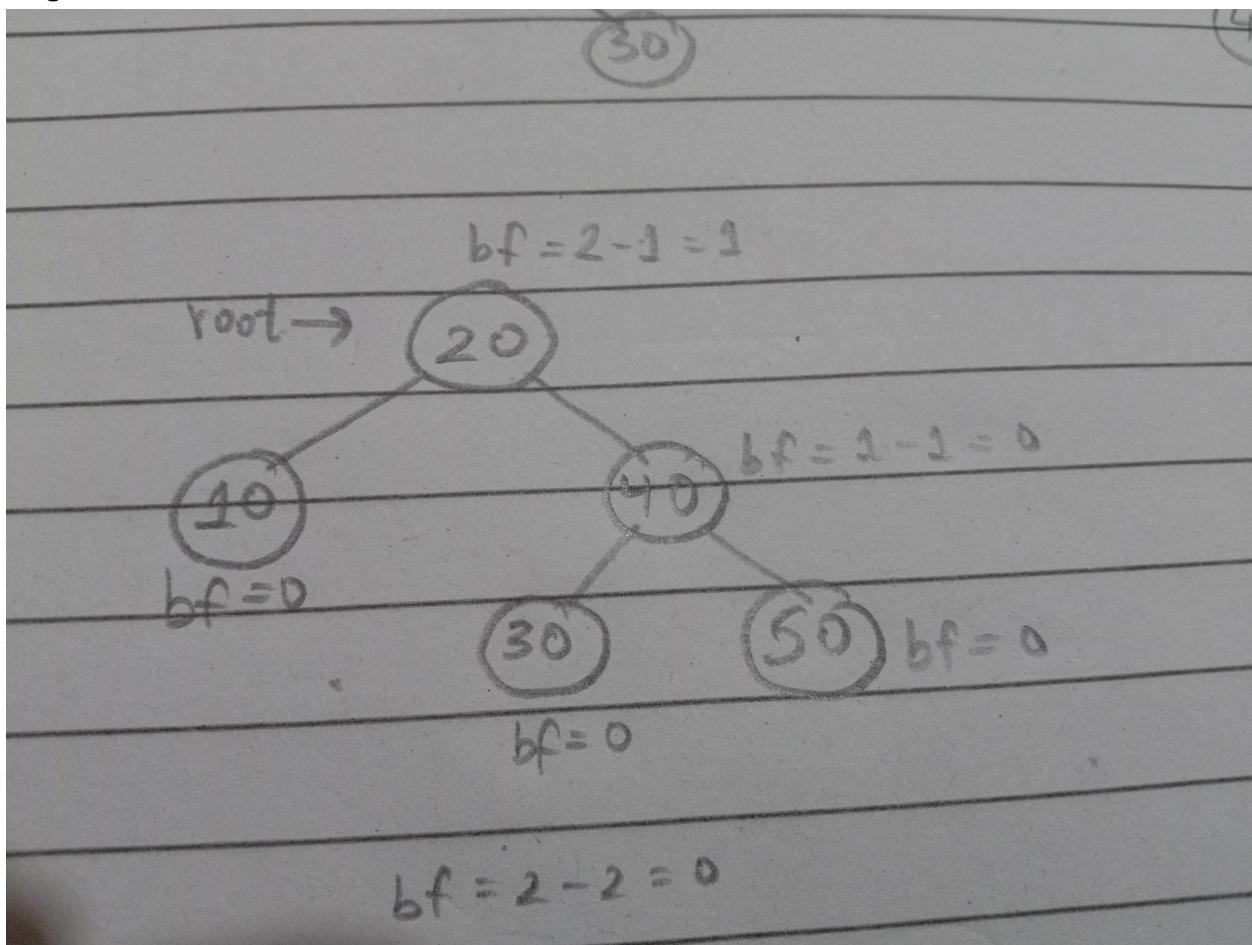
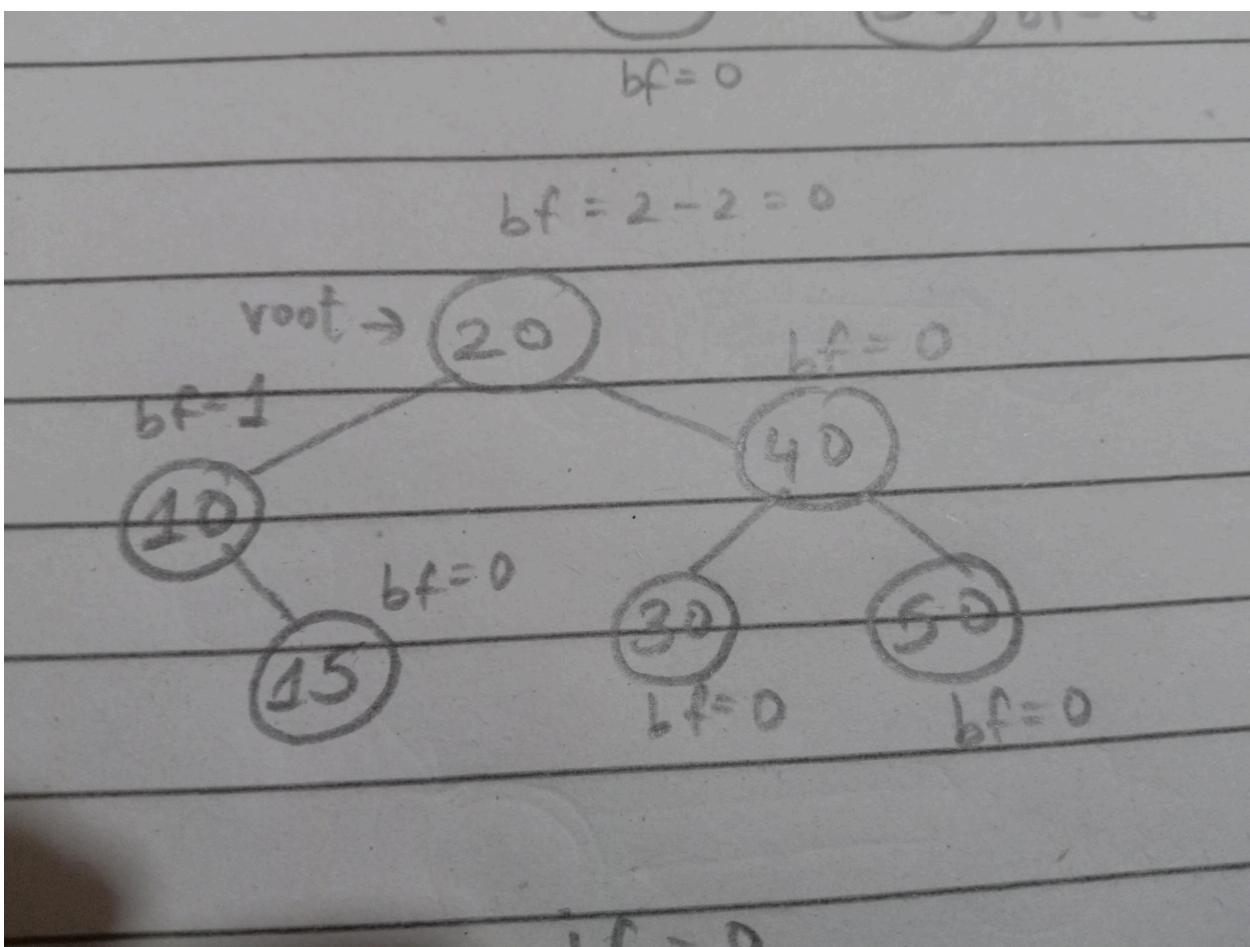


Original AVL Tree:



Insertion of roll number 15:



Process:

To insert 15 we will first compare it with the root node (20), 15 is less than 20 which means it belongs in the left subtree of 20, so we will now check with the left child of the root (10), 15 is greater than 10 so it belongs to the right subtree of 10, so we check the right child of 10, but it is null so we insert 15 there, Then we check the balance factor of 10 and the root, but they are both within the range of -1 and 1, so we don't do any further rotation

Height of tree: 2

Using the Left rotation operation:

```
Node* leftRotate(Node* x) {  
    Node* y = x->right;  
    Node* temp = y->left;  
    y->left = x;  
    x->right = temp;  
    x->height = max(getHeight(x->left), getHeight(x->right)) + 1;  
    y->height = max(getHeight(y->left), getHeight(y->right)) + 1;  
    return y;  
}
```

