

Question 1:

a.

Full tree: a, f

Complete tree: a, b, f

Perfect tree: f

AVL tree: a, b, d, e, f

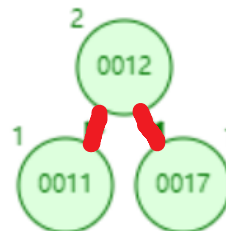
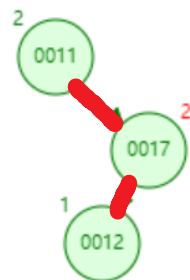
Binary search tree: a, b, c, d, e, f

b.



Insert 11

insert 17



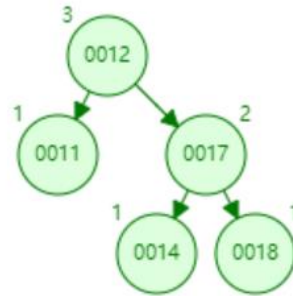
right-left

Insert 12

rotate / restructure



Insert 18

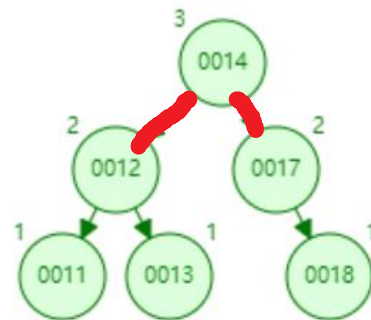


insert 14

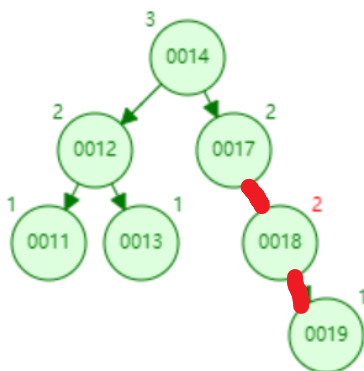


right-left

Insert 13

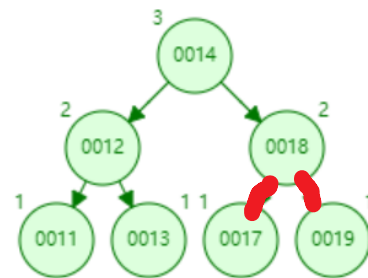


rotate / restructure



right-right

Insert 19



rotate / restructure