

# Comparing IndexedUnsortedLists

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Mason Vail

Boise State University Computer Science

# IUArrayList

IUList Methods	IUArrayList
addToFront()	$O(n)$
addToRear() / add()	$O(1)$
addAfter()/add(index)	$O(n)$
removeFirst()	$O(n)$
removeLast()	$O(1)$
remove(element) / remove(index)	$O(n)$
get() / set()	$O(1)$
indexOf() / contains()	$O(n)$
<i>Memory usage</i>	$\sim 1.5n$

# IUArrayList vs IUSingleLinkedList

IUList Methods	IUArrayList	IUSingleLinkedList
addToFront()	$O(n)$	$O(1)$
addToRear() / add()	$O(1)$	$O(1)$
addAfter()/add(index)	$O(n)$	$O(n)$
removeFirst()	$O(n)$	$O(1)$
removeLast()	$O(1)$	$O(n)$
remove(element) / remove(index)	$O(n)$	$O(n)$
get() / set()	$O(1)$	$O(n)$
indexOf() / contains()	$O(n)$	$O(n)$
<i>Memory usage</i>	$\sim 1.5n$	$2n$

# IUArrayList vs IUSingleLinkedList vs IUDoubleLinkedList

IUList Methods	IUArrayList	IUSingleLinkedList	IUDoubleLinkedList
addToFront()	O(n)	O(1)	O(1)
addToRear() / add()	O(1)	O(1)	O(1)
addAfter()/add(index)	O(n)	O(n)	O(n)
removeFirst()	O(n)	O(1)	O(1)
removeLast()	O(1)	O(n)	O(1)
remove(element) / remove(index)	O(n)	O(n)	O(n)
get() / set()	O(1)	O(n)	O(n)
indexOf() / contains()	O(n)	O(n)	O(n)
Memory usage	~1.5n	2n	3n

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