Differences between List<E> and Set<E>

List<E> and Set<E> are part of Java Collections Framework and are used widely. Most common implementation of List<E> is ArrayList<E> and for Set<E> is HashSet<E>. There are few differences between the two and in this post we will see them.

This post is part of Java Collections Interview Questions and you can find several interview questions here.

List<E> and Set<E> difference.

**First** difference is that List<E> allows you to insert duplicate elements. While Set<E> isn’t kind enough to let you insert duplicate elements. If you try to value that exists in Set<E> then it will replace that value. Set<E> contains unique elements.

**Second** difference is that List<E> maintains the order of Insertion. As discussed here List<E> maintains the order of insertion of elements. Set<E> does not maintain order. But we can use SortedSet<E> which can store elements defined by Comparator<T>.

Third difference is in terms of index access or Random access of elements. List<E> interface has ArrayList<E> as concrete implementation. ArrayList<E> is backed by an array and hence it supports indexed retrieval of elements. This cannot be achieved by any concrete implementation of Set<E>.

Fourth difference is that we can use Iterator<E> and ListIterator<E> to iterate through the List<E>. For Set<E> we can only use Iterator<E> interface.

That’s all on difference between List<E> and Set<E>. Click here to see when to use List<E> and Set<E>.