

# Comparison between recursion and non recursion

Time complexity	Best case	Worst case	Average case
Recursion	$O(n \log n)$	$O(n \log n)$	$O(n \log n)$
Non recursion	$O(n)$	$O(n^2)$	$O(n^2)$

- Time complexity of non recursion is  $O(n^2)$
- Time complexity of recursion is  $O(n \log n)$
- Then recursion distinct is better than non recursion distinct in time complexity
- $\text{Min}(\text{recursion}, \text{non recursion}) = \text{recursion}$