**Java HashSet class**

Java HashSet class is used to create a collection that uses a hash table for storage. It inherits the AbstractSet class and implements Set interface.

The important points about Java HashSet class are:

* HashSet stores the elements by using a mechanism called **hashing.**
* HashSet contains unique elements only.
* Insertion Order not Preserved.
* Null values are allowed.

**Difference between List and Set**

List can contain duplicate elements whereas Set contains unique elements only.

**Hierarchy of HashSet class**

The HashSet class extends AbstractSet class which implements Set interface. The Set interface inherits Collection and Iterable interfaces in hierarchical order.

hashset.png

**HashSet class declaration**

Let's see the declaration for java.util.HashSet class.

1. public class HashSet<E> extends AbstractSet<E> implements Set<E>, Cloneable, Serializable

**Constructors of Java HashSet class:**

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| **Constructor** | **Description** |
| HashSet() | It is used to construct a default HashSet. |
| HashSet(Collection c) | It is used to initialize the hash set by using the elements of the collection c. |
| HashSet(int capacity) | It is used to initialize the capacity of the hash set to the given integer value capacity. The capacity grows automatically as elements are added to the HashSet. |

**Methods of Java HashSet class:**

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| **Method** | **Description** |
| void clear() | It is used to remove all of the elements from this set. |
| boolean contains(Object o) | It is used to return true if this set contains the specified element. |
| boolean add(Object o) | It is used to adds the specified element to this set if it is not already present. |
| boolean isEmpty() | It is used to return true if this set contains no elements. |
| boolean remove(Object o) | It is used to remove the specified element from this set if it is present. |
| Object clone() | It is used to return a shallow copy of this HashSet instance: the elements themselves are not cloned. |
| int size() | It is used to return the number of elements in this set. |