

Collection(l)

- **boolean add(E e)**
- **boolean contains(Object o)** //Returns true if this collection contains the specified element.
- **Iterator<E> iterator()** //Returns an iterator over the elements in this collection.
- **boolean remove(Object o)** //Removes a single instance of the specified element from this collection
- **int size()** //Returns the number of elements in this collection.
- **object[] toArray()** //Returns an array containing all of the elements in this collection.

|---List

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| |---ArrayList

- ✓ **boolean add (E e)** // Appends the specified element to the end of this list.
- ✓ **void add(int index, E element)** //Inserts at the specified position and Shifts current and subsequent elements to the right (adds one to their indices)
- ✓ **int indexOf(Object o)** //index of the first occurrence of the element in this list, or -1 if this list does not contain the element.
- ✓ **E get(int index)** //Returns the element at the specified position in this list.
- ✓ **ListIterator listIterator()**
- ✓ **E set(int index, E element)** //Replaces the element at the specified position .Returns the previous element
- ✓ **E remove(int index)** //Removes the element at the specified position in this list.
- ✓ **boolean remove(Object o)** //Removes the first occurrence of the specified element from this list, if it is present.

| |---LinkedList

- ✓ **Boolean add(E e)** //Appends the specified element to the end of this list.
- ✓ **void add(int index, E element)** //Inserts the specified element at the specified position in this list.
- ✓ **void addFirst(E e)** //Inserts the specified element at the beginning of this list.
- ✓ **void addLast(E e)** //Appends the specified element to the end of this list.
- ✓ **E element()** //Retrieves, but does not remove, the head (first element) of this list.
- ✓ **Iterator<E> descendingIterator()** //Returns an iterator over the elements in this deque in reverse sequential order.
- ✓ **E getFirst()** // Returns the first element in this list.

- ✓ **E getLast()** // Returns the last element in this list
- ✓ **Boolean offer(E e)** //Adds the specified element as the tail (last element) of this list.
- ✓ **E peek()** //Retrieves, but does not remove, the head (first element) of this list.
- ✓ **E poll()** //Retrieves and removes the head (first element) of this list.

| |----Vector---Stack

- ✓ **Boolean empty()** //Tests if this stack is empty.
- ✓ **E peek()** //Looks at the object at the top of this stack without removing it from the stack.
- ✓ **E pop()** //Removes the object at the top of this stack and returns that object as the value of this function.
- ✓ **E push(E item)** //Pushes an item onto the top of this stack.
- ✓ **Int search(Object o)** //Returns the 1-based position where an object is on this stack.

|----Set

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| |----HashSet----LinkedHashSet

- ✓ **Same as Collection Class Methods**

| |----TreeSet

- ✓ **E first()** //Returns the first (lowest) element currently in this set.
- ✓ **E last()** //Returns the last (highest) element currently in this set.

|----Queue

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| |----PriorityQueue(I)(Heap Representation in Java)

- ✓ **boolean offer(E e)** //Inserts the specified element into this priority queue.
- ✓ **E peek()** //Retrieves, but does not remove, the head of this queue, or returns null if this queue is empty.
- ✓ **E poll()** // Retrieves and removes the head of this queue, or returns null if this queue is empty.

| |----BlockingQueue

Add() internally just call **offer()** method and does nothing extra.