***List***

* Ordered collection of object/data which preserves the insertion order and allows positional access
* Allows Duplicate values & null elements
* Not Synchronized

List are of 2 types

1. Array List
2. Linked list

***Important Functions/Operations of List class***

|  |  |
| --- | --- |
| ***Return Type*** | ***Methods*** |
| void | [add](https://docs.oracle.com/javase/8/docs/api/java/util/List.html#add-int-E-)(int index, [E](https://docs.oracle.com/javase/8/docs/api/java/util/List.html) element) |
| boolean | [addAll](https://docs.oracle.com/javase/8/docs/api/java/util/List.html#addAll-int-java.util.Collection-)(int index, [Collection](https://docs.oracle.com/javase/8/docs/api/java/util/Collection.html)<? extends [E](https://docs.oracle.com/javase/8/docs/api/java/util/List.html)> c) |
| E | [get](https://docs.oracle.com/javase/8/docs/api/java/util/List.html#get-int-)(int index) |
| int | [indexOf](https://docs.oracle.com/javase/8/docs/api/java/util/List.html#indexOf-java.lang.Object-)([Object](https://docs.oracle.com/javase/8/docs/api/java/lang/Object.html) o) |
| int | [hashCode](https://docs.oracle.com/javase/8/docs/api/java/util/List.html#hashCode--)() |
| int | [indexOf](https://docs.oracle.com/javase/8/docs/api/java/util/List.html#indexOf-java.lang.Object-)([Object](https://docs.oracle.com/javase/8/docs/api/java/lang/Object.html) o) |
| int | [lastIndexOf](https://docs.oracle.com/javase/8/docs/api/java/util/List.html#lastIndexOf-java.lang.Object-)([Object](https://docs.oracle.com/javase/8/docs/api/java/lang/Object.html) o) |
| [ListIterator](https://docs.oracle.com/javase/8/docs/api/java/util/ListIterator.html)<[E](https://docs.oracle.com/javase/8/docs/api/java/util/List.html)> | [listIterator](https://docs.oracle.com/javase/8/docs/api/java/util/List.html#listIterator--)() |
| [ListIterator](https://docs.oracle.com/javase/8/docs/api/java/util/ListIterator.html)<[E](https://docs.oracle.com/javase/8/docs/api/java/util/List.html)> | [listIterator](https://docs.oracle.com/javase/8/docs/api/java/util/List.html#listIterator-int-)(int index) |
| E | [remove](https://docs.oracle.com/javase/8/docs/api/java/util/List.html#remove-int-)(int index) |
| default void | [replaceAll](https://docs.oracle.com/javase/8/docs/api/java/util/List.html#replaceAll-java.util.function.UnaryOperator-)([UnaryOperator](https://docs.oracle.com/javase/8/docs/api/java/util/function/UnaryOperator.html" \o "interface in java.util.function)<[E](https://docs.oracle.com/javase/8/docs/api/java/util/List.html)> operator) |
| [E](https://docs.oracle.com/javase/8/docs/api/java/util/List.html) | [set](https://docs.oracle.com/javase/8/docs/api/java/util/List.html#set-int-E-)(int index, [E](https://docs.oracle.com/javase/8/docs/api/java/util/List.html) element) |
| default void | [sort](https://docs.oracle.com/javase/8/docs/api/java/util/List.html#sort-java.util.Comparator-)([Comparator](https://docs.oracle.com/javase/8/docs/api/java/util/Comparator.html)<? super [E](https://docs.oracle.com/javase/8/docs/api/java/util/List.html)> c) |
| default [Spliterator](https://docs.oracle.com/javase/8/docs/api/java/util/Spliterator.html" \o "interface in java.util)<[E](https://docs.oracle.com/javase/8/docs/api/java/util/List.html)> | [spliterator](https://docs.oracle.com/javase/8/docs/api/java/util/List.html#spliterator--)() |
| [List](https://docs.oracle.com/javase/8/docs/api/java/util/List.html)<[E](https://docs.oracle.com/javase/8/docs/api/java/util/List.html)> | [subList](https://docs.oracle.com/javase/8/docs/api/java/util/List.html#subList-int-int-)(int fromIndex, int toIndex) |

Refer- <https://docs.oracle.com/javase/8/docs/api/java/util/List.html>

***Important Functions/Operations of Collection class***

|  |  |
| --- | --- |
| ***Return Type*** | ***Methods*** |
| boolean | [add](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html#add(E))([E](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html) e) |
| boolean | [addAll](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html#addAll(java.util.Collection))([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html)<? extends [E](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html)> c) |
| void | [clear](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html#clear())() |
| boolean | [contains](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html#contains(java.lang.Object))([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html) o) |
| boolean | [containsAll](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html#containsAll(java.util.Collection))([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html)<?> c) |
| boolean | [equals](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html#equals(java.lang.Object))([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html) o) |
| int | [isEmpty](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html#isEmpty())() |
| [Iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html)<[E](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html)> | [iterator](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html#iterator())() |
| boolean | [remove](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html#remove(java.lang.Object))([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html) o) |
| boolean | [removeAll](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html#removeAll(java.util.Collection))([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html)<?> c) |
| boolean | [retainAll](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html#retainAll(java.util.Collection))([Collection](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html)<?> c) |
| int | [size](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html#size())() |
| [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html)[] | [toArray](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html#toArray())() |
| <T> T[] | [toArray](https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html#toArray(T[]))(T[] a) |

* Few methods like **equals(), hashCode(), toString ()** are overridden from object class

Refer <https://docs.oracle.com/javase/7/docs/api/java/util/Collection.html>