DAY-55

19 September 2023 15:47

SET (I)

DIFFERENT BETWEEN LIST(I) AND SET (I)

LIST (I)	SET (I)
DUPLICATE ARE ALLOWED	DUPLICATES ARE NOT ALLOWED
INSERTION ORDER IS PRESERVED	INSERTION ORDER IS NOT PRESERVED.

HASH SET

- IT IS AN IMPLEMENTATION CLASS OF SET (I) INTRODUCED IN 1.2 V
- DUPLICATES ARE NOT ALLOWED
- INSERTION ORDER IS NOT PRESERVED
- NULL INSERTION IS POSSIBLE
- HETEROGENOUS OBJECTS ARE ALLOWED
- UNDERLYING DATA STRUCTURE IS HashTable

CONSTRUCTORS OF HASH SET

- HashSet a1 = new HashSet();
- HashSet a1 = new HashSet(int initial capacity)
- HashSet a1 = new HashSet(int initial fill ratio)
- HashSet a1 = new HashSet(collection c);

- Default capacity of HashSet = 16
- Default fill Ratio of HashSet= 75%.

```
package collectionpractice;

import java.util.HashSet;

public class HashNum {

	public static void main(String[] args)
	{
		HashSet h = new HashSet();
		h.add(12);
		h.add(53);
		h.add(76);
		h.add(87);
		h.add(16);
		h.add(78);
```

```
        h.add(93);
        h.add(72);
        h.add(49);
        h.add(49);
        h.add(null);
        h.add('c');
        System.out.println(h);


    }

}
```

CURSORS

- IT IS USED TO RETRIEVE OBJECTS FROM COLLECTION ONE BY ONE
- CURSORS WORKS EXACTLY LIKE get().
- SINCE get() IS APPLICABLE FOR LIST IMPLEMENTATION CLASS ONLY, THAT'S WHY FOR SET IMPLEMENTATION CLASSES WE USE CURSORS.

THERE ARE 3 TYPES OF CURSORS AVAILABLE.

1. Enumeration(I)
2. Iterator (I)
3. ListIterator(I)

ENUMERATION (I)

- THIS CURSOR IS USED FOR LEGACY CLASS ONLY (VECTOR, STACK)
- THIS CURSOR CAN ONLY PERFORM READ OPERATION.

ITERATOR(I)

- IT IS ALSO CALLED AS UNIVERSAL CURSOR BECAUSE WE CAN USE THIS CURSOR WITH ANY TYPE OF COLLECTION.
- THIS CURSOR CAN PERFORM READ AND REMOVE OPERATION.

- public Iterator iterator();
- ArrayList a = new ArrayList();
- Iterator itr = a.iterator();

METHODS OF ITERATOR

- public boolean hasNext();
- public Object next();
- public void remove();

- WAJP TO PRINT ONLY INTEGER VALUE AND REMOVE OTHER VALUES FROM HASHSET

```
package collectionpractice;

import java.util.HashSet;
import java.util.Iterator;

public class HashNum {

	public static void main(String[] args)
	{
		HashSet h = new HashSet();
		h.add(1);
		h.add(5.3);
		h.add("Java");
		h.add('s');
		h.add(5);

		Iterator itr = h.iterator();

		while (itr.hasNext())
		{

			Object obj = itr.next();
			if (obj instanceof Integer)
			{
				System.out.println(obj);
			}
			else
			{
				itr.remove();
			}

		}


		System.out.println(h);




	}

}
```