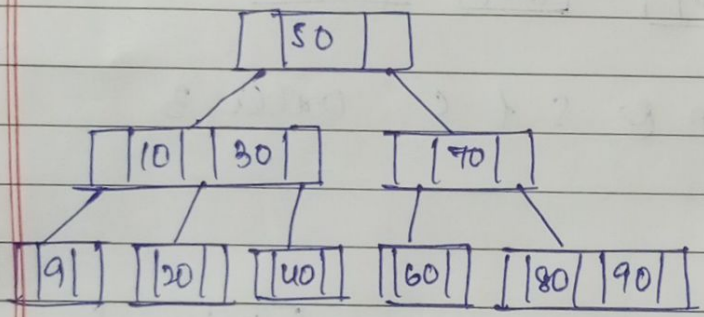
step 5:



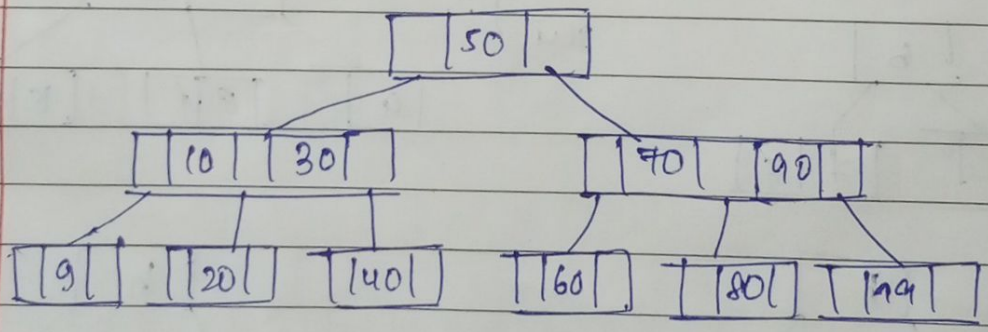
step 6:



step 7

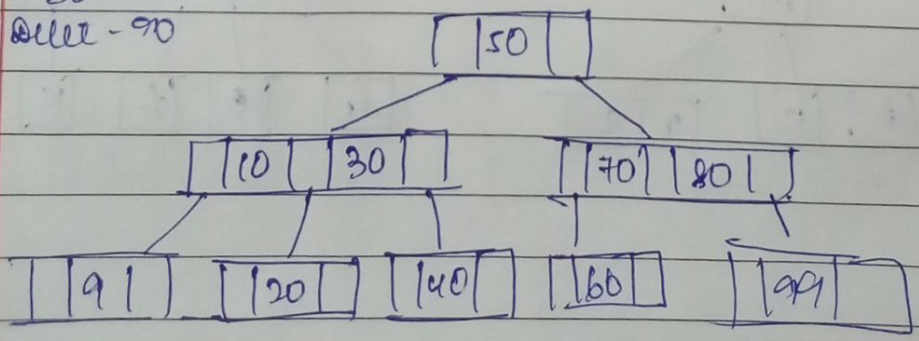


step 8



DELETION:

Delete - 90



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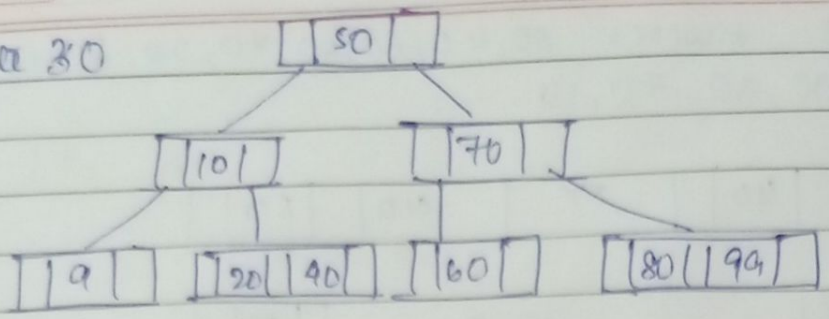
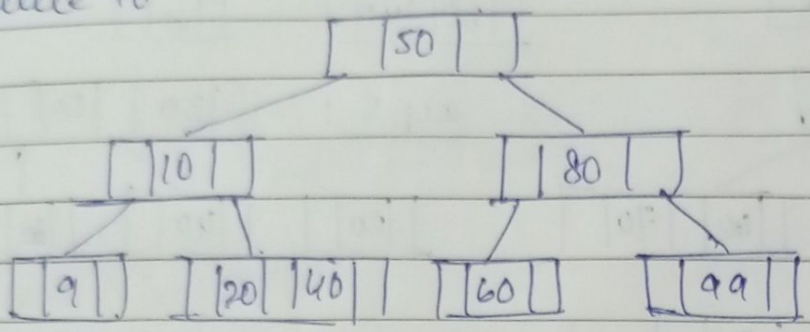
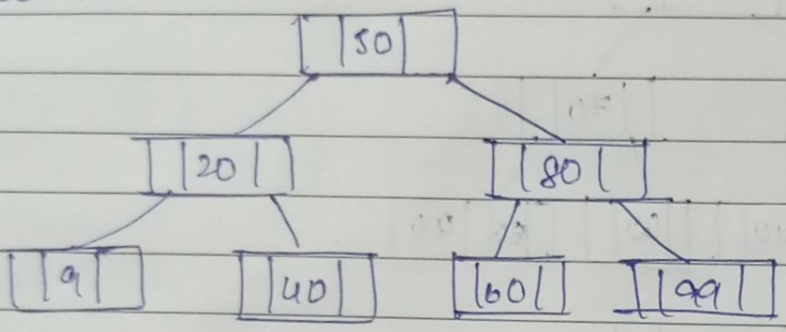
Delete 30



