**Algorithm Analysis**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Singley Linked List | | | | Array Based List | | | |
|  | Time | | Space | | Time | | Space | |
|  | Best Case | Worst Case | Best Case | Worst Case | Best Case | Worst Case | Best Case | Worst Case |
| add(T) | O(1) | O(1) | O(1) | O1() | O() | O() | O() | O() |
| add(int, T) | O(1) | O(n) | O(1) | O(1) | O() | O() | O() | O() |
| Set(int,T) | O(1) | O(n) | O(1) | O(1) | O() | O() | O() | O() |
| Remove(int) | O(1) | O(n) | O(1) | O(1) | O() | O() | O() | O() |
| Remove(T) | O(1) | O(n) | O(1) | O(1) | O() | O() | O() | O() |
| Contains(T) | O(1) | O(n) | O(1) | O(1) | O() | O() | O() | O() |
| Get(int) | O(1) | O(n) | O(1) | O(1) | O() | O() | O() | O() |
| indexOf(T) | O(1) | O(n) | O(1) | O(1) | O() | O() | O() | O() |
| subList(int,int) | O(1) | O(n) | O(1) | O(n) | O() | O() | O() | O() |