LinkedHashSet class in Java with Examples

A LinkedHashSet is an ordered version of HashSet that maintains a doubly-linked List across all elements. When the iteration order is needed to be maintained this class in used. When iterating through a HashSet the order is unpredictable, while a LinkedHashSet lets us iterate through the elements in the order in which they were inserted.when cycling through LinkedHashSet using an iterator, the elements will be returned in the order in which they were inserted.

Syntax:

```
LinkedHashSet<String> hs = new LinkedHashSet<String>();
```

- Contains unique elements only like HashSet. It extends HashSet class and implements Set interface.
- Maintains insertion order.

Basic **Operations** of LinkedHashSet:

```
import java.util.LinkedHashSet;
public class Demo
{
    public static void main(String[] args)
    {
        LinkedHashSet<String> linkedset =
                           new LinkedHashSet<String>();

        // Adding element to LinkedHashSet
        linkedset.add("A");
        linkedset.add("B");
        linkedset.add("C");
        linkedset.add("D");

        //This will not add new element as A already exists
        linkedset.add("A");
        linkedset.add("E");

        System.out.println("Size of LinkedHashSet = " +
                                   linkedset.size());
```

```
        System.out.println("Original LinkedHashSet:" + linkedset);
        System.out.println("Removing D from LinkedHashSet: " +
                           linkedset.remove("D"));
        System.out.println("Trying to Remove Z which is not "+
                           "present: " + linkedset.remove("Z"));
        System.out.println("Checking if A is present=" +
                           linkedset.contains("A"));
        System.out.println("Updated LinkedHashSet: " + linkedset);
    }
}
```

Run on IDE

Output:

```
Size of LinkedHashSet=5
Original LinkedHashSet:[A, B, C, D, E]
Removing D from LinkedHashSet: true
Trying to Remove Z which is not present: false
Checking if A is present=true
Updated LinkedHashSet: [A, B, C, E]
```

LinkedHashmap vs LinkedHashset

- LinkedHashMap does a mapping of keys to values whereas a LinkedHashSet simply stores a collection of things with no duplicates.
- LinkedHashMap extends HashMap and LinkedHashSet extends HashSet.

Important : Keeping the insertion order in both LinkedHashmap and LinkedHashset have additional associated costs, both in terms of spending additional CPU cycles and needing more memory. If you do not need the insertion order maintained, it is recommended to use the lighter-weight HashSet and HashMap instead.

This article is contributed by **Pratik Agarwal**. If you like GeeksforGeeks and would like to contribute, you can also write an article using contribute.geeksforgeeks.org or mail your article to contribute@geeksforgeeks.org. See your article appearing on the GeeksforGeeks main page and help other Geeks.

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