Delete 70



Delete 10



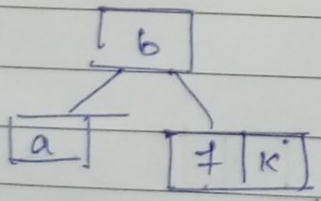
(3) a f b k h m e s t c order 3

delete m b e

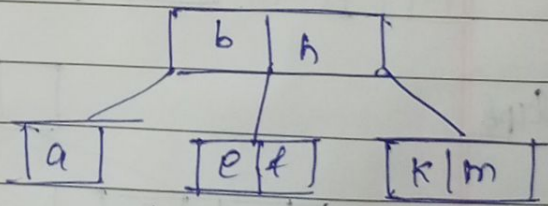
Max = 2

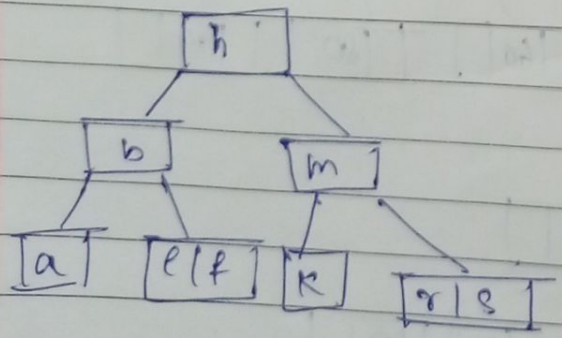
Min = $\lceil \frac{3}{2} \rceil - 1 = 1$

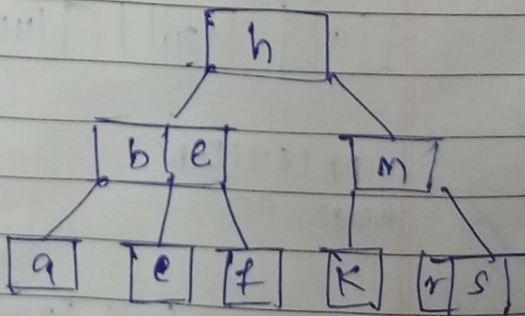
Step 1:



Step 2:

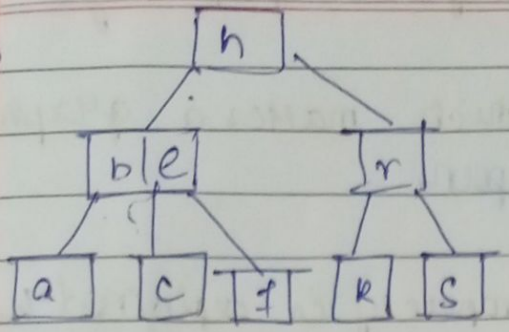




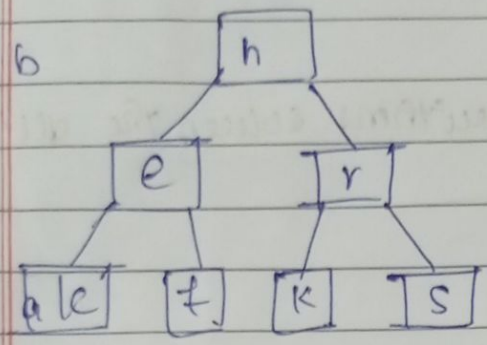


Teacher's Signature .....

