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List of terms relating to algorithms and data structures

From Wikipedia, the free encyclopedia

The [NIST Dictionary of Algorithms and Data Structures](#) is a reference work maintained by the U.S. [National Institute of Standards and Technology](#). It defines a large number of **terms relating to algorithms and data structures**. For algorithms and data structures not necessarily mentioned here, see [list of algorithms](#) and [list of data structures](#).

This list of terms was originally derived from the index of that document, and is in the public domain, as it was compiled by a Federal Government employee as part of a Federal Government work. Some of the terms defined are:

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A [\[edit\]](#)

- [absolute performance guarantee](#)
- [abstract data type \(ADT\)](#)
- [\(a,b\)-tree](#)
- [accepting state](#)
- [Ackermann's function](#)
- [active data structure](#)
- [acyclic directed graph](#)
- [adaptive heap sort](#)
- [adaptive Huffman coding](#)
- [adaptive k-d tree](#)
- [adaptive sort](#)
- [address-calculation sort](#)
- [adjacency-list representation](#)
- [adjacency-matrix representation](#)
- [adversary](#)
- [algorithm](#)
- [algorithm BSTW](#)
- [algorithm FGK](#)
- [algorithmic efficiency](#)
- [algorithmically solvable](#)
- [algorithm V](#)
- [all pairs shortest path](#)
- [alphabet](#)
- [Alpha Skip Search algorithm](#)
- [alternating path](#)
- [alternating Turing machine](#)
- [alternation](#)
- [American flag sort](#)
- [amortized cost](#)
- [ancestor](#)
- [and](#)
- [ANSI](#)
- [antichain](#)
- [antisymmetric relation](#)

- AP
- Apostolico–Crochemore
- Apostolico–Giancarlo algorithm
- approximate string matching
- approximation algorithm
- arborescence
- arithmetic coding
- array
- array index
- array merging
- array search
- articulation point
- assignment problem
- association list
- associative
- associative array
- asymptotically tight bound
- asymptotic bound
- asymptotic lower bound
- asymptotic space complexity
- asymptotic time complexity
- asymptotic upper bound
- augmenting path
- automaton
- average case
- average-case cost
- AVL tree
- axiomatic semantics

B [\[edit\]](#)

- backtracking
- bag
- Baillie-PSW primality test
- balanced binary search tree
- balanced binary tree
- balanced k-way merge sort
- balanced merge sort
- balanced multiway merge
- balanced multiway tree
- balanced quicksort
- balanced tree
- balanced two-way merge sort
- BANG file
- Batchmer sort
- Baum Welch algorithm
- BB α tree
- BDD
- BD-tree
- Bellman–Ford algorithm
- Benford's law
- best case
- best-case cost
- best-first search
- biconnected component
- biconnected graph
- bidirectional bubble sort

- big-O notation
- binary function
- binary GCD algorithm
- binary heap
- binary insertion sort
- binary knapsack problem
- **binary priority queue**
- binary relation
- binary search
- binary search tree
- binary tree
- **binary tree representation of trees**
- bingo sort
- binomial heap
- binomial tree
- bin packing problem
- bin sort
- bintree
- bipartite graph
- bipartite matching
- bisector
- bitonic sort
- bit vector
- Bk tree
- block
- **block addressing index**
- blocking flow
- block search
- Bloom filter
- blossom (graph theory)
- bogosort
- **boogol**
- boolean
- boolean expression
- boolean function
- bottleneck traveling salesman
- bottom-up tree automaton
- **boundary-based representation**
- bounded error probability in polynomial time
- bounded queue
- bounded stack
- Bounding volume hierarchy, also referred to as bounding volume tree (BV-tree, BVT)
- Boyer–Moore string search algorithm
- Boyer–Moore–Horspool algorithm
- bozo sort
- B+ tree
- BPP (complexity)
- Bradford's law
- branch (as in control flow)
- branch (as in revision control)
- branch and bound
- breadth-first search
- Bresenham's algorithm
- brick sort
- bridge
- British Museum algorithm
- brute force attack

- brute force search
- brute force string search
- brute force string search with mismatches
- BSP-tree
- B*-tree
- B-tree
- bubble sort
- bucket
- bucket array
- bucketing method
- bucket sort
- bucket trie
- buddy system
- buddy tree
- build-heap
- Burrows–Wheeler transform (BWT)
- busy beaver
- Byzantine generals

