

MultiSet.java

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1 /** This class MultiSet is an interface for MyBag and MySet
2  *
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4  *
5  *
6  * @version 1.0 (April. 2014) */
7
8 package MULTISSET;
9
10 import java.util.Iterator;
11
12 public interface MultiSet < E extends Keyed > extends Iterable<E>{
13
14     //returns the number of elements in the collection
15     public int cardinality();
16
17     //returns the number of elements that match item from this
18     public int multiplicity (E item);
19
20     //Adds anItem to the collection; note this is a mutable operation
21     public void add(E anItem);
22
23     //returns true if this is empty
24     public Boolean isEmpty();
25
26     //returns a new MultiSet by taking the union of this and aSet,
27     //the operation is immutable, neither this or aSet is modified
28     public MultiSet<E> union(MultiSet<E> aSet);
29
30     //returns true if this contains the same elements as aSet
31     public Boolean equal(MultiSet<E> aSet);
32
33     //returns a new MultiSet by taking the intersection of this and aSet
34     //the operation is immutable, neither this or aSet is modified
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35 //the operation can be views as  $\min(|S|, |T|)$ 
36 public MultiSet<E> intersection (MultiSet<E> aSet);
37
38 //Returns an iterator over the collection this.
39 public Iterator<E> iterator();
40
41 }
42
```