# DATA STRUCTURES CHEAT SHEET

| DATA STRUCTURES | AVERAGE TIME COMPLEXITY | | | | WORST TIME COMPLEXITY | | | |
|---|---|---|---|---|---|---|---|---|
| | ACCESS | SEARCH | INSERT | DELETE | ACCESS | SEARCH | INSERT | DELETE |
| ARRAY | O(1) | O(N) | O(N) | O(N) | O(1) | O(N) | O(N) | O(N) |
| DYNAMIC ARRAY | O(1) | O(N) | O(N) | O(N) | O(1) | O(N) | O(N) | O(N) |
| LINKED LIST | O(N) | O(N) | O(1) | O(1) | O(N) | O(N) | O(1) | O(1) |
| DOUBLE LINKED LIST | O(N) | O(N) | O(1) | O(1) | O(N) | O(N) | O(1) | O(1) |
| SKIP LIST | O(LOGN) | O(LOGN) | O(LOGN) | O(LOGN) | O(N) | O(N) | O(N) | O(N) |
| STACK | O(N) | O(N) | O(1) | O(1) | O(N) | O(N) | O(1) | O(1) |
| QUEUE | O(N) | O(N) | O(1) | O(1) | O(N) | O(N) | O(1) | O(1) |
| HASH TABLE | O(1) | O(1) | O(1) | O(1) | O(N) | O(N) | O(N) | O(N) |
| BINARY SEARCH TREE | O(LOGN) | O(LOGN) | O(LOGN) | O(LOGN) | O(N) | O(N) | O(N) | O(N) |
| BALANCED BST | O(LOGN) | O(LOGN) | O(LOGN) | O(LOGN) | O(LOGN) | O(LOGN) | O(LOGN) | O(LOGN) |
| B-TREE | O(LOGN) | O(LOGN) | O(LOGN) | O(LOGN) | O(LOGN) | O(LOGN) | O(LOGN) | O(LOGN) |
| BINARY HEAP | O(N) | O(N) | O(LOGN) | O(LOGN) | O(N) | O(N) | O(LOGN) | O(LOGN) |
| BINOMIAL HEAP | O(N) | O(N) | O(1) | O(LOGN) | O(N) | O(N) | O(LOGN) | O(LOGN) |
| FIBONACCI HEAP | O(N) | O(N) | O(1) | O(LOGN) | O(N) | O(N) | O(1) | O(N) |

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