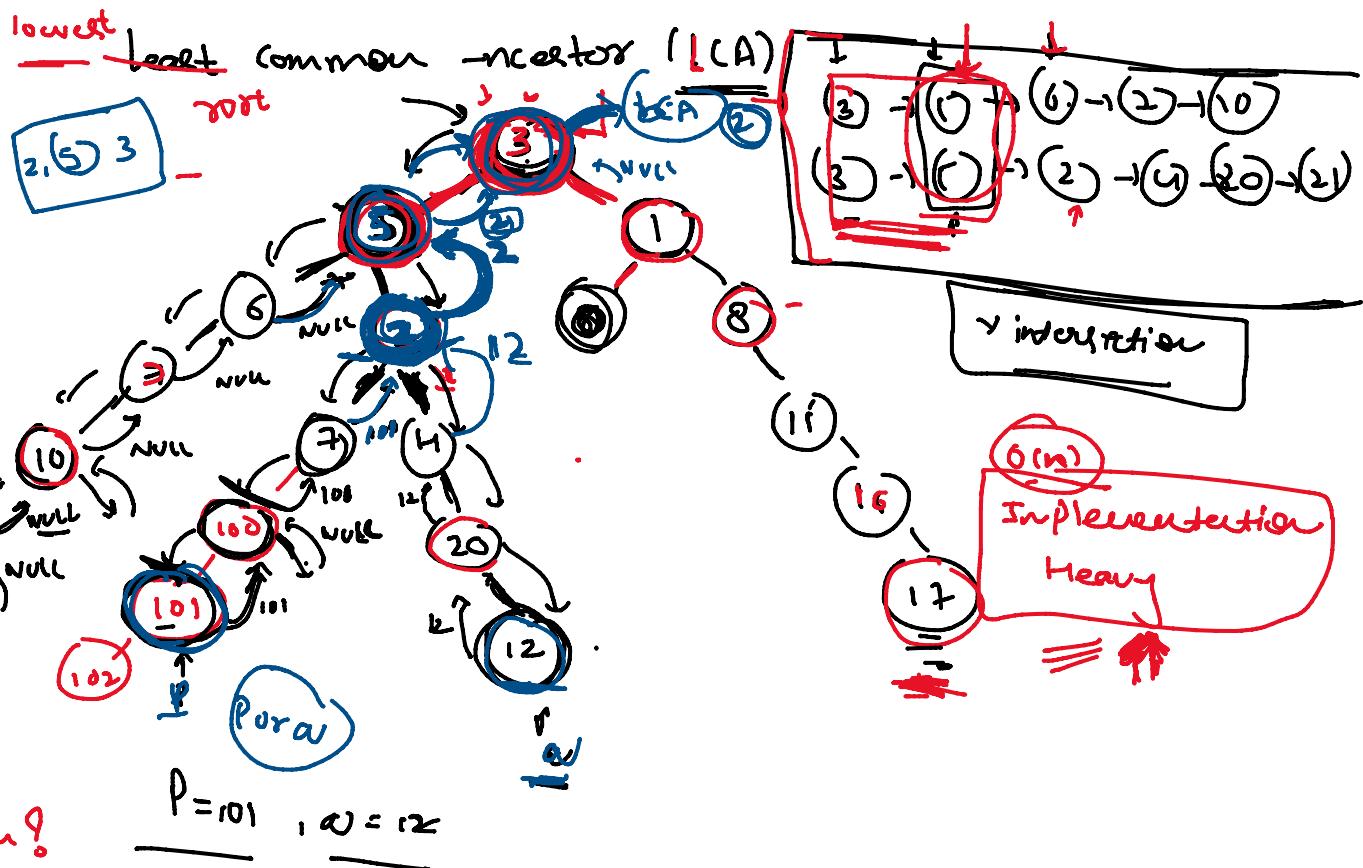


TreesLCA of a Binary TreeP.o

- If both P and a exist in left, so LCA will be in left
- " " " " " " " " right " " " " " " " right
- If P and a exist different subtree, their LCA will be root
-

Node & LCA (Node *root, Node *P, Node *a)

if (root == NULL)
return NULL;

if (root->val == [P->val] or root->val == [a->val])

5

return root;

~

②

Nodes left = lca (root → left);

Nodes right = lca (root → right);

if (left and right)

return root;

if (left)

