

Generic	Description	Internal Implementation	Add insert	Add beyond capacity	Queue Push	Dequeue Pop Peek	Remove RemoveAt	Item[] ElementAt()	GetEnumerator	Contains() IndexOf() Find
List	Represents a strongly typed list of objects that can be accessed by index. Provides methods to search, sort, and manipulate lists.	Array	$O(1)/O(N)$	$O(N)$	NA	NA	$O(N)$	$O(1)$	$O(1)$	$O(N)$
LinkedList	Represents a doubly linked list.	Doubly linked list	$O(1)$	$O(1)$	$O(1)$	$O(1)$	$O(1)$	$O(n)$	$O(1)$	$O(n)$
Stack	Represents a variable size last-in-first-out (LIFO) collection of instances of the same specified type.	Array	$O(1)$	$O(n)$	$O(1)$	$O(1)$	NA	NA	$O(1)$	$O(n)$
Queue	Represents a first-in, first-out collection of objects.	Array	$O(1)$	$O(n)$	$O(1)$	$O(1)$	NA	NA	$O(1)$	$O(n)$
Dictionary	Represents a collection of keys and values where keys can't be duplicated and can't be null.	Hashtable with links to another array index for collision	$O(1)/O(n)$	$O(n)$	NA	NA	$O(1)/O(n)$	$O(1)/O(n)$	$O(1)$	$O(n)$
HashSet	Same as Dictionary but with no values	Hashtable with links to another array index for collision	$O(1)/O(n)$	$O(n)$	NA	NA	$O(1)/O(n)$	$O(1)/O(n)$	$O(1)$	NA

SortedDictionary	Same as Dictionary but sorted on the key and uses a tree implementation for searching	Red-black tree	$O(\log n)$	$O(\log n)$	NA	NA	$O(\log n)$	$O(\log n)$	$O(\log n)$	$O(n)$
SortedList	Same as List but sorted using a provided compare function and it uses binary search	Array	$O(n)$, $O(\log n)$ if added to end of list	$O(n)$	NA	NA	$O(n)$	$O(\log n)$	$O(1)$	$O(n)$
SortedSet	Same as SortedDictionary but with no value	Red-black tree	$O(\log n)$	$O(\log n)$	NA	NA	$O(\log n)$	$O(\log n)$	$O(\log n)$	NA