	Ordering	Random Access	Key-Value Pairs	Allows Duplicates	Allows Null Values	Thread Safe	Blocking Operations	Upper Bounds	Usage Scenarios
Most Commonly Known Collections									
ArrayList	YES	YES	NO	YES	YES	NO	NO	NO	* Default choice of List implementation * To store a bunch of things * Repetitions matters * Insertion order matters * Best implementation in case of huge lists which are read intensive (elements are accessed more frequently than inserted deleted)
HashMap	NO	YES	YES	NO	YES	NO	NO	NO	* Default choice of Map implementation * Majorly used for simple in-memory caching purpose.
Vector	YES	YES	NO	YES	YES	YES	NO	NO	* Historical implementation of List * A good choice for thread-safe implementation
Hashtable	NO	YES	YES	NO	NO	YES	NO	NO	* Similar to HashMap * Do not allow null values or keys * Entire map is locked for thread safety
Most Talked About Collections									
HashSet	NO	YES	NO	NO	YES	NO	NO	NO	* To store bunch of things * A very nice alternative for ArrayList if ** Do not want repetitions ** Ordering does not matter
TreeSet	YES	YES	NO	NO	NO	NO	NO	NO	* To store bunch of things in sorted order * A very nice alternative for ArrayList if ** Do not want repetitions ** Sorted order
LinkedList	YES	NO	NO	YES	YES	NO	NO	NO	* Sequential Access * Faster adding and deleting of elements * Slightly more memory than ArrayList * Add/Remove elements from both ends of the queue * Best alternative in case of huge lists which are more write intensive (elements added / deleted are more frequent than reading elements)
ArrayDeque	YES	YES	NO	YES	NO	NO	NO	NO	* Random Access * Faster searching and retrieval of elements * Add/Remove elements from both ends of the queue * Best alternative in case of huge lists which are more read intensive
Stack	YES	NO	NO	YES	YES	YES	NO	NO	* Similar to a Vector * Last-In-First-Out implementation
TreeMap	YES	YES	YES	NO	NO	NO	NO	NO	* A very nice alternative for HashMap if sorted keys are important
Special Purpose Collections									
WeakHashMap	NO	YES	YES	NO	YES	NO	NO	NO	* The keys that are not referenced will automatically become eligible for garbage collection * Usually used for advanced caching techniques to store huge data and want to conserve memory
Arrays	YES	YES	NO	YES	YES	NO	NO	YES	* A Utility class provided to manipulate arrays ** Searching ** Sorting ** Converting to other Collection types such as a List
Properties	NO	YES	YES	NO	NO	YES	NO	NO	* Properties are exactly same as the Hashtable * Keys and Values are String * Can be loaded from a input stream * Usually used to store application properties and configurations
Thread Safe Collections									
CopyOnWriteArrayList	YES	YES	NO	YES	YES	YES	NO	NO	* A thread safe variant of ArrayList * Best use for ** Small lists which are read intensive ** requires thread-safety
ConcurrentHashMap	NO	YES	YES	NO	NO	YES	NO	NO	* A thread safe variant of Hashtable * Best use for ** requires thread-safety ** Better performance at high load due to a better locking mechanism
ConcurrentSkipListMap	YES	YES	YES	NO	NO	YES	NO	NO	* A thread safe variant of TreeMap * Best use for ** requires thread-safety
ConcurrentSkipListSet	YES	NO	NO	NO	NO	YES	NO	NO	* A thread safe variant of TreeSet * Best use for ** Do not want repetitions ** Sorted order ** Requires thread-safety
CopyOnWriteArraySet	YES	YES	NO	NO	YES	YES	NO	NO	* A thread-safe implementation of a Set * Best use for ** Small lists which are read intensive ** requires thread-safety ** Do not want repetitions
ConcurrentLinkedQueue	YES	NO	NO	YES	NO	YES	NO	NO	* A thread-safe variant of PriorityQueue * Best use for ** Small lists ** No random access ** requires thread-safety
ConcurrentLinkedDeque	YES	NO	NO	YES	NO	YES	NO	NO	"* A thread-safe variant of LinkedList * Best use for ** Small lists ** No random access ** Insertions, retrieval on both sides of the queue ** requires thread-safety"
Blocking Collections									
ArrayBlockingQueue	YES	NO	NO	YES	NO	YES	YES	YES	* Best use for Producer - Consumer type of scenarios with ** Lower capacity bound ** Predictable capacity * Has a bounded buffer. Space would be allocated during object creation
LinkedBlockingQueue	YES	NO	NO	YES	NO	YES	YES	YES	* Best use for Producer - Consumer type of scenarios with ** Large capacity bound ** Unpredictable capacity * Upper bound is optional
LinkedTransferQueue	YES	NO	NO	YES	NO	YES	YES	YES	* Can be used in situations where the producers should wait for consumer to receive elements. e.g. Message Passing
PriorityBlockingQueue	YES	NO	NO	YES	NO	YES	YES	NO	"* Best use for Producer - Consumer type of scenarios with ** Large capacity bound ** Unpredictable capacity ** Consumer needs elements in sorted order
LinkedBlockingDeque	YES	NO	NO	YES	NO	YES	YES	YES	* A Deque implementation of LinkedBlockingQueue ** Can add elements at both head and tail
SynchronousQueue	YES	NO	NO	YES	NO	YES	YES	NO	* Both producer and consumer threads will have to wait for a handoff to occur. * If there is no consumer waiting. The element is not added to the collection.
DelayQueue	YES	NO	NO	YES	NO	YES	YES	NO	* Similar to a normal LinkedBlockingQueue * Elements are implementations of Delayed interface * Consumer will be able to get the element only when it's delay has expired
						Source:	http://www.janeve.me/articles/which-java-collection-to-use		