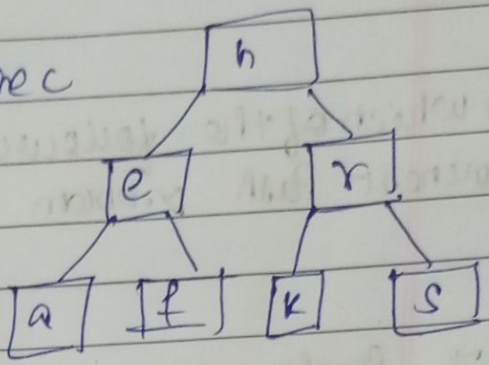
delete m



delete b

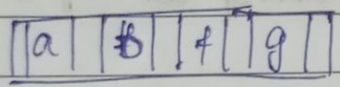


delete c



(4) max = 4

min = $\lceil \frac{5}{2} \rceil - 1 = 2$



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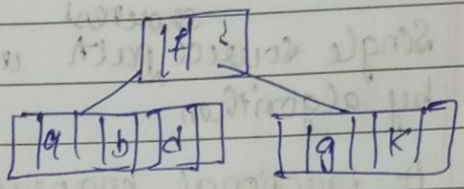
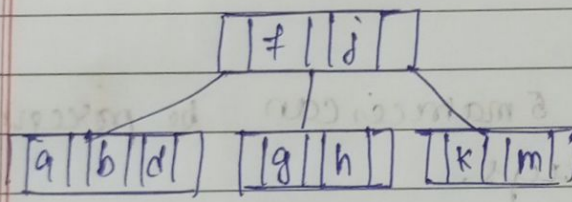
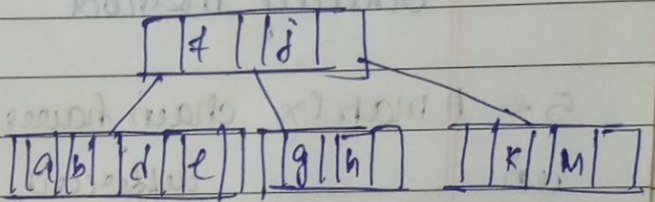
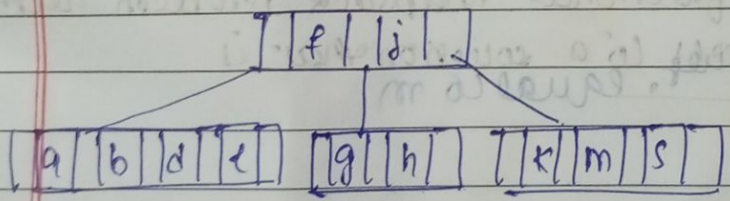
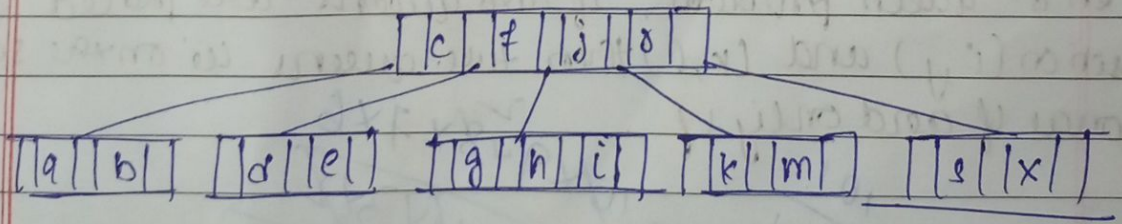
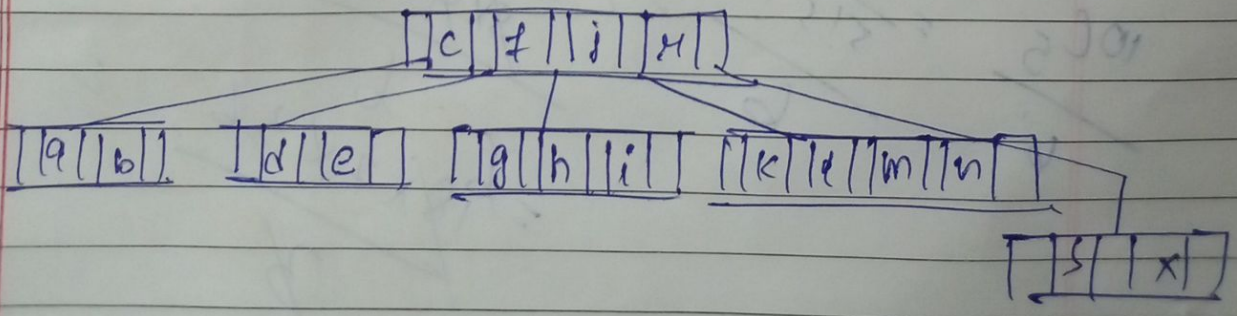






