

Java Collections Summary

List Implementations

Class	Constructor	Default Size	Internal Structure	Version
ArrayList	<code>new ArrayList<>()</code>	10	Dynamic Array	Java 1.2
LinkedList	<code>new LinkedList<>()</code>	0	Doubly Linked List	Java 1.2
Vector	<code>new Vector<>()</code>	10	Dynamic Array (sync)	Java 1.0
Stack	<code>new Stack<>()</code>	10	Inherits Vector	Java 1.0

Set Implementations

Class	Constructor	Default Size	Internal Structure	Version
HashSet	<code>new HashSet<>()</code>	16	Hash Table	Java 1.2
LinkedHashSet	<code>new LinkedHashSet<>()</code>	16	Hash Table + Linked List	Java 1.4
TreeSet	<code>new TreeSet<>()</code>	0	Red-Black Tree	Java 1.2
EnumSet	<code>EnumSet.of(...)</code>	-	Bit vector	Java 1.5
CopyOnWriteArraySet	<code>new CopyOnWriteArraySet<>()</code>	0	Copy-on-write array	Java 1.5
ConcurrentSkipListSet	<code>new ConcurrentSkipListSet<>()</code>	0	Skip List	Java 1.6

Map Implementations

Class	Constructor	Default Size	Internal Structure	Version
HashMap	<code>new HashMap<>()</code>	16	Hash Table	Java 1.2
LinkedHashMap	<code>new LinkedHashMap<>()</code>	16	Hash Table + Linked List	Java 1.4
TreeMap	<code>new TreeMap<>()</code>	0	Red-Black Tree	Java 1.2
Hashtable	<code>new Hashtable<>()</code>	11	Hash Table (sync)	Java 1.0
ConcurrentHashMap	<code>new ConcurrentHashMap<>()</code>	16	Segmented Hash Table	Java 1.5
WeakHashMap	<code>new WeakHashMap<>()</code>	16	Hash Table + Weak refs	Java 1.2
IdentityHashMap	<code>new IdentityHashMap<>()</code>	21	Hash Table (== equality)	Java 1.4
EnumMap	<code>new EnumMap<>(Enum.class)</code>	0	Array (index by enum)	Java 1.5

Queue / Deque Implementations

Class	Constructor	Default Size	Internal Structure	Version
PriorityQueue	<code>new PriorityQueue<>()</code>	11	Min-Heap	Java 1.5
ArrayDeque	<code>new ArrayDeque<>()</code>	16	Resizable array	Java 1.6
LinkedList	<code>new LinkedList<>()</code>	0	Doubly Linked List	Java 1.2

ConcurrentLinkedQueue	new ConcurrentLinkedQueue<>()	0	Lock-free linked nodes	Java 1.5
LinkedBlockingQueue	new LinkedBlockingQueue<>()	MAX_VALUE	Linked Nodes	Java 1.5

Thread-Safe Collections

Class	Constructor	Default Size	Internal Structure	Version
Vector	new Vector<>()	10	Array	Java 1.0
Stack	new Stack<>()	10	Inherits from Vector	Java 1.0
Hashtable	new Hashtable<>()	11	Hash Table	Java 1.0
ConcurrentHashMap	new ConcurrentHashMap<>()	16	Buckets/Segments	Java 1.5
CopyOnWriteArrayList	new CopyOnWriteArrayList<>()	0	Copy-on-write array	Java 1.5
CopyOnWriteArraySet	new CopyOnWriteArraySet<>()	0	CopyOnWriteArrayList	Java 1.5
ConcurrentLinkedQueue	new ConcurrentLinkedQueue<>()	0	Lock-free linked nodes	Java 1.5