



Iterator interface provides the facility of iterating the elements in a forward direction only.

The **Iterable interface** is the root interface for all the collection classes. The Collection interface extends the Iterable interface and therefore all the subclasses of Collection interface also implement the Iterable interface.

The **Collection interface** is the interface which is implemented by all the classes in the collection framework. It declares the methods that every collection will have. In other words, we can say that the Collection interface builds the foundation on which the collection framework depends.

List interface is the child interface of Collection interface. It inhibits a list type data structure in which we can store the ordered collection of objects. It can have duplicate values.

The **ArrayList class** implements the List interface. It uses a dynamic array to store the duplicate element of different data types.

LinkedList implements the Collection interface. It uses a doubly linked list internally to store the elements. It can store the duplicate elements.

Vector uses a dynamic array to store the data elements. It is similar to ArrayList.

The **stack** is the subclass of Vector. It implements the last-in-first-out data structure.

Queue interface maintains the first-in-first-out order. It can be defined as an ordered list that is used to hold the elements which are about to be processed.

The **PriorityQueue** class implements the Queue interface. It holds the elements or objects which are to be processed by their priorities. PriorityQueue doesn't allow null values to be stored in the queue.

Deque interface extends the Queue interface. In Deque, we can remove and add the elements from both the side.

ArrayDeque class implements the Deque interface. It facilitates us to use the Deque. Unlike queue, we can add or delete the elements from both the ends.

Set Interface in Java is present in java.util package. It extends the Collection interface. It represents the unordered set of elements which doesn't allow us to store the duplicate items.

HashSet class implements Set Interface. It represents the collection that uses a hash table for storage.

LinkedHashSet class represents the LinkedList implementation of Set Interface. It extends the HashSet class and implements Set interface.

SortedSet is the alternate of Set interface that provides a total ordering on its elements. The elements of the SortedSet are arranged in the increasing (ascending) order.

Java **TreeSet** class implements the Set interface that uses a tree for storage. Like HashSet, TreeSet also contains unique elements.