C [\[edit\]](#)

- cactus stack
- Calculus of Communicating Systems (CCS)
- calendar queue
- candidate consistency testing
- candidate verification
- canonical complexity class
- capacitated facility location
- capacity
- capacity constraint
- cartesian tree
- cascade merge sort
- caverphone
- Cayley–Purser algorithm
- C curve
- cell probe model
- cell tree
- cellular automaton
- centroid
- certificate
- chain (order theory)
- chaining (algorithm)
- child
- Chinese postman problem
- Chinese remainder theorem
- Christofides algorithm
- Christofides heuristic
- chromatic index
- chromatic number
- Church–Turing thesis
- circuit
- circuit complexity
- circuit value problem
- circular list
- circular queue
- clique
- clique problem

- clustering (see [hash table](#))
- **clustering free**
- coalesced hashing
- **coarsening**
- cocktail shaker sort
- codeword
- coding tree
- **collective recursion**
- collision
- collision resolution scheme
- **Colussi**
- combination
- comb sort
- Communicating Sequential Processes
- commutative
- compact DAWG
- **compact trie**
- comparison sort
- competitive analysis
- competitive ratio
- complement
- complete binary tree
- complete graph
- **completely connected graph**
- **complete tree**
- complexity
- complexity class
- computable
- concave function
- concurrent flow
- concurrent read, concurrent write
- concurrent read, exclusive write
- configuration
- confluent persistent data structure
- conjunction
- connected components
- connected graph
- co-NP
- constant function
- continuous knapsack problem
- Cook reduction
- Cook's theorem
- counting sort
- covering
- CRCW
- **Crew (algorithm)**
- **critical path problem**
- CSP (communicating sequential processes)
- CSP (constraint satisfaction problem)
- CTL
- cuckoo hashing
- cut (graph theory)
- cut (logic programming)
- cutting plane
- cutting stock problem
- **cutting theorem**
- cut vertex

- [cycle sort](#)
- [cyclic redundancy check \(CRC\)](#)

D [\[edit\]](#)

- [D-adjacent](#)
- [DAG shortest paths](#)
- [Damerau–Levenshtein distance](#)
- [data structure](#)
- [decidable](#)
- [decidable language](#)
- [decimation](#)
- [decision problem](#)
- [decision tree](#)
- [decomposable searching problem](#)
- [degree](#)
- [dense graph](#)
- [depoissonization](#)
- [depth](#)
- [depth-first search \(DFS\)](#)
- [deque](#)
- [derangement](#)
- [descendant \(see \[tree structure\]\(#\)\)](#)
- [deterministic](#)
- [deterministic algorithm](#)
- [deterministic finite automata string search](#)
- [deterministic finite automaton \(DFA\)](#)
- [deterministic finite state machine](#)
- [deterministic finite tree automaton](#)
- [deterministic pushdown automaton \(DPDA\)](#)
- [deterministic tree automaton](#)
- [Deutsch–Jozsa algorithm](#)
- [DFS forest](#)
- [DFTA](#)
- [diagonalization argument](#)
- [diameter](#)
- [dichotomic search](#)
- [dictionary](#)
- [diet \(see *discrete interval encoding tree* below\)](#)
- [difference \(set theory\)](#)
- [digital search tree](#)
- [digital tree](#)
- [digraph](#)
- [Dijkstra's algorithm](#)
- [diminishing increment sort](#)
- [dining philosophers](#)
- [direct chaining hashing](#)
- [directed acyclic graph \(DAG\)](#)
- [directed acyclic word graph \(DAWG\)](#)
- [directed graph](#)
- [discrete interval encoding tree](#)
- [discrete p-center](#)
- [disjoint set](#)
- [disjunction](#)
- [distributed algorithm](#)
- [distributional complexity](#)
- [distribution sort](#)

- divide and conquer algorithm
- divide and marriage before conquest
- **division method**
- Data domain
- don't care
- Doomsday rule
- double-direction bubble sort
- double-ended priority queue
- double hashing
- **double left rotation**
- Double Metaphone
- **double right rotation**
- doubly chained tree
- doubly ended queue
- doubly linked list
- Dragon curve
- dual graph
- dual linear program
- Dutch national flag
- dyadic tree
- dynamic array
- **dynamic data structure**
- **dynamic hashing**
- dynamic programming
- dynamization transformation

