## Tree Set

A TreeSet in Java is an implementation of the SortedSet interface, which extends the Set interface. It is part of the Java Collections Framework and is used to store elements in a sorted order. Unlike HashSet, which uses a hash table for storage, TreeSet uses a self-balancing binary search tree (specifically, a red-black tree) to maintain the elements in sorted order.

## NavigableSet

A NavigableSet is a subinterface of the SortedSet interface in the Java Collections Framework. It extends the functionalities of a SortedSet by providing navigation methods for accessing elements based on their relative order. NavigableSet was introduced in Java 6.

1. Navigation Methods:
   1. NavigableSet provides methods for navigating the set in both ascending and descending order. For example, lower, floor, ceiling, and higher methods return elements related to a specified element based on their order.
2. Range Views:
   1. NavigableSet offers methods for obtaining sub-sets or views of the set within a specified range. The subSet, headSet, and tailSet methods allow you to create subsets of the original set.
3. Polling:
   1. The pollFirst and pollLast methods remove and return the first and last elements in the set, respectively.

System.out.println("Lower(25): " + navigableSet.lower(25));

The lower method returns the greatest element in the set strictly less than the given element (25 in this case).

System.out.println("Floor(25): " + navigableSet.floor(25));

The floor method returns the greatest element in the set less than or equal to the given element.

System.out.println("Ceiling(25): " + navigableSet.ceiling(25));

The ceiling method returns the smallest element in the set greater than or equal to the given element.

System.out.println("Higher(25): " + navigableSet.higher(25));

The higher method returns the smallest element in the set strictly greater than the given element.