DEPARTMENT OF
COMPUTER SCIENCE & ENGINEERING
CHANDIGARH UNIVERSITY
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CLASS & GROUP : 20BCS_WM_607 - B **SEMESTER : 5th**

EXPERIMENT - 06 (TREES)

PROBLEM STATEMENT :

Tree : Top View (on HackerRank)

CODE :

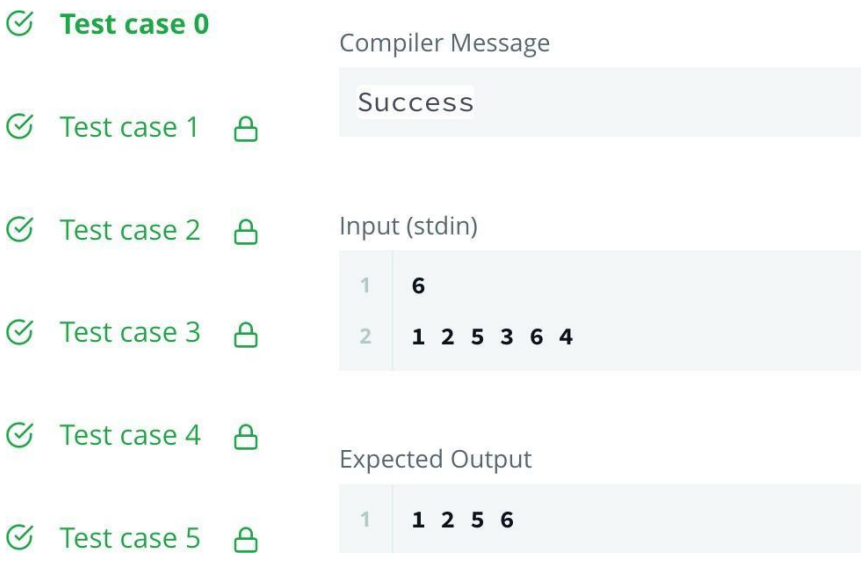
```
void topView(Node * root) {
    queue<pair<int,Node*>> q;
    q.push(make_pair(0,root));
    map<int,Node*> ans;

    for(auto i=q.front(); !q.empty(); q.pop(),i=q.front()){
      if(!i.second) continue;
      ans.insert(i);
      q.push(make_pair(i.first+1,i.second->right));
      q.push(make_pair(i.first-1,i.second->left));
    }

    for(auto i:ans) {
      cout<<i.second->data<<" ";
    }

  }
```

OUTPUT :



PROBLEM STATEMENT :

Binary Search Tree : Insertion (on HackerRank)

CODE :

```
Node * insert(Node * root, int data) {
    if(root==NULL) {
        Node* newNode;
        newNode =
        (Node*)malloc(sizeof(Node));
        newNode->left = NULL;
        newNode->right = NULL;
        newNode->data = data;
        return newNode;
    }

    if(data <= root->data){
        root->left = insert(root->left, data);
    }
    else{
        root->right = insert(root->right, data);
    }

    return root;
}
```

OUTPUT :