

Q) NILESH GOPTA

17

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→ Approach

1, 2, 3, 4, 5, 6

(Balance Factor: Bf)

→ Insertion

① Root $h=1, Bf=0$

→ Insert 2

$h=2, Bf=1$
 $h=1, Bf=0$

→ Insert 3

$h=3, Bf=2$
 $h=2, Bf=1$
 $h=1, Bf=0$

↳ Imbalance ∴ R R Rotation

$Bf=0$

$Bf=0$

→ Insert 4

$Bf=-1$

$Bf=-1$

$Bf=0$

→ Insert 5

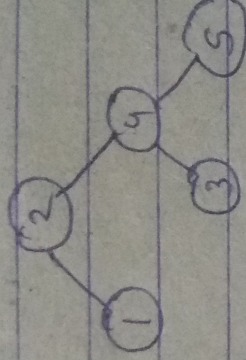
$Bf=-2$

$Bf=-2$

$Bf=-1$

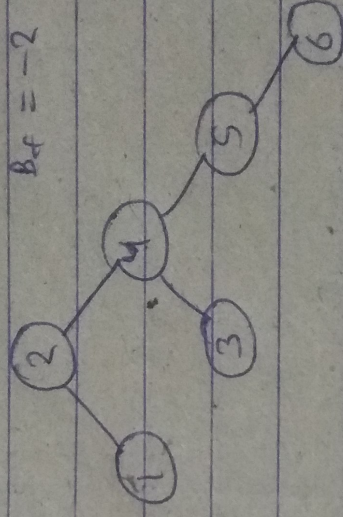
$Bf=0$

RR rotation at 3



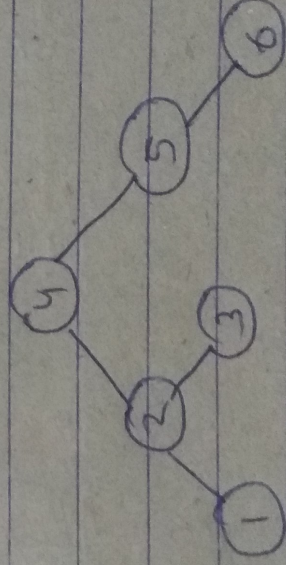
⇒ Insert 6

B₄ = -2



Not Balanced

↳ RL Rotation



↳ Final balanced AVL Tree