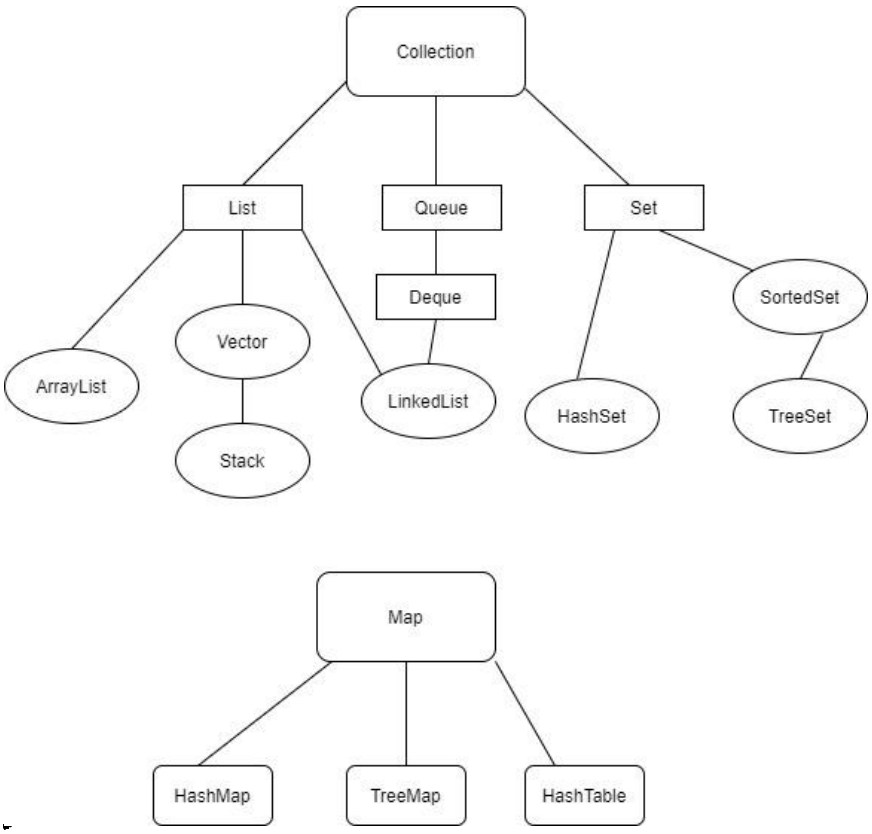

All class

All these data structures are formed of an array ,a list or both.

So Java encapsulate the traversal process and provide an iterator API. However, we can traversal the whole container with a for each loop. What the difference between???

es that implemented Collection or Map have their own iterators.

The system will throw java.util.ConcurrentModificationException when try to modify within a for loop or a iterator.

We can remove an element using iterator, and we can remove or modify an element within listIterator.

A: For list

(1) For each loop just can iterate the whole list, have no effect to the value of the list

(2) Iterator can remove a specific element of the list using iterator

(3) List has listIterator, it can operate the list from an pointed index. It can remove an element of list using iterator. In addition, it can set an element us list.set(index,element)

B:For map

It has the similar methods like list, but it has no listiterator. I consider since it is easy to relocate a value through a key, there is no need to modify a value within iterator.

It is different to use a for loop compared to a list. Because map has no iterator, its entry has. So usually use the following methods:

(1)

```
Iterator<Map.Entry<Integer,String>> mapIt =
map.entrySet().iterator()
```

(2)

```
for(Map.Entry<Integer,String> entry:map.entrySet())
```

(3)

```
for(int key:map.keySet())
```