E [\[edit\]](#)

- edge
- edge coloring
- edge connectivity
- edge crossing
- edge-weighted graph
- edit distance
- **edit operation**
- **edit script**
- 8 queens
- **elastic-bucket trie**
- element uniqueness
- **end-of-string**
- enfilade
- **epidemic algorithm**
- Euclidean algorithm
- Euclidean distance
- Euclidean Steiner tree
- Euclidean traveling salesman problem
- Euclid's algorithm
- Euler cycle
- Eulerian graph
- Eulerian path
- exact string matching
- EXCELL (**extendible cell**)
- exchange sort
- exclusive or
- exclusive read, concurrent write (ERCW)
- exclusive read, exclusive write (EREW)
- exhaustive search

- existential state
- **expandable hashing**
- expander graph
- exponential
- extended binary tree
- extended Euclidean algorithm
- extended k-d tree
- extendible hashing
- **external index**
- external memory algorithm
- **external memory data structure**
- external merge
- **external merge sort**
- external node
- external quicksort
- **external radix sort**
- external sort
- extrapolation search
- extremal
- extreme point

F [\[edit\]](#)

- facility location
- factor (see substring)
- factorial
- fast fourier transform (FFT)
- **fathoming**
- feasible region
- feasible solution
- feedback edge set
- feedback vertex set
- Ferguson–Forcade algorithm
- Fibonacci number
- Fibonacci search
- Fibonacci tree
- Fibonacci heap
- **filial-heir chain**
- Find
- **find kth least element**
- **finitary tree**
- finite Fourier transform (discrete Fourier transform)
- finite state automaton
- finite state machine
- finite state machine minimization
- finite state transducer
- first child-next sibling binary tree
- first come, first served
- first-in, first-out (FIFO)
- **fixed-grid method**
- **flash sort**
- flow
- flow conservation
- flow function
- flow network
- Floyd–Warshall algorithm
- Ford–Bellman algorithm

- [Ford–Fulkerson algorithm](#)
- [forest](#)
- [forest editing problem](#)
- [formal language](#)
- [formal methods](#)
- [formal verification](#)
- [forward index](#)
- [fractal](#)
- [fractional knapsack problem](#)
- [fractional solution](#)
- [free edge](#)
- [free list](#)
- [free tree](#)
- [free vertex](#)
- [frequency count heuristic](#)
- [full array](#)
- [full binary tree](#)
- [full inverted index](#)
- [fully dynamic graph problem](#)
- [fully persistent data structure](#)
- [fully polynomial approximation scheme](#)
- [function \(programming\)](#)
- [function \(mathematics\)](#)
- [functional data structure](#)

G [\[edit\]](#)

- [Galil–Giancarlo](#)
- [Galil–Seiferas](#)
- [gamma function](#)
- [GBD-tree](#)
- [geometric optimization problem](#)
- [global optimum](#)
- [gnome sort](#)
- [goobi](#)
- [graph](#)
- [graph coloring](#)
- [graph concentration](#)
- [graph drawing](#)
- [graph isomorphism](#)
- [graph partition](#)
- [Gray code](#)
- [greatest common divisor \(GCD\)](#)
- [greedy algorithm](#)
- [greedy heuristic](#)
- [grid drawing](#)
- [grid file](#)
- [Grover's algorithm](#)

H [\[edit\]](#)

- [halting problem](#)
- [Hamiltonian cycle](#)
- [Hamiltonian path](#)
- [Hamming distance](#)
- [Harter–Highway dragon](#)
- [hash function](#)
- [hash heap](#)

- hash table
- hash table delete
- Hausdorff distance
- hB-tree
- head
- heap
- heapify
- heap property
- heapsort
- heaviest common subsequence
- height
- height-balanced binary search tree
- height-balanced tree
- heuristic
- hidden Markov model
- highest common factor
- Hilbert curve
- histogram sort
- homeomorphic
- horizontal visibility map
- Horner's rule
- Huffman encoding
- Hungarian algorithm
- hybrid algorithm
- hyperedge
- hypergraph

I [\[edit\]](#)

