

LAB-7 → (Insertion in Red Black) Tree

Ans) def fin-insert(self, k):

~~while k.parent == k.parent.parent.right~~

while k.parent.colour == 1:

if k.parent == k.parent.parent.right

u = k.parent.parent.left

if u.colour == 1:

u.colour = 0

k.parent.colour = 0

k.parent.parent.colour = 1

k = k.parent.parent

else:

if k == k.parent.left

k = k.parent

self.right-rotate(k)

k.parent.parent.colour = 0

k.parent.parent.colour = 1

self.left-rotate(k.parent.parent)

else:

u = k.parent.parent.right

if u.colour == 1:

u.colour = 0

k.parent.colour = 0

k.parent.parent.colour = 1

k = k.parent.parent

else:
if $k = k.parent.right$
 $k = k.parent$
self.left-rotate(k)

$k.parent.color = 0$

$k.parent.parent.color = 1$

self.right-rotate(k.parent.parent)

if ($k == self.root$):
break

self.root.color = 0