source: http://bigocheatsheet.com/

Searching

Algorithm	Data Structure	Time Complexity		Space Complexity
		Average	Worst	Worst
Depth First Search (DFS)	Graph of |V| vertices and |E| edges	-	O(|E| + |V|)	O(|V|)
Breadth First Search (BFS)	Graph of |V| vertices and |E| edges	-	O(|E| + |V|)	O(|V|)
Binary search	Sorted array of n elements	O(log(n))	O(log(n))	O(1)
Linear (Brute Force)	Array	O(n)	O(n)	O(1)
Shortest path by Dijkstra, using a Min-heap as priority queue	Graph with |V| vertices and |E| edges	|V| + |E|) log |V	|V| + |E|) log |V	O(|V|)
Shortest path by Dijkstra, using an unsorted array as priority queue	Graph with |V| vertices and |E| edges	O(|V|^2)	O(|V|^2)	O(|V|)
Shortest path by Bellman-Ford	Graph with |V| vertices and |E| edges	O(|V||E|)	O(|V||E|)	O(|V|)

Sorting

Algorithm	Data Structure	Time Complexity			Worst Case Auxiliary Space Complexity
		Best	Average	Worst	Worst
Quicksort	Array	O(n log(n))	O(n log(n))	O(n^2)	O(n)
Mergesort	Array	O(n log(n))	O(n log(n))	O(n log(n))	O(n)
Heapsort	Array	O(n log(n))	O(n log(n))	O(n log(n))	O(1)

Bubble Sort	Array	O(n)	O(n^2)	O(n^2)	O(1)							
Insertion Sort	Array	O(n)	O(n^2)	O(n^2)	O(1)							
Select Sort	Array	O(n^2)	O(n^2)	O(n^2)	O(1)							
Bucket Sort	Array	O(n+k)	O(n+k)	O(n^2)	O(nk)							
Radix Sort	Array	O(nk)	O(nk)	O(nk)	O(n+k)							

Data Structures

Data Structure	Time Complexity								Space Complexity			
	Average				Worst				Worst			
	Indexing	Search	Insertion	Deletion	Indexing	Search	Insertion	Deletion				
Basic Array	O(1)	O(n)	-	-	O(1)	O(n)	-	-	O(n)			
Dynamic Array	O(1)	O(n)	O(n)	O(n)	O(1)	O(n)	O(n)	O(n)	O(n)			
Singly-Linked List	O(n)	O(n)	O(1)	O(1)	O(n)	O(n)	O(1)	O(1)	O(n)			
Doubly-Linked List	O(n)	O(n)	O(1)	O(1)	O(n)	O(n)	O(1)	O(1)	O(n)			
Skip List	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(n)	O(n)	O(n)	O(n)	O(n log(n))			
Hash Table	-	O(1)	O(1)	O(1)	-	O(n)	O(n)	O(n)	O(n)			
Binary Search Tree	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(n)	O(n)	O(n)	O(n)	O(n)			
Cartesian Tree	-	O(log(n))	O(log(n))	O(log(n))	-	O(n)	O(n)	O(n)	O(n)			
B-Tree	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(n)			
Red-Black Tree	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(n)			
Splay Tree	-	O(log(n))	O(log(n))	O(log(n))	-	O(log(n))	O(log(n))	O(log(n))	O(n)			
AVL Tree	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(n)			

Heaps

Heaps	Time Complexity											
	Heapify	Find Max	Extract Max	Increase Key	Insert	Delete	Merge					
Linked List (sorted)	-	O(1)	O(1)	O(n)	O(n)	O(1)	O(m+n)					
Linked List (unsorted)	-	O(n)	O(n)	O(1)	O(1)	O(1)	O(1)					
Binary Heap	O(n)	O(1)	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(m+n)					
Binomial Heap	-	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(log(n))	O(log(n))					
Fibonacci Heap	-	O(1)	O(log(n))*	O(1)*	O(1)	O(log(n))*	O(1)					

Graphs

Node / Edge Management	Storage	Add Vertex		Remove Vertex								
Adjacency list	O(|V|+|E|)	O(1)	O(1)	O(|V| + |E|)	O(|E|)	O(|V|)						
Incidence list	O(|V|+|E|)	O(1)	O(1)	O(|E|)	O(|E|)	O(|E|)						
Adjacency matrix	O(|V|^2)	O(|V|^2)	O(1)	O(|V|^2)	O(1)	O(1)						
Incidence matrix	O(|V| · |E|)	O(|V| · |E|)	O(|V| · |E|)	O(|V| · |E|)	O(|V| · |E|)	O(|E|)						