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## Latest news

[MORE NEWS \(/NEWS/\)](#)

October 2019

**Harman checks code quality**

Developer of connected car products Harman starts using TIOBE's TiCS framework to measure its code quality.

[\(https://www.harman.com/\)](https://www.harman.com/)

October 2019

**TomTom wins TIOBE QA Award**

The next generation NavKit2 project has the best TIOBE Quality Indicator (TQI) score of all TiCS projects.

[\(/tqi/awards/\)](/tqi/awards/)

September 2019

**TiCS 2019.3 released!**

TIOBE releases TiCS 2019.3.0 with over 90 improvements, i.e., Python 3 support, Visual Studio 2019 support.

[/https://portal.tio-be.com/2019.3/docs/#doc=ReleaseNotes.html%232019.3.0](https://portal.tio-be.com/2019.3/docs/#doc=ReleaseNotes.html%232019.3.0)[\(/rss.xml\)](/rss.xml)

## TIOBE Index for December 2019

### December Headline: The winners continue to win

TIOBE will announce the programming language of the year next month. There are 4 candidates for this title: Java (+1.3%), C (+1.8%), Python (+1.9%) and C# (+1.4%). These 4 languages are all in the top 5. Only C++ lost some ranking points in 2019. Python is top favorite for the title. It was already programming language of the year 2018, but its popularity keeps growing. This is mainly due to the lack of programmers in the world and the ease of learning this language if compared to other languages. C is also doing well thanks to the rise of Internet of Things. Why Java and C# are doing well is unclear, but it would be the first time that C# becomes the programming language of the year. Let's see what will happen next month!

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 search engines such as Google, Bing, Yahoo!, Wikipedia, Amazon, YouTube and Baidu 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.

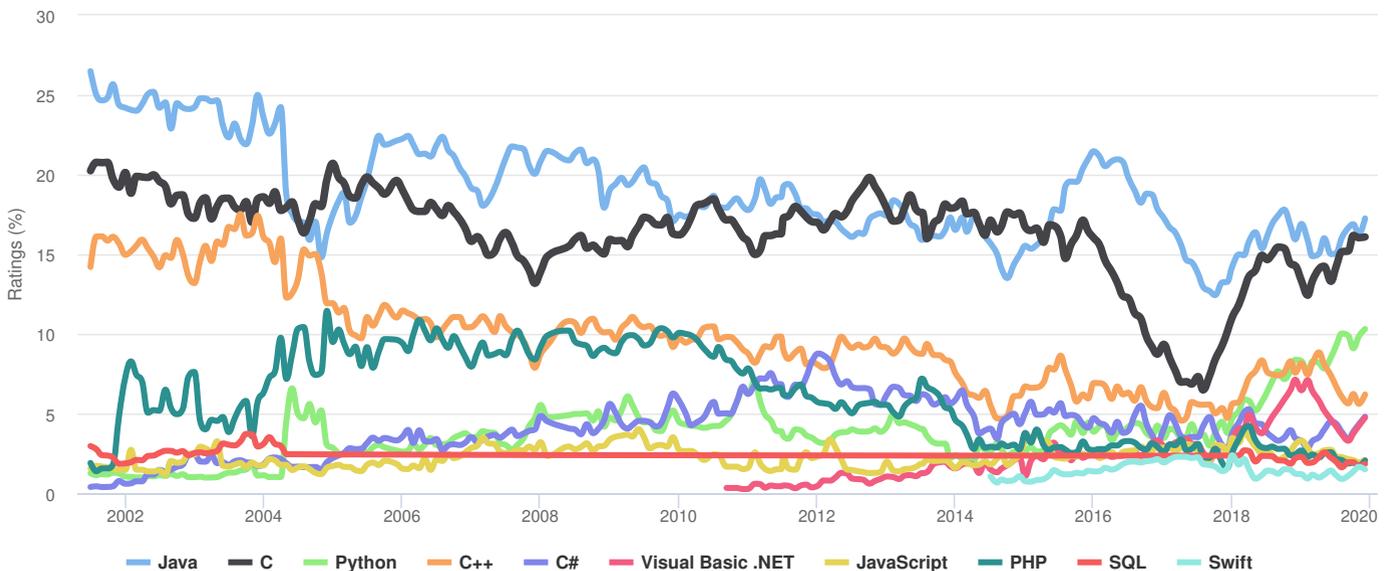
The index can be used to check whether your programming skills are still up to date or to make a strategic decision about what programming language should be adopted when starting to build a new software system. The definition of the TIOBE index can be found [here \(/programming-languages-definition/\)](/programming-languages-definition/).

