	Time complexity	Space Complexity	Stability	Data size
BUBBLE SORT	Worst/average case : $O(n^2)$ Best case : O(n)	O(1)	Stable	Not efficient on large datasets
SELECTION SORT	$O(n^2)$	O(1)	instable	Not efficient on large datasets
INSERTION SORT	Worst/average case : $O(n^2)$ Best case : O(n)	O(1)	Stable	Works only on small datasets
MERGE SORT	O(n*logn)	O(n)	Stable	Works well on small and large datasets
QUICK SORT	Average/Best case : O(n*logn) Worst : $O(n^2)$	O(log n)	instable	Works well on smack and large datasets

Time complexity-

O(n) – Run time of algorithm increases linearly with the size of input

$O(n^2)$- Run time of algorithm increases quadratically with the size of input. Occurs where there are nested loops. Not applicable for large datasets as it becomes very slow.

O(n*logn)-Runtime of algorithm increases logarithmically with the input size

Space complexity-

O(1)-No additional memory space is required based on the input size. It uses the fixed memory.

O(n)-Memory space required is proportional to the input size

O(log n)- Memory space required is logarithmically proportional to the input size