6)

-Linear Search for Insertion Index:

Time Complexity: O(n)

Shifting Elements:

Time Complexity: O(n)O(n)O(n)

Insertion:

Time Complexity: O(1).

Overall Time Complexity (with Linear Search):

O(n)+O(n)+O(1)=O(n)

-Binary Search for Insertion Index:

Time Complexity: O(logn)

Shifting Elements:

Time Complexity: O(n)

Insertion:

Time Complexity: O(1)

Overall Time Complexity (with Binary Search):

O(logn)+O(n)+O(1)= O(n)

8)

Storing the Value

Time Complexity: O(1)

Shifting Elements

Worst-case Time Complexity: O(n)

Overall Time Complexity

The dominant operation in the remove function is the shifting of elements, which has a worst-case time complexity of O(n).

10)

It uses binary search, so it is O(logn)