

```
int t=5;
while(0)
{
}
```

// tasks

```
vector<int> vc{1,2,3};
int i=0;
for(int item:vc)
{
    cout << item << " ";
}
```

foreach(---)

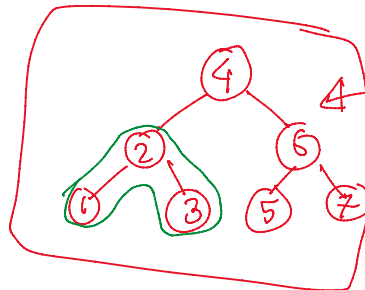
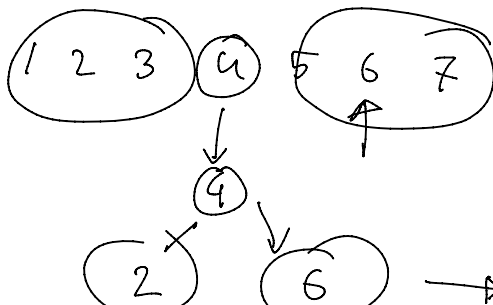
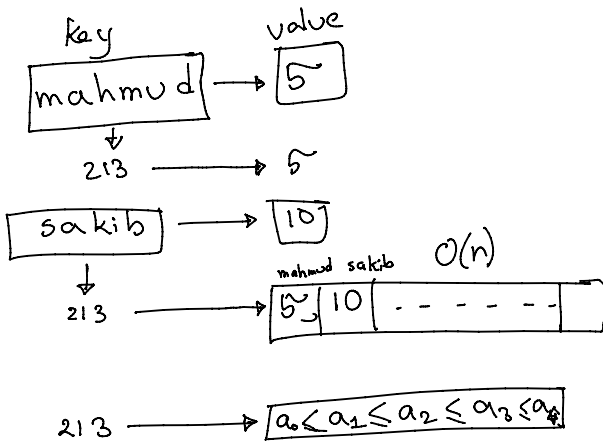
item → item → item → x

1 | 2 | 3

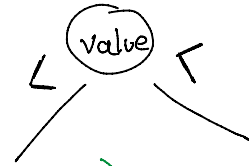
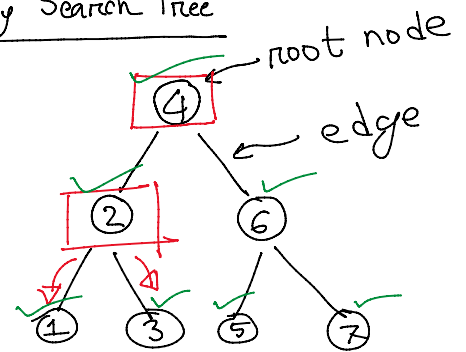
C++ STL for CP public

Learning Data Structure

unordered_map → $O(n)$ $O(\log N)$



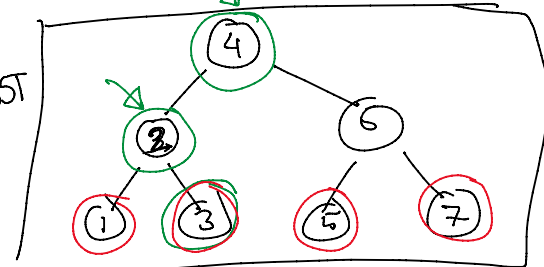
Binary Search Tree



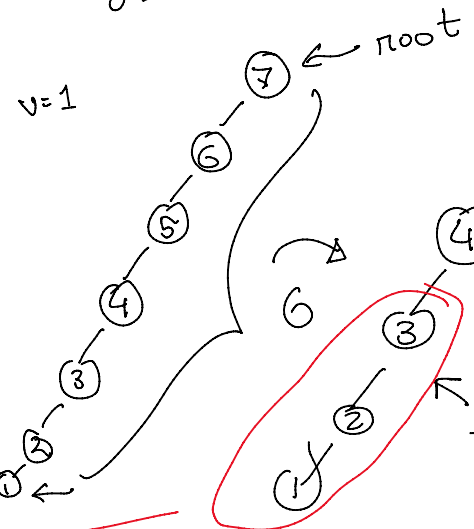
$v=3$

minimum height BST

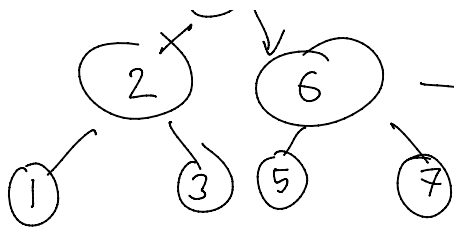
2



$$\log_2(7) = 3$$







Self balancing BST

- i) AVL Tree
- ii) **RBT**
- iii) Treap (Tree + Heap)
- iv) Splay Tree

