|  |  |  |  |
| --- | --- | --- | --- |
| **Searching & Sorting** | **Best** | **Average** | **Worst** |
| Bubble Sort | O(n2) | O(n2) | O(n2) |
| Improved Bubble Sort | O(n) | O(n2) | O(n2) |
| Insertion Sort | O(n) | O(n2) | O(n2) |
| Heap Sort | O(n log n) | O(n log n) | O(n log n) |
| Linear Search | O(1) | O(n) | O(n) |
| Binary Search | O(1) | O(log n) | O(log n) |

# TIME COMPLEXITY CHART IN DSA

|  |  |
| --- | --- |
| **Stack Operations** | **Time Complexity** |
| Insertion | O(1) |
| Deletion | O(1) |
| Searching/Traversing | O(N) |

|  |  |
| --- | --- |
| **Queue Operations** | **Time Complexity** |
| enqueue | O(1) |
| dequeue | O(N) |
| Peek | O(1) |