## Java Collections - JDK 6.0

Map An object that maps keys to values. A map cannot contain duplicate keys; each key can map to at most one value SortedMap A Map that further provides a total ordering on its keys NavigableMap A SortedMap extended with navigation methods returning the closest matches for given search targets ConcurrentMap A Map providing additional atomic putIfAbsent, remove, and replace methods. ConcurrentNavigableMap A ConcurrentMap supporting NavigableMap operations, and recursively so for its navigable sub-maps. List An ordered collection Set A collection that contains no duplicate elements SortedSet A Set that further provides a total ordering on its elements NavigableSet A SortedSet extended with navigation methods reporting closest matches for given search targets Queue A collection designed for holding elements prior to processing Dequeue A linear collection that supports element insertion and removal at both ends BlockingQueue A Queue that additionally supports operations that wait for the queue to become non-empty when retrieving an element, and wait for space to become available in the queue when storing an element BlockingDequeue A Deque that additionally supports blocking operations that wait for the deque to become non-empty when retrieving an element, and wait for space to become available in the deque when storing an element Collections This class consists exclusively of static methods that operate on or return collections. It contains polymorphic algorithms that operate on collections, "wrappers", which return a new collection backed by a specified collection, and a few other odds and ends. «interface» List <E> iava.util ⊕ LinkedList <E> G CopyOnWriteArrayList <E> ⊕ ArrayList <E> java. util java. util java.util.concurrent add contains Iterator.remove get next remove(O) ArravList O(1) O(1) O(n)O(1) O(n)O(n) LinkedList O(n) O(1) O(n)O(1) O(1) O(1)CopyOnWriteArrayList O(1) O(n) O(n)O(1) O(n)O(n) «interface» «interface» ⊕ WeakHashMap <K,V> • Map <K,V> ConcurrentMap <K.V> java. util java.util.concurrent java.util ⊕ IdentityHashMap <K,V> iava.util «interface» ⊕ EnumMap <K,V> SortedMap <K,V> ⊕ ConcurrentHashMap <K,V> java. util java.util.concurrent iava.util ⊕ HashMap <K,V> iava. uti «interface» «interface» ❶ NavigableMap <K,V> ConcurrentNavigableMap <K,V> iava util iava.util.concurrent ⊕ LinkedHashMap <K,V> iava, uti ⊕ TreeMap <K,V> ⊕ ConcurrentSkipListMap <K,V> iava util concurrent iava util containsKey next Note get HashMap O(1)O(1)O(h/n)h is the table capacity LinkedHashMap O(1)O(1) O(1) IdentityHashMap O(1)O(1)O(h/n)h is the table capacity EnumMap O(1)O(1) O(1)O(log n) O(log n) TreeMap O(log n) ConcurrentHashMap O(1)O(1)O(h/n)h is the table capacity

O(log n) O(log n)

O(1)

ConcurrentSkipListMap