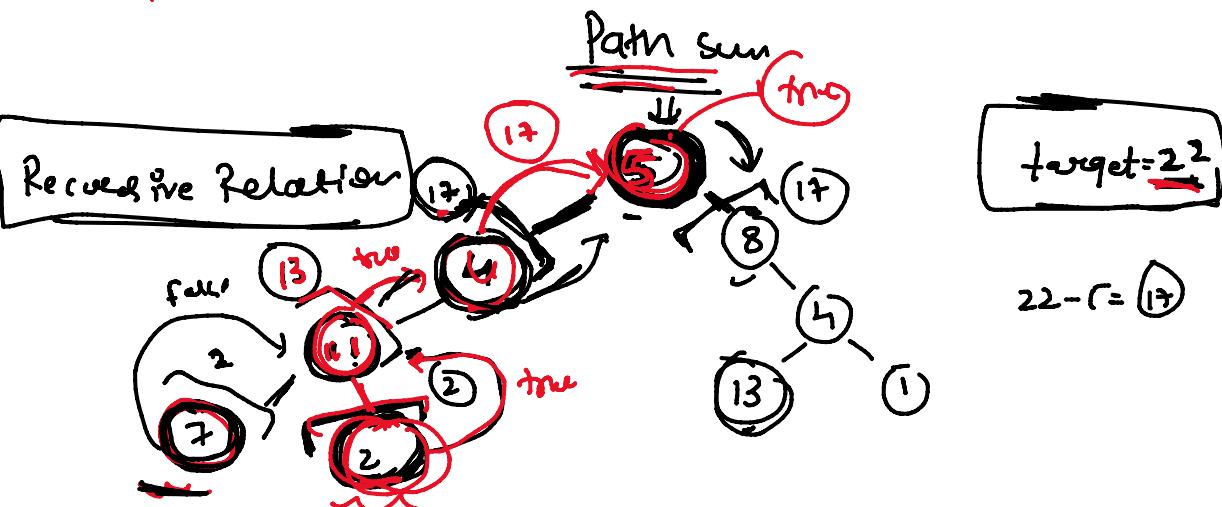
return left;

if (right)

return right;

return Null;

~



bool isPath(Node* root, int target, int sum)

```

    if (root == NULL)
        return false;
    sum = sum + root->val;
    if (root->left == NULL and root->right == NULL)
        if (sum == target)
            return true;
        return false;
    }

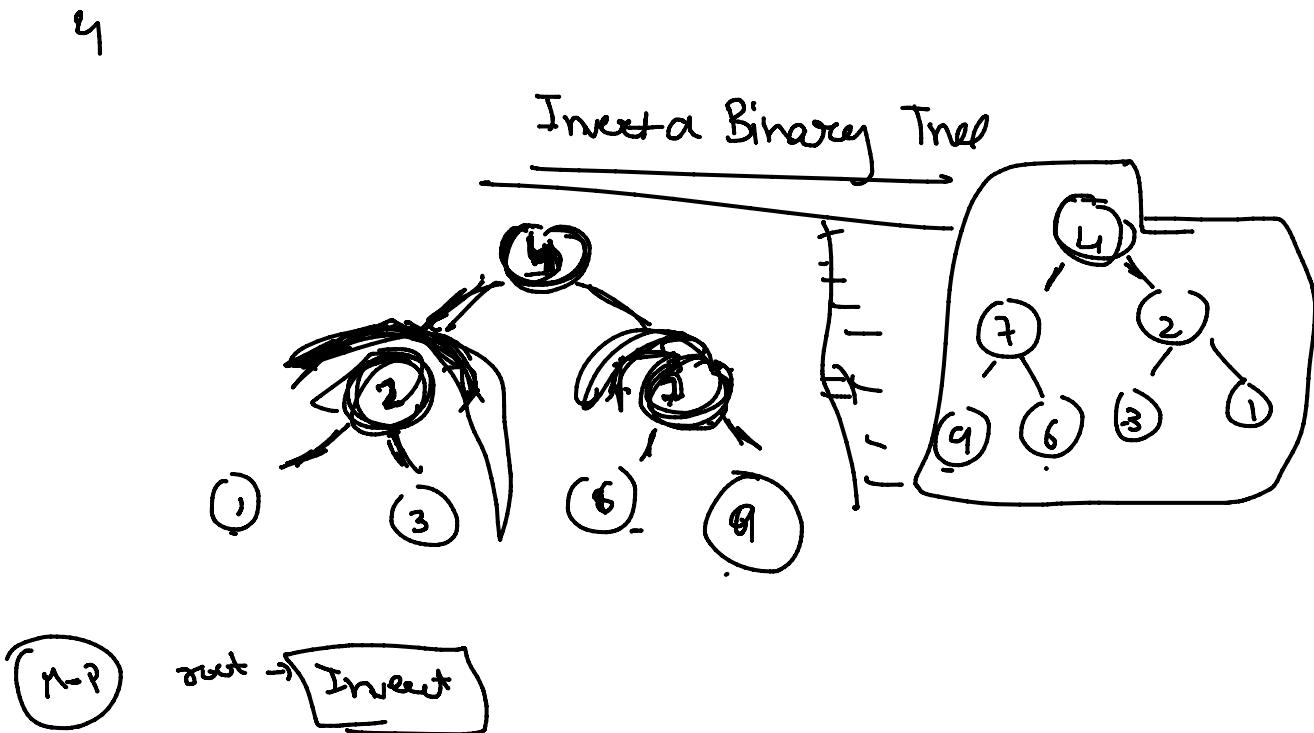
```

```

bool left = isPath (root->left, target, sum)
bool right = "" (root->right, " ", sum)

if (left or right)
    return true;
return false;
}

