4

```
Node* insert (node, data)
{
 if (node == NULL)
    return (newNode (data))
  if (data < node -> data)
  node -> left = insert (node -> left, data)
else if (data > node -> data)
 node -> right = insert (node -> right, data)
else
 return node
  // height
 node -> ht = 1 + max (node -> left -> ht, node -> right -> ht)
 // balancing
 bal = (node == NULL) ? 0 : (node -> left -> ht) - (node -> right -> ht)
 if (bal > 1)
{ if (data < node -> left -> data
    return right (Rotate (node))
   if (data > node -> left -> data)
    { node -> left = leftRot (node -> left)
      return rightRot (node)

    }
}
```

```
if (bal < -1)
{
    data >
    if (node -> if (data > node -> right -> data)
        return leftRot (node);
    if (data < node -> right -> data)
    {
        node -> right = rightRot (node -> right)
        return leftRot (node)
    }
}
return node
}
```