- Identity function
- ideal merge
- implication
- implies
- in-branching
- inclusion-exclusion principle
- inclusive or
- incompressible string
- incremental algorithm
- in-degree
- independent set (graph theory)
- index file
- information theoretic bound
- in-order traversal
- in-place sort
- insertion sort
- instantaneous description
- integer linear program
- integer multi-commodity flow
- integer polyhedron
- interactive proof system
- interior-based representation
- internal node
- internal sort
- interpolation search
- interpolation-sequential search
- interpolation sort
- intersection (set theory)

- [interval tree](#)
- [intractable](#)
- [introsort](#)
- [introspective sort](#)
- [inverse Ackermann function](#)
- [inverted file index](#)
- [inverted index](#)
- [irreflexive](#)
- [isomorphic](#)
- [iteration](#)

J [\[edit\]](#)

- [Jaro–Winkler distance](#)
- [Johnson's algorithm](#)
- [Johnson–Trotter algorithm](#)
- [J sort](#)
- [JSort](#)
- [jump list](#)
- [jump search](#)

K [\[edit\]](#)

- [Karmarkar's algorithm](#)
- [Karnaugh map](#)
- [Karp–Rabin string search algorithm](#)
- [Karp reduction](#)
- [k-ary heap](#)
- [k-ary Huffman encoding](#)
- [k-ary tree](#)
- [k-clustering](#)
- [k-coloring](#)
- [k-connected graph](#)
- [k-d-B-tree](#)
- [k-dimensional](#)
- [K-dominant match](#)
- [k-d tree](#)
- [key](#)
- [KMP](#)
- [KmpSkip Search](#)
- [knapsack problem](#)
- [knight's tour](#)
- [Knuth–Morris–Pratt algorithm](#)
- [Königsberg bridges problem](#)
- [Kolmogorov complexity](#)
- [Kraft's inequality](#)
- [Kripke structure](#)
- [Kruskal's algorithm](#)
- [kth order Fibonacci numbers](#)
- [kth shortest path](#)
- [kth smallest element](#)
- [KV diagram](#)
- [k-way merge](#)
- [k-way merge sort](#)
- [k-way tree](#)

L [\[edit\]](#)

- [labeled graph](#)

- language
- last-in, first-out (LIFO)
- Las Vegas algorithm
- lattice (group)
- **layered graph**
- LCS
- leaf
- least common multiple (LCM)
- leftist tree
- left rotation
- Lempel–Ziv–Welch (LZW)
- **level-order traversal**
- Levenshtein distance
- lexicographical order
- linear
- linear congruential generator
- linear hash
- linear insertion sort
- linear order
- linear probing
- **linear probing sort**
- **linear product**
- linear program
- **linear quadtree**
- linear search
- link
- linked list
- list
- **list contraction**
- little-o notation
- Lm distance
- load factor (computer science)
- local alignment
- local optimum
- logarithm, logarithmic scale
- longest common subsequence
- longest common substring
- Lotka's law
- lower bound
- lower triangular matrix
- lowest common ancestor
- l-reduction

M [\[edit\]](#)

- **Malhotra–Kumar–Maheshwari blocking flow** (ru.)
- Manhattan distance
- many-one reduction
- Markov chain
- marriage problem (see [assignment problem](#))
- Master theorem
- matched edge
- matched vertex
- matching (graph theory)
- matrix
- **matrix-chain multiplication problem**
- max-heap property

- maximal independent set
- maximally connected component
- Maximal Shift
- maximum bipartite matching
- maximum-flow problem
- MAX-SNP
- Mealy machine
- mean
- median
- meld (data structures)
- memoization
- merge algorithm
- merge sort
- meromorphic function
- metaheuristic
- metaphone
- midrange
- Miller–Rabin primality test
- min-heap property
- minimal perfect hashing
- minimum bounding box (MBB)
- minimum cut
- minimum path cover
- minimum spanning tree
- minimum vertex cut
- mixed integer linear program
- mode
- model checking
- model of computation
- moderately exponential
- MODIFIND
- monotone priority queue
- monotonically decreasing
- monotonically increasing
- Monte Carlo algorithm
- Moore machine
- Morris-Pratt
- move (finite-state machine transition)
- move-to-front heuristic
- move-to-root heuristic
- multi-commodity flow
- multigraph
- multilayer grid file
- multiplication method
- multiprefix
- multiprocessor model
- multiset
- multi suffix tree
- multiway decision
- multiway merge
- multiway search tree
- multiway tree
- Munkres' assignment algorithm

