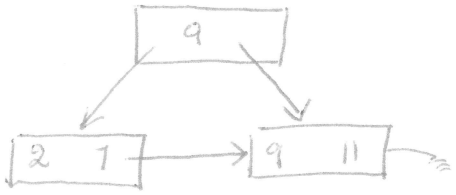
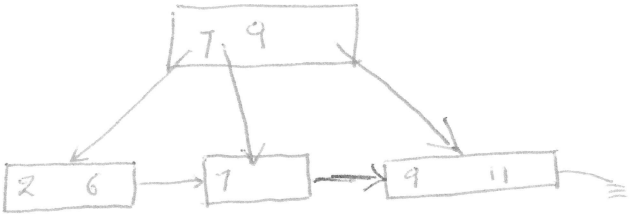
Problem 5c. i

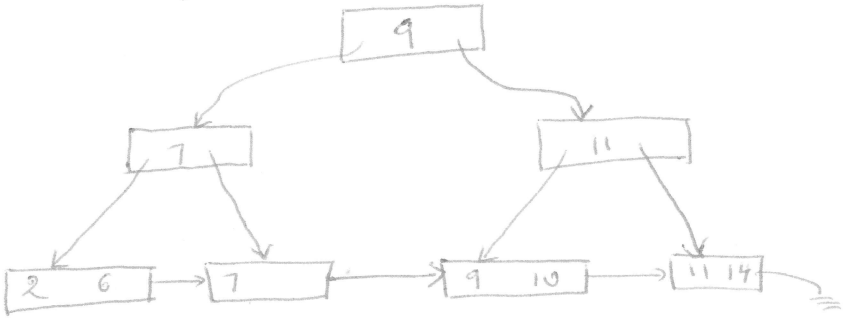
(1)



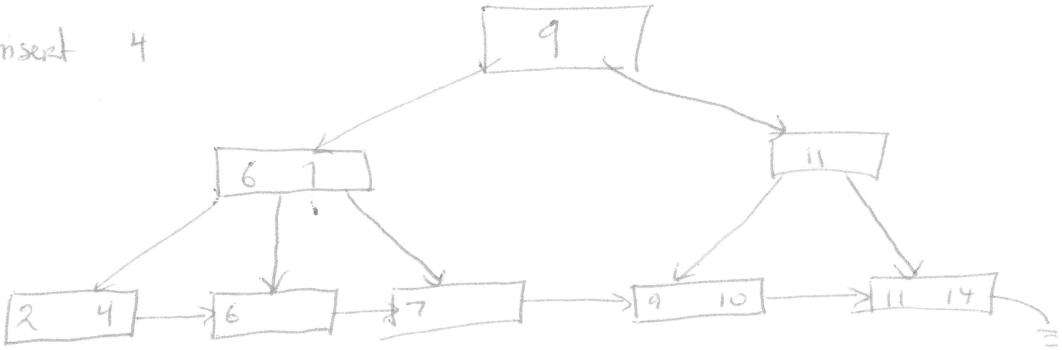
insert 6



insert 10, 14



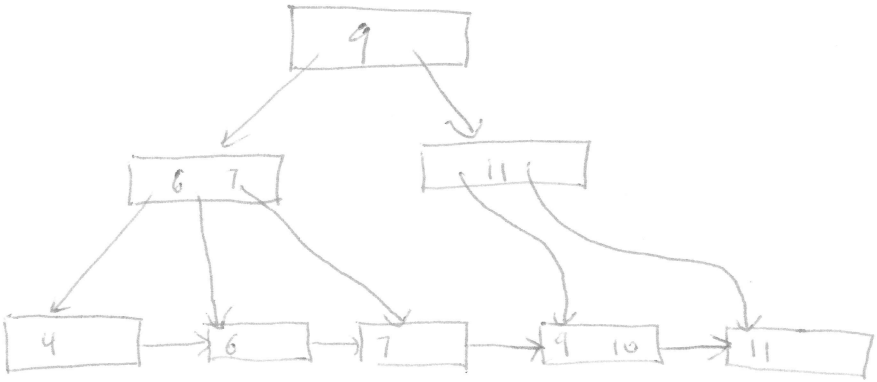
insert 4



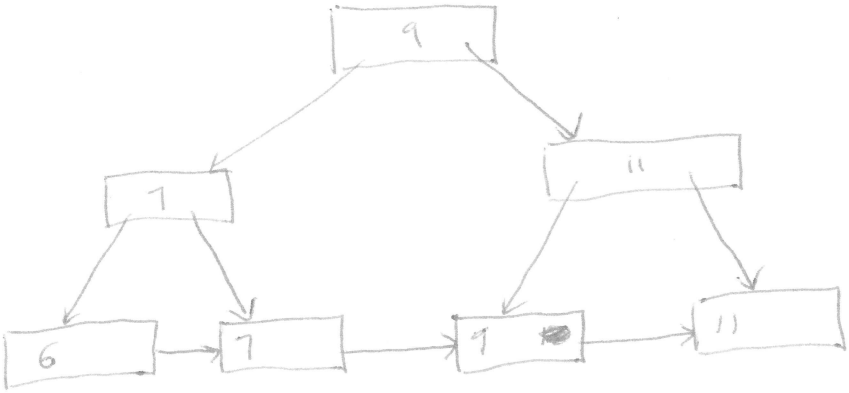
Problem 5c. ii

(2)

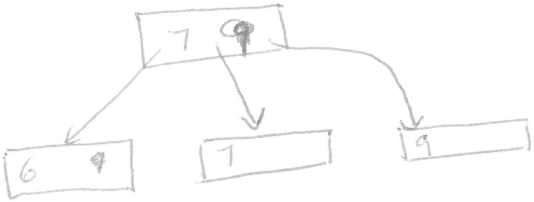
Delete 2, 14



Delete 4, 10



Consider now deleting 11.