Dec 2019	Dec 2018	Change	Programming Language	Ratings	Change
1	1		Java	17.253%	+1.32%
2	2		C	16.086%	+1.80%
3	3		Python	10.308%	+1.93%
4	4		C++	6.196%	-1.37%
5	6	▲	C#	4.801%	+1.35%
6	5	▼	Visual Basic .NET	4.743%	-2.38%
7	7		JavaScript	2.090%	-0.57%
8	8		PHP	2.048%	-0.39%

2019 Index	2018 Index	Change	Programming Language	Rating	Change
9	9		SQL	1.843%	-0.34%
10	14	⬆️	Swift	1.490%	+0.27%
11	17	⬆️	Ruby	1.314%	+0.21%
12	11	⬆️	Delphi/Object Pascal	1.280%	-0.12%
13	10	⬆️	Objective-C	1.204%	-0.27%
14	12	⬆️	Assembly language	1.067%	-0.30%
15	15		Go	0.995%	-0.19%
16	16		R	0.995%	-0.12%
17	13	⬆️	MATLAB	0.986%	-0.30%
18	25	⬆️	D	0.930%	+0.42%
19	19		Visual Basic	0.929%	-0.05%
20	18	⬆️	Perl	0.899%	-0.11%

### TIOBE Programming Community Index

Source: [www.tiobe.com](http://www.tiobe.com)



## 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](mailto:tpci@tiobe.com) (mailto:tpci@tiobe.com). Please also check the [overview of all programming languages](#) (./programming-languages-definition/#instances) that we monitor.

Position	Programming Language	Ratings
21	SAS	0.845%
22	Groovy	0.837%
23	Dart	0.812%
24	PL/SQL	0.748%
25	Scratch	0.544%

26	Scala	0.542%
27	Lisp	0.465%
28	COBOL	0.416%
29	Fortran	0.389%
30	Kotlin	0.377%
31	Rust	0.370%
32	Transact-SQL	0.323%
33	Logo	0.312%
34	ABAP	0.308%
35	Lua	0.304%
36	Ada	0.299%
37	TypeScript	0.281%
38	RPG	0.268%
39	ML	0.252%
40	PowerShell	0.246%
41	Haskell	0.240%
42	LabVIEW	0.224%
43	Julia	0.219%
44	Scheme	0.203%
45	Hack	0.198%
46	OpenEdge ABL	0.192%
47	ActionScript	0.183%
48	LiveCode	0.177%
49	F#	0.176%
50	Prolog	0.174%

## 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).

- (Visual) FoxPro, 4th Dimension/4D, ABC, Alice, Apex, Avenue, Awk, Bash, bc, Boo, Bourne shell, C++/CLI, CL (OS/400), Clojure, Common Lisp, Crystal, cT, Curl, Elixir, Erlang, Factor, Forth, Icon, Inform, Io, J, J#, Ladder Logic, Maple, Monkey, MQL4, NATURAL, OpenCL, Oz, PL/I, PostScript, Programming Without Coding Technology, Pure Data, Red, Ring, S, SPARK, Standard ML, Tcl, Vala/Genie, VBScript, VHDL, WebAssembly, XC, Z shell

## This Month's Changes in the Index

This month the following changes have been made to the definition of the index:

3 of 6

- There are lots of mails that still need to be processed. As soon as there is more time available your mail will be answered. Please be patient.

12/15/19, 4:18 PM

# 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