Set

`#include <set>

std::set<DataType> setName;`

Unraveling Sets:

- Uniqueness Rule: Only distinct elements find a home.
- Behind the Scenes: Implemented using a Binary Search Tree (BST).
- Immutable Charm: Elements remain unmodified; only insertion and deletion allowed.
- Sorting Secret: Presents elements in sorted order.
- Set's Toolbox: Methods include insert, find, erase, count. Their complexity is O(log n) due to the underlying BST.

Methods:

1. insert(value): Inserts an element into the set.
2. emplace(): Inserts an element in-place.
3. emplace_hint(): Inserts an element with a hint for where it should be positioned.
4. erase(iterator): Removes an element pointed to by the iterator.
5. erase(value): Removes the element with the specified value.
6. clear(): Removes all elements from the set.
7. size(): Returns the number of elements in the set.
8. empty(): Checks if the set is empty (i.e., if its size is zero).
9. find(value): Finds an element with the specified value.

10. count(value): Counts the occurrences of an element with the specified value (1 if present, 0 otherwise).

11. lower_bound(value): Returns an iterator to the first element that is not less than a specified value.

12. upper_bound(value): Returns an iterator to the first element that is greater than a specified value.

13. equal_range(value): Returns a pair of iterators representing the range of elements with the specified value.

14. begin(): Returns an iterator to the beginning of the set.

15. end(): Returns an iterator to the end of the set.

16. rbegin(): Returns a reverse iterator to the reverse beginning of the set.

17. rend(): Returns a reverse iterator to the reverse end of the set.