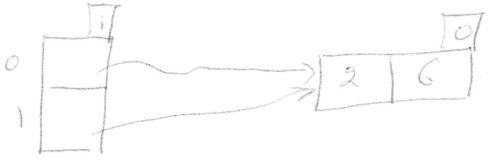


Problem 6a

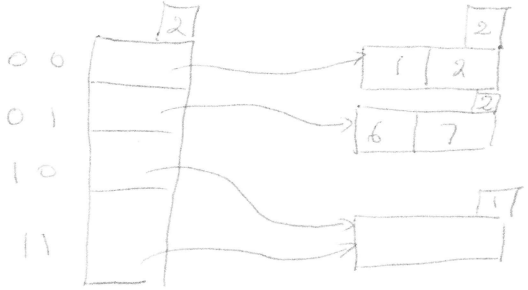
Observe that we need 4 bits to represent
0, 1, 2, 4, 6, 7, 8, 9

0 ⇝ 0000
1 ⇝ 0001
2 ⇝ 0010
4 ⇝ 0100
6 ⇝ 0110
7 ⇝ 0111
8 ⇝ 1000
9 ⇝ 1001

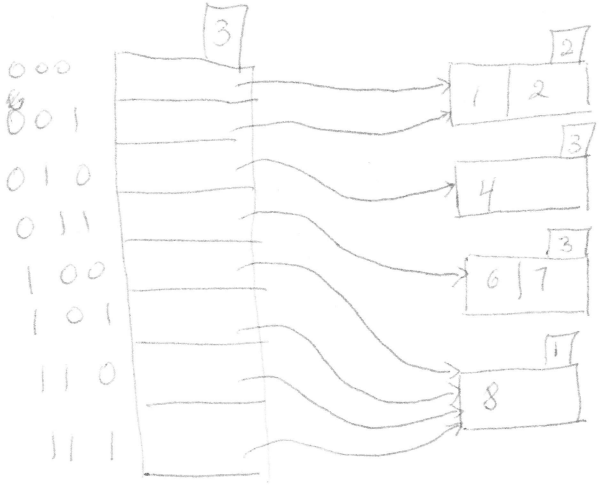
Insert 2, 6



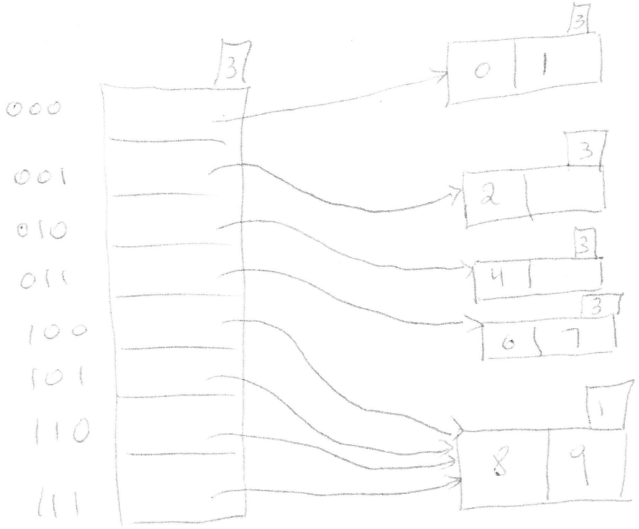
Insert 1, 7



Insert 4, 8

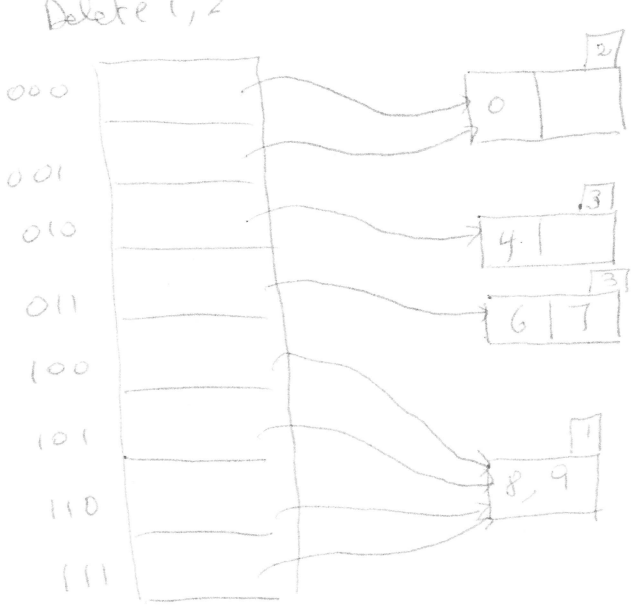


Insert 0, 9

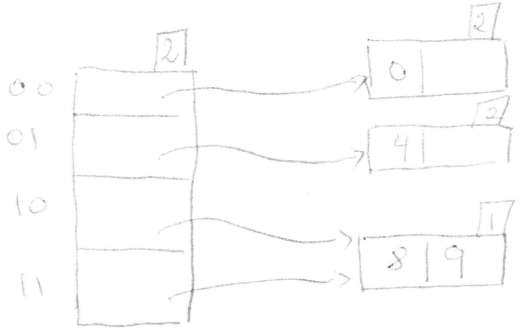


Problem 6b

Delete 1, 2



Delete 6, 7



Delete 0, 9