N [\[edit\]](#)

- naive string search

- [nand](#)
- [n-ary function](#)
- [NC](#)
- [NC many-one reducibility](#)
- [nearest neighbor search](#)
- [negation](#)
- [network flow](#) (see [flow network](#))
- [network flow problem](#)
- [next state](#)
- [NIST](#)
- [node](#)
- [nonbalanced merge](#)
- [nonbalanced merge sort](#)
- [nondeterministic](#)
- [nondeterministic algorithm](#)
- [nondeterministic finite automaton](#)
- [nondeterministic finite state machine \(NFA\)](#)
- [nondeterministic finite tree automaton \(NFTA\)](#)
- [nondeterministic polynomial time](#)
- [nondeterministic tree automaton](#)
- [nondeterministic Turing machine](#)
- [nonterminal node](#)
- [nor](#)
- [not](#)
- [Not So Naive](#)
- [NP](#)
- [NP-complete](#)
- [NP-complete language](#)
- [NP-hard](#)
- [n queens](#)
- [nullary function](#)
- [null tree](#)
- [NYSIS](#)

O [\[edit\]](#)

- [objective function](#)
- [occurrence](#)
- [octree](#)
- [offline algorithm](#)
- [offset \(computer science\)](#)
- [omega](#)
- [omicron](#)
- [one-based indexing](#)
- [one-dimensional](#)
- [online algorithm](#)
- [open addressing](#)
- [optimal](#)
- [optimal cost](#)
- [optimal hashing](#)
- [optimal merge](#)
- [optimal mismatch](#)
- [optimal polygon triangulation problem](#)
- [optimal polyphase merge](#)
- [optimal polyphase merge sort](#)
- [optimal solution](#)
- [optimal triangulation problem](#)

- optimal value
- optimization problem
- or
- oracle set
- oracle tape
- oracle Turing machine
- Orders of approximation
- **ordered array**
- ordered binary decision diagram (OBDD)
- **ordered linked list**
- ordered tree
- **order preserving hash**
- **order preserving minimal perfect hashing**
- oriented acyclic graph
- oriented graph
- oriented tree
- **orthogonal drawing**
- **orthogonal lists**
- orthogonally convex rectilinear polygon
- oscillating merge sort
- **out-branching**
- out-degree
- overlapping subproblems

P [\[edit\]](#)

- packing (see [set packing](#))
- padding argument
- pagoda
- pairing heap
- PAM (point access method)
- parallel computation thesis
- **parallel prefix computation**
- Parallel Random Access Machine (PRAM)
- **parametric searching**
- parent
- partial function
- **partially decidable problem**
- **partially dynamic graph problem**
- partially ordered set
- partially persistent data structure
- partial order
- partial recursive function
- partition (set theory)
- passive data structure
- patience sorting
- path (graph theory)
- path cover
- **path system problem**
- Patricia tree
- pattern
- **pattern element**
- P-complete
- PCP
- Peano curve
- Pearson's hash
- perfect binary tree

- perfect hashing
- perfect k-ary tree
- perfect matching
- perfect shuffle
- performance guarantee
- performance ratio
- permutation
- persistent data structure
- phonetic coding
- pile (data structure)
- pipelined divide and conquer
- planar graph
- planarization
- planar straight-line graph
- PLOP-hashing
- point access method
- pointer jumping
- pointer machine
- poissonization
- polychotomy
- polyhedron
- polylogarithmic
- polynomial
- polynomial-time approximation scheme (PTAS)
- polynomial hierarchy
- polynomial time
- polynomial-time Church–Turing thesis
- polynomial-time reduction
- polyphase merge
- polyphase merge sort
- polytope
- poset
- postfix traversal
- Post machine (see Post–Turing machine)
- postman's sort
- postorder traversal
- Post's correspondence problem
- potential function (see potential method)
- predicate
- prefix
- prefix code
- prefix computation
- prefix sum
- prefix traversal
- preorder traversal
- primary clustering
- primitive recursive
- Prim's algorithm
- principle of optimality
- priority queue
- prisoner's dilemma
- PRNG
- probabilistic algorithm
- probabilistically checkable proof
- probabilistic Turing machine
- probe sequence
- Procedure (computer science)

