

Regular Expressions Glossary

- **ANN**, see *artificial neural network*.
- **Approximate Solution**, this is when someone is searching for a particular set of *Strings*, and if the *Regular Expression* successfully matches that set of *Strings*, but can also match to additional *Strings* that are not specifically being searched for. The opposite is a *Precise Solution*.
- **Artificial Neural Network**, a computer program that can learn and recognise patterns. They are inspired by biological brains.
- **AWK** is a scripting language that can be used to extract data from files, developed by Alfred Aho, Peter Weinberger, and Brian Kernighan in the 1970s.
- **C**, a programming language developed by Dennis Ritchie in the 1970s.
- **C++**, a programming language developed by Bjarne Stroustrup in the 1980s.
- **Case Sensitive**, this refers to a property of some computer programs that differentiates between Uppercase and Lowercase letters. So, for example, if the program treats the letter “D” as being different from the letter “d”, it is Case Sensitive, but if they are treated as being the same, it’s Case Insensitive.
- **Character**, a single letter, number or symbol.
- **Church–Turing Thesis**, a collection of mathematical approaches that explore which types of problems have a solution, and which ones do not.
- **Compatible Time-Sharing System**, an operating system developed by IBM and the Massachusetts Institute of Technology in the 1960s.
- **CTSS**, see *Compatible Time-Sharing System*.
- **ECMAScript**, a script programming language developed by Brendan Eich in the 1990s.
- **ed**, a text editor developed by Ken Thompson in the 1970s.
- **Emacs**, a text editor developed by David A. Moon, Guy L. Steele Jr., and Richard Stallman in the 1970s.
- **Empty String**, see *Null String*.

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- **Field-Programmable Gate Arrays**, a special form of integrated circuit that can be configured and after it has been manufactured.
- **FPGA**, see *Field-Programmable Gate Array*.
- **Graphics Processing Units**, a specialized electronic circuit designed to accelerate the display of images and video on a display device.
- **grep**, a command-line tool for searching files for text that matches a pattern on *Unix*-type operating systems, developed by Ken Thompson in the 1970s.
- **GPU**, see *Graphics Processing Unit*.
- **International Organization for Standardization**, an international standards organization made up of representatives from the national standards organizations of member countries. It was founded in 1947.
- **ISO**, see *International Organization for Standardization*.
- **ISO SGML**, an ISO standard for a general way to add categorizing codes to text files called the “Standard Generalized Markup Language”. It was based on work developed by Charles Goldfarb, Edward Mosher, and Raymond Lorie in the 1960s.
- **Java**, a programming language developed by James Gosling in the 1990s.
- **Lambda calculus (λ -calculus)**, a formal mathematical system of logic that models problems that have a solution. It was developed by Alonzo Church in the 1930s.
- **Library**, see *Software Library*.
- **Literal Character**, a *character* that is being searched for in a *string*.
- **Metacharacter**, a special *character* that can represent other *characters*.
- **McCulloch-Pitts neural network**, an *artificial neural network* that is a simple model (“caricature model”) of how biological brains work.
- **Null String**, A *String* with no characters in it (often expressed as “a *String* of zero length”). This is also called an *Empty String*.
- **Package**, see *Software Library*.

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- **Perl**, a script programming language developed by Larry Wall in the 1980s.
- **Portable Operating System Interface**, a family of standards specified by the IEEE Computer Society for maintaining compatibility between operating systems. It was released in 1988.
- **POSIX**, see *Portable Operating System Interface*.
- **PostgreSQL**, a *Relational Database Management System* developed by the PostgreSQL Global Development Group in the 1990s.
- **Precise Solution**, this is when someone is searching for a particular set of *Strings*, and if the *Regular Expression* successfully matches only to that exact set of *Strings*. The opposite is an *Approximate Solution*.
- **Python**, a programming language developed by Guido van Rossum in the 1980s.
- **QED**, a text editor developed by Butler Lampson, L. Peter Deutsch, and Dana Angluin in the 1960s.
- **RDBMS**, see *Relational Database Management System*.
- **Recursive Function**, a computer program where the number of times each part of the program will execute is known before the program runs.
- **RegEx**, another name for a *regular expression*.
- **RegExes**, a collection of *regular expressions*.
- **Regular Expression**, a special search pattern that can combine *literal characters* and *metacharacters*.
- **Relational Database Management System**, a system that stores and accesses data in tables that are highly structured. It is based on a structure defined by E. F. Codd in 1970.
- **sed**, a text editor developed by Lee E. McMahon in the 1970s.
- **Software Library**, a collection of functions that can be used by computer programs, but aren't built directly into the programming language.
- **SQL (Structured Query Language)**, a database design language used in managing databases. Developed by Donald Chamberlin and Raymond Boyce in the 1970s.

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- **String**, a piece of text made up of a sequence of *characters*. It is analogous to a string of pearls, where each pearl is a *character*.
- **Substring**, part of another *string*, or more formally, a contiguous sequence of *characters* within a *string*.
- **Theory of Computation**, a branch of theoretical computer science and mathematics that deals with which problems can be solved, and how efficiently.
- **Turing Machine**, a simple mathematical concept that models problems that have a solution. It was developed by Alan Turing in the 1930s.
- **Unix**, an operating system developed by Ken Thompson, Dennis Ritchie, Brian Kernighan, Douglas McIlroy, and Joe Ossanna in the 1960s.
- **vi**, a text editor developed by Bill Joy in the 1970s.