Set in c++ → Internally uses Red Black Tree (Self balancing BST)

RANKA DATE / / PAGE

- default order is always sorted
- to store in decreasing order use.
  (greater<int>)

```
set<int, greater<int>> s;
s.insert(10);
s.insert(5);
s.insert(20);
```

→ if remove greater

5 10 20

Store → 20 10 5

- ignores duplicate values.
- find is used to find the element.
  auto it = s.find(10);
- s.clear() → remove all the elements.
- count → returns count of occurrence (it returns 1/0 in case of sets).
- erase → removes element from set / group of elements from set
- lower_bound on sets →
- rbegin() → reverse iterator

s.erase(it) → erase that iterator
s.erase(it, s.end()) → from that iterator to last

→ gives the iterator to element if present or gives the element just greater than this

- upper_bound → member function → gives the iterator to the next greater element, which is not present
  eg 2 no. is greater than largest given end().

RANKA
DATE / /
PAGE

Complexities

Set

begin(), end()
rbegin(), rend()
cbegin(), cend()
size(), empty()
→ O(1)

insert, find(),
count, lower_bound()
upper_bound, erase
→ O(log n)

erase(it) → Amortized O(1)