- process algebra
- proper (see proper subset)
- proper binary tree
- proper coloring
- proper subset
- property list
- prune and search
- pseudo-random number generator
- pth order Fibonacci numbers
- P-tree
- purely functional language
- pushdown automaton (PDA)
- pushdown transducer
- p-way merge sort

Q [\[edit\]](#)

- qm sort
- q sort
- quadratic probing
- quadtree
- quadtree complexity theorem
- quad trie
- quantum computation
- queue
- quick search
- quicksort

R [\[edit\]](#)

- Rabin–Karp string search algorithm
- radix quicksort
- radix sort
- ragged matrix
- Raita algorithm
- random access machine
- random number generation
- randomization
- randomized algorithm
- randomized binary search tree
- randomized complexity
- randomized polynomial time
- randomized rounding
- randomized search tree
- Randomized-Select
- random number generator
- random sampling
- range (function)
- range sort
- Rank (graph theory)
- Ratcliff/Obershelp pattern recognition
- reachable
- rebalance
- recognizer
- rectangular matrix
- rectilinear
- rectilinear Steiner tree
- recurrence equations

- recurrence relation
- recursion
- recursion termination
- **recursion tree**
- recursive (computer science)
- recursive data structure
- recursive doubling
- recursive language
- recursively enumerable language
- **recursively solvable**
- red-black tree
- **reduced basis**
- **reduced digraph**
- reduced ordered binary decision diagram (ROBDD)
- reduction
- reflexive relation
- **regular decomposition**
- rehashing
- relation (mathematics)
- relational structure
- relative performance guarantee
- relaxation
- relaxed balance
- **rescalable**
- **restricted universe sort**
- result cache
- **Reverse Colussi**
- **Reverse Factor**
- **R-file**
- Rice's method
- right rotation
- right-threaded tree
- root
- root balance
- rooted tree
- **rotate left**
- **rotate right**
- rotation
- **rough graph**
- RP
- R+-tree
- R*-tree
- R-tree
- run time

S [\[edit\]](#)

- saguaro stack
- **saturated edge**
- SBB tree
- scan
- scapegoat tree
- search algorithm
- search tree
- search tree property
- secant search
- **secondary clustering**

- memory segment
- Select algorithm
- select and partition
- selection problem
- selection sort
- select kth element
- **select mode**
- self-loop
- self-organizing heuristic
- self-organizing list
- **self-organizing sequential search**
- semidefinite programming
- **separate chaining hashing**
- **separation theorem**
- sequential search
- Set (computer science)
- set cover
- set packing
- shadow heap
- **shadow merge**
- **shadow merge insert**
- shaker sort
- Shannon–Fano coding
- shared memory
- Shell sort
- Shift-Or
- Shor's algorithm
- **shortcutting**
- shortest common supersequence
- **shortest common superstring**
- shortest path
- shortest spanning tree
- shuffle
- shuffle sort
- sibling
- Sierpiński curve
- Sierpinski triangle
- sieve of Eratosthenes
- **sift up**
- signature
- Simon's algorithm
- **simple merge**
- simple path
- **simple uniform hashing**
- simplex communication
- simulated annealing
- **simulation theorem**
- single-destination shortest-path problem
- single-pair shortest-path problem
- single program multiple data
- single-source shortest-path problem
- singly linked list
- **singularity analysis**
- sink
- sinking sort
- **skd-tree**
- skew symmetry

- skip list
- skip search
- slope selection
- Smith algorithm
- Smith–Waterman algorithm
- smoothsort
- solvable problem
- sort algorithm
- sorted array
- sorted list
- sort in place
- **sort merge**
- soundex
- space-constructible function
- spanning tree
- sparse graph
- sparse matrix
- **sparsification**
- sparsity
- spatial access method
- spectral test
- splay tree
- SPMD
- square matrix
- square root
- SST (shortest spanning tree)
- stable
- stack (data structure)
- stack tree
- star-shaped polygon
- start state
- state
- state machine
- state transition
- **static data structure**
- **static Huffman encoding**
- s-t cut
- **st-digraph**
- Steiner minimum tree
- Steiner point
- Steiner ratio
- Steiner tree
- Steiner vertex
- Steinhaus–Johnson–Trotter algorithm
- Stirling's approximation
- Stirling's formula
- stooge sort
- **straight-line drawing**
- strand sort
- strictly decreasing
- strictly increasing
- strictly lower triangular matrix
- strictly upper triangular matrix
- string
- **string editing problem**
- string matching

