Delete a node from BST

class Solution {

public TreeNode deleteNode(TreeNode root, int key)

{

if(root==null)

return null;

if(root.val>key)

{

root.left=deleteNode(root.left,key);

}

else if(root.val<key)

{

root.right=deleteNode(root.right,key);

}

else

{

if(root.right==null)

{

return root.left;

}

else if(root.left==null)

{

return root.right;

}

else

{

int min=minvalue(root.right);

root.val=min;

root.right=deleteNode(root.right,min);

}

}

return root;

}

public int minvalue(TreeNode root)

{

int min=root.val;

while(root.left!=null)

{

min=root.left.val;

root=root.left;

}

return root.val;

}

}