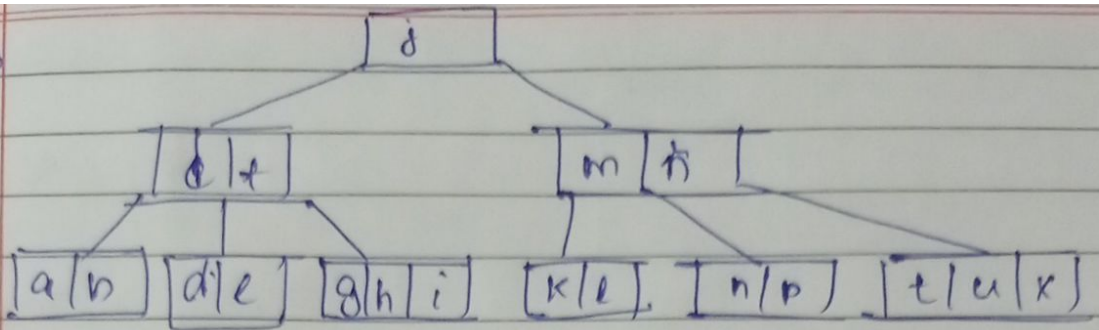




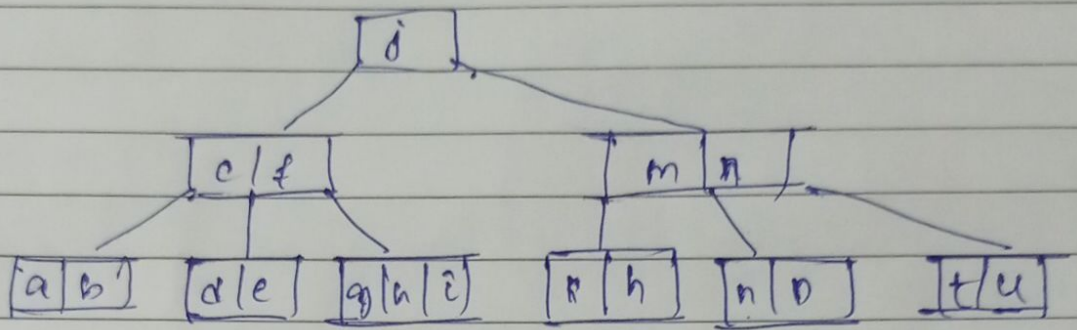


Teacher's Signature .....

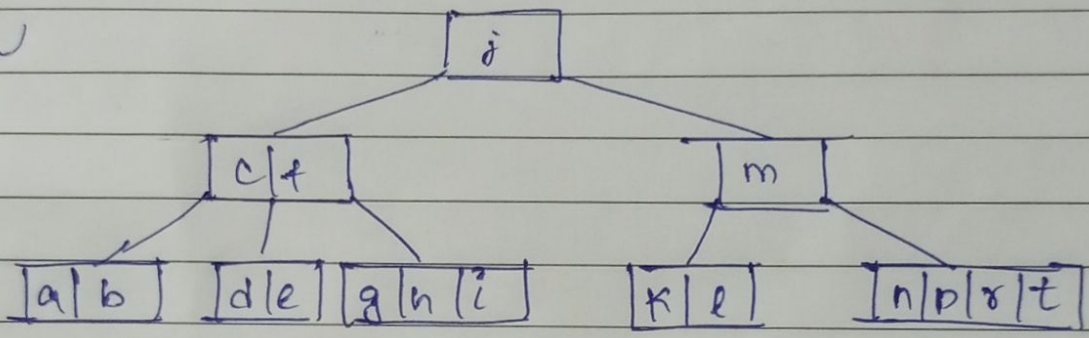
delete g



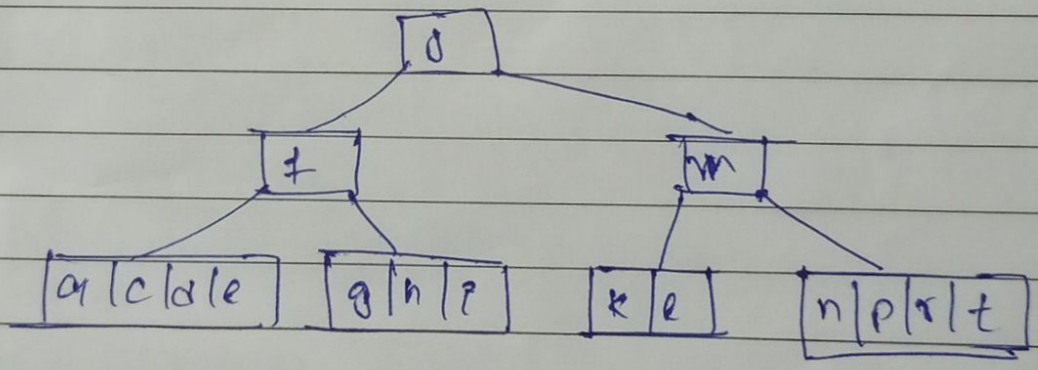
delete x



Delete U



Delete b



Delete f