***Collection Framework***

Collection: Collection is a group of an individual objects represent a Unity.

Collection Framework : Coolection framework is provides group of classes and Interfaces to work on DataStructure. Collection is an architecture whixh provides to store and manipulate the group of objects. By using java collection we can pewrform operations on Data like insert, delete, update, sorting and manipulate on data.

DataStructures are : List, Vector, Stack, Queue, Set, Map, Array, Tree are the some of datastructures.

Iterable: Iterable is an Interface which is parent of Collection. Which provides traverse. Ex ForEach(), SplitIterator, Iterator.

**Iterable**

Note: 1. Interfaces (I) color (orange) 2. Abstract Class(A) color(Blue) 3. Class (C) color (Green)

**iterable (I)**

**Any Group of individual objects which are represent as a single unit**

**collection (I)**

**AbstractCollection(A)**

**List(I)**

**RandomAceess(I)**

**AbstractList (A)**

**AbstractSequentialList (A)**

**Clonable(I)**

**Serializable(I)**

**Vector(C)**

**ArrayList(C)**

**LinkedList(C)**

**Stack(C)**

**public** **interface** Iterable<T>

**public** **interface** Collection<E> **extends** Iterable<E>

**public** **abstract** **class** AbstractCollection<E> **implements** Collection<E>

**public** **interface** List<E> **extends** Collection<E>

**public** **class** LinkedList<E>

**extends** AbstractSequentialList<E>

**implements** List<E>, Deque<E>, Cloneable, java.io.Serializable

**public** **class** ArrayList<E> **extends** AbstractList<E>

**implements** List<E>, RandomAccess, Cloneable, java.io.Serializable

**public** **class** Vector<E>

**extends** AbstractList<E>

**implements** List<E>, RandomAccess, Cloneable, java.io.Serializable

**public**

**class** Stack<E> **extends** Vector<E>

**Any Group of individual objects which are represent as a single unit**

**Key**

**Value**

**SortedMap**

**HashMap**

**TreeMap**

**LinkedHasMap**

**Map**

**Extends**

**Implements**

**Traveler**

1. **Iterator**
2. **ListIterator**
3. **forEach**
4. **forEach()**
5. **Enumeration**

**Not Indexed Collection**

**Not Preserved order**

**Duplicates are not allowed**

**Sorted**

**Not Indexed Collection**

**Not Preserved order**

**Duplicates are not allowed**

**Indexed Collection**

**Order Preserved**

**Duplicates are allowed**

**Thread Safe**

**D L L**

**Dynamic**

**Array**

**Dynamic**

**Array**

**TreeSet**

**NavigableSet**

**LinkedHashSet**

**SortedSet**

**HashSet**

**LinkedQueue**

**ArrayQueue**

**PriorityQueue**

**DeQueue**

**Stack**

**Vector**

**ArrayList**

**LinkedList**

**Set**

**Queue**

**List**

**Collection**