```



Node * invert (Node * root)

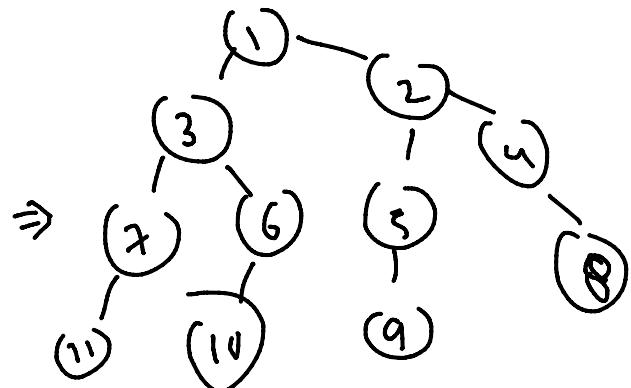
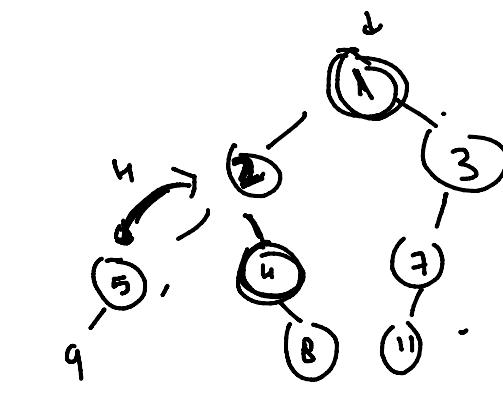
{ if (root == NULL)

 return NULL;

 Node * left = invert (root->left);

 Node * right = invert (root->right);

 return root;



++ "1"

Binary Tree Paths

"1 → 2 → 3 → 4"

"1 → 2 → 5 → 6"

"1 → 7 → 8 → 9"

["1 → 2"]

"1 → 2 → 3"

"1 → 2 → 3 → 4"

"1 → 2 → 3 → 4"

"1 → 2 → 5 → 6"

"1 → 7 → 8 → 9"

"1 → 2 → 3 → 4"

"1 → 2 → 5 → 6"

"1 → 7 → 8 → 9"

"1 → 2 → 3"

"1 → 2 → 3 → 4"

"1 → 2 → 3 → 4"

"1 → 2 → 5 → 6"

"1 → 7 → 8 → 9"

"1 → 2 → 3 → 4"

"1 → 2 → 5 → 6"

"1 → 7 → 8 → 9"

```
void getPaths ( Node* root , String temp , vector < String > ans )
```

```
{  
    if (root == NULL)  
        return;
```

```
    String tt = to_string (root → val);
```

```
    temp = temp + tt;
```

```
[ if (root → left == NULL and root → right == NULL )
```

```
{  
    ans.push_back (temp);  
    return; }
```

```
[ if (root → left)
```

```
    getPaths (root → left , temp + "→" , ans );
```

```
[ if (root → right )
```

```
    getPaths (root → right , temp + "→" , ans );
```

```
-
```