- string matching on ordered alphabets
- string matching with errors
- string matching with mismatches
- string searching
- strip packing
- strongly connected component
- strongly connected graph
- strongly NP-hard
- subadditive ergodic theorem
- subgraph isomorphism
- sublinear time algorithm
- subsequence
- subset
- substring
- subtree
- suffix
- suffix array
- suffix automaton
- suffix tree
- superimposed code
- superset
- supersink
- supersource
- symmetric relation
- symmetrically linked list
- symmetric binary B-tree
- symmetric set difference
- symmetry breaking
- symmetric min max heap

T [\[edit\]](#)

- tail
- tail recursion
- target
- temporal logic
- terminal (see [Steiner tree](#))
- terminal node
- ternary search
- ternary search tree (TST)
- text searching
- theta
- threaded binary tree
- threaded tree
- three-dimensional
- three-way merge sort
- three-way radix quicksort
- time-constructible function
- time/space complexity
- top-down radix sort
- top-down tree automaton
- top-node
- topological order
- topological sort
- topology tree
- total function
- totally decidable language

- totally decidable problem
- totally undecidable problem
- total order
- tour
- tournament
- towers of Hanoi
- tractable problem
- transducer
- transition (see [finite-state machine](#))
- transition function (of a [finite-state machine](#) or [Turing machine](#))
- transitive relation
- transitive closure
- transitive reduction
- transpose sequential search
- travelling salesman problem (TSP)
- treap
- tree
- tree automaton
- tree contraction
- tree editing problem
- tree sort
- tree transducer
- tree traversal
- triangle inequality
- triconnected graph
- trie
- trinary function
- tripartition
- Turbo-BM
- Turbo Reverse Factor
- Turing machine
- Turing reduction
- Turing transducer
- twin grid file
- two-dimensional
- two-level grid file
- 2-3-4 tree
- 2-3 tree
- Two Way algorithm
- two-way linked list
- two-way merge sort

U [\[edit\]](#)

- unary function
- unbounded knapsack problem (UKP)
- uncomputable function
- uncomputable problem
- undecidable language
- undecidable problem
- undirected graph
- uniform circuit complexity
- uniform circuit family
- uniform hashing
- uniform matrix
- union
- union of automata

- [universal hashing](#)
- [universal state](#)
- [universal Turing machine](#)
- [universe](#)
- [unsolvable problem](#)
- [unsorted list](#)
- [upper triangular matrix](#)

V [\[edit\]](#)

- [van Emde Boas priority queue](#)
- [vehicle routing problem](#)
- [Veitch diagram](#)
- [Venn diagram](#)
- [vertex](#)
- [vertex coloring](#)
- [vertex connectivity](#)
- [vertex cover](#)
- [vertical visibility map](#)
- [virtual hashing](#)
- [visibility map](#)
- [visible \(geometry\)](#)
- [Viterbi algorithm](#)
- [VP-tree](#)
- [VRP \(vehicle routing problem\)](#)

W [\[edit\]](#)

- [walk](#)
- [weak cluster](#)
- [weak-heap](#)
- [weak-heap sort](#)
- [weight-balanced tree](#)
- [weighted, directed graph](#)
- [weighted graph](#)
- [window](#)
- [witness](#)
- [work-depth model](#)
- [work-efficient](#)
- [work-preserving](#)
- [worst case](#)
- [worst-case cost](#)
- [worst-case minimum access](#)

X [\[edit\]](#)

- [xor](#)

Y [\[edit\]](#)

- [Yule–Simon distribution](#)

Z [\[edit\]](#)

- [Zeller's congruence](#)
- [0-ary function](#)
- [0-based indexing](#)
- [0/1 knapsack problem](#)
- [Zhu–Takaoka string matching algorithm](#)
- [Zipfian distribution](#)

- [Zipf's law](#)
- [Zipper \(data structure\)](#)
- [ZPP](#)

Categories: [Lists of computer terms](#) | [Mathematics-related lists](#) | [Algorithms and data structures](#)

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