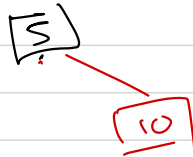



{5, 10, 20, 30, 40, 50, 60, 70}

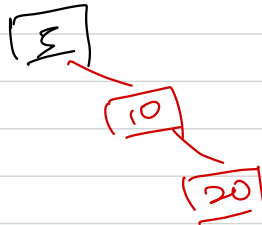
- Insert 5



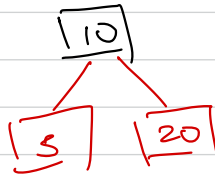
- Insert 10



- Insert 20



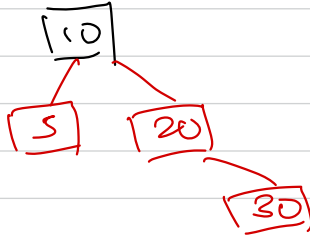
• violation
red child
red parent.



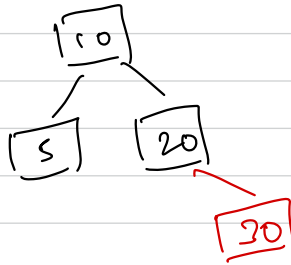
rotate grand
parent

• Swap grandparent
and parent
colour.

- Insert 30

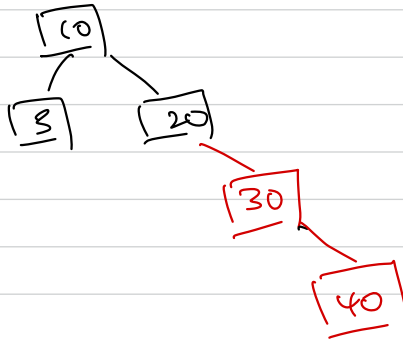


• red parent
red child

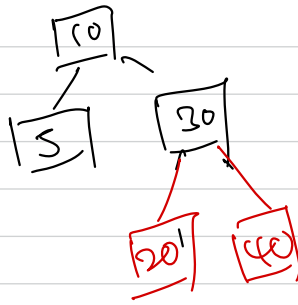


• swap 5
and 20

- Insert 40

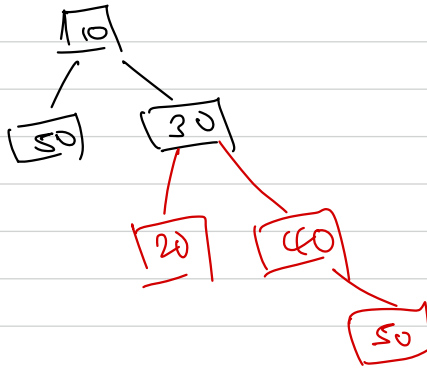


• red child
red parent.

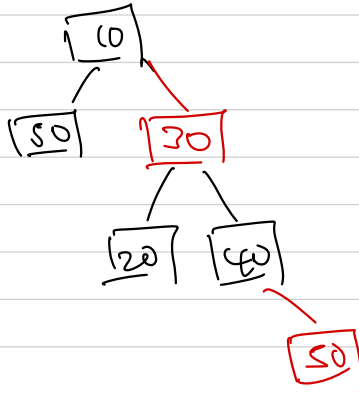


- rotate grandparent
- swap parent and grandparent colour

- Insert 50

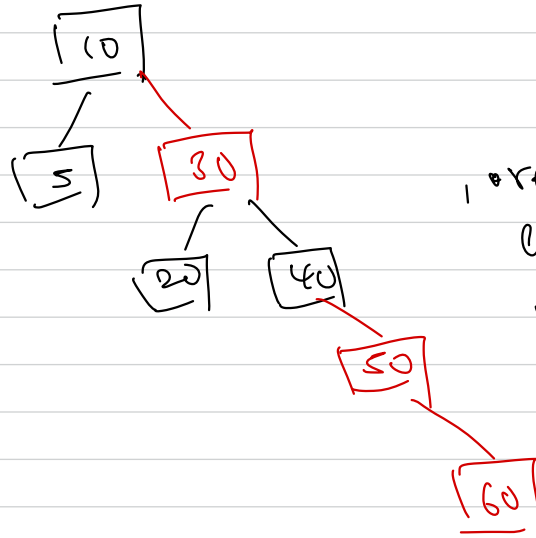


- red child
red parent

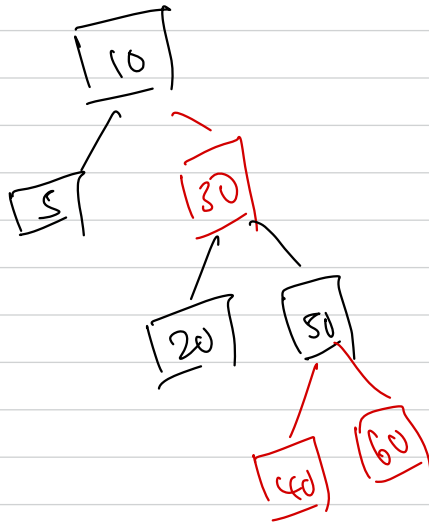


- change 20, 30
140 colour.

- Insert 60



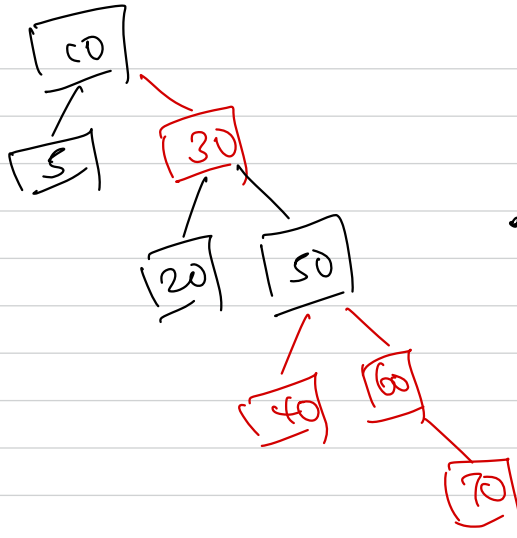
• red
child
red parent



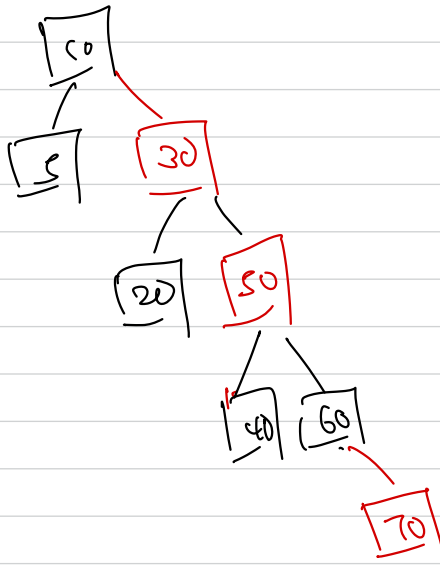
• rotate grand
parent

• change grandparent,
and parent

- Insert 70



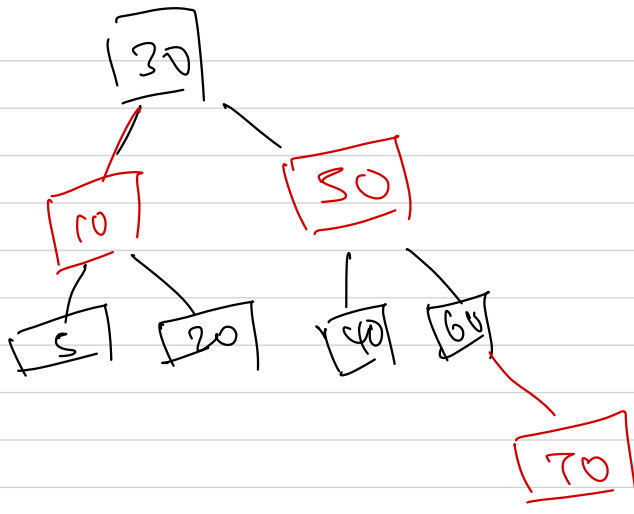
- red child
- red parent



- flip 40, 60 and 50 colour.

- red child
- red parent

- rotate 30 to the left



does not differ
from demo