TIOBE Index for June 2024

June Headline: C++ surpasses C for the first time in history

C++ is the new number 2 in the TIOBE index. Originally, dubbed as the better and object-oriented version of C, it took C++ 39 years after its inception to beat C's popularity. C++ has never been that high in the TIOBE index, whereas C has never been that low. C++ started a new life as of 2011 with its consistent 3 yearly updates. Although most compilers and most engineers can't take up with this pace, it is considered a success to see the language evolve. The main strenghts of C++ are its performance and scalability. Its downside is its many ways to get things done, i.e. its rich idiom of features, which is caused by its long history and aim for backward compatibility. C++ is heavily used in embedded systems, game development and financial trading software, just to name a few domains. Other highlights of the TIOBE index this month are Go, which is at position #7 for the first time, and Rust with an all time high at position #17. --*Paul Jansen CEO TIOBE Software*

The TIOBE Programming Community index is an indicator of the popularity of programming languages. The index is updated once a month. The ratings are based on the number of skilled engineers world-wide, courses and third party vendors. Popular web sites Google, Amazon, Wikipedia, Bing and more than 20 others are used to calculate the ratings. It is important to note that the TIOBE index is not about the *best* programming language or the language in which *most lines of code* have been written.

Jun 2024	Jun 2023	Change	Programming Language
1	1		Python
2	3	↑	C++
3	2	↓	C
4	4		Java
5	5		C#
6	7	↑	JavaScript
7	14	⇈	Go
8	9	↑	SQL
9	6	↓	Visual Basic
10	15	⇈	Fortran
11	11		Delphi/Object P
12	19	⇈	Swift
13	10	↓	Assembly langu
14	12	↓	MATLAB
15	8	⇊	PHP
16	13	↓	Scratch
17	20	↑	Rust
18	18		Ruby

Jun 2024	Jun 2023	Change	Programming Language
19	29	⇈	Kotlin
20	22	↑	COBOL

Position	Programming Language
21	R
22	SAS
23	Dart
24	Prolog
25	Ada
26	D
27	Perl
28	Classic Visual Basic
29	Haskell
30	(Visual) FoxPro
31	Scala
32	Lua
33	Julia
34	GAMS
35	ML
36	Lisp
37	Objective-C
38	Transact-SQL
39	VBScript
40	ABAP
41	PowerShell
42	Scheme
43	Bash
44	Logo
45	LabVIEW

Position	Programming Language
46	F#
47	Solidity
48	Awk
49	PL/SQL
50	TypeScript

The index can be used to check whether your programming skills are still up to date or to make a strategic decision about what programming language should be adopted when starting to build a new software system. The definition of the TIOBE index can be found here.

Other programming languages

The complete top 50 of programming languages is listed below. This overview is published unofficially, because it could be the case that we missed a language. If you have the impression there is a programming language lacking, please notify us at tpci@tiobe.com. Please also check the overview of all programming languages that we monitor.

The Next 50 Programming Languages

The following list of languages denotes #51 to #100. Since the differences are relatively small, the programming languages are only listed (in alphabetical order).

- ABC, ActionScript, Apex, APL, AutoLISP, bc, CFML, Chapel, CHILL, CLIPS, Clojure, COMAL, Crystal, cT, Elixir, Erlang, Forth, Groovy, Hack, Icon, Inform, Io, J, JScript, Ladder Logic, Lingo, LPC, M4, MEL, Modula-2, Mojo, NATURAL, NetLogo, OpenCL, OpenEdge ABL, PowerScript, Programming Without Coding Technology, Q, RPG, Smalltalk, Smarty, SNOBOL, SPARK, SQR, VHDL, WebDNA, Wolfram, X++, X10,

Programming Language	2024	2019	2014	2009
Python	1	4	8	6
C	2	2	1	2
C++	3	3	4	3
Java	4	1	2	1
C#	5	6	5	7
JavaScript	6	7	9	9
Visual Basic	7	19	-	-
SQL	8	9	-	-
Go	9	17	34	-
PHP	10	8	6	5
Objective-C	32	10	3	36
Lisp	35	32	14	21
(Visual) Basic	-	-	7	4

yacc

Very Long Term History

To see the bigger picture, please find below the positions of the top 10 programming languages of many years back. Please note that these are *average* positions for a period of 12 months.

There are 2 important remarks here:

- There is a difference between "Visual Basic" and "(Visual) Basic" in the table above. Until 2010, "(Visual) Basic" referred to all possible dialects of Basic, including Visual Basic. After some discussion, it has been decided to split "(Visual) Basic" into all its dialects such as Visual Basic .NET, Classic Visual Basic, PureBasic, and Small Basic, just to name a few. Since Visual Basic .NET has become the major implementation of Visual Basic, it is now called "Visual Basic".
- The programming language SQL was added to the TIOBE index in 2018 after somebody pointed out that SQL is Turing Complete. So although this language is very old, it has only a short history in the index.

Year	Winner
2023	C#
2022	C++
2021	Python
2020	Python
2019	C
2018	Python
2017	C
2016	Go

2015	Java
2014	JavaScript
2013	Transact-SQL
2012	Objective-C
2011	Objective-C
2010	Python
2009	Go
2008	C
2007	Python
2006	Ruby
2005	Java
2004	PHP
2003	C++

Programming Language Hall of Fame

The hall of fame listing all "Programming Language of the Year" award winners is shown below. The award is given to the programming language that has the highest rise in ratings in a year.

Bugs & Change Requests

This is the top 5 of most requested changes and bugs. If you have any suggestions how to improve the index don't hesitate to send an e-mail to tpci@tiobe.com.

1. Apart from “<language> programming”, also other queries such as “programming with <language>”, “<language> development” and “<language> coding” should be tried out.
2. Add queries for other natural languages (apart from English). The idea is to start with the Chinese search engine Baidu. This has been implemented partially and will be completed the next few months.
3. Add a list of all search term requests that have been rejected. This is to minimize the number of recurring mails about Rails, JQuery, JSP, etc.
4. Start a TIOBE index for databases, software configuration management systems and application frameworks.
5. Some search engines allow to query pages that have been added last year. The TIOBE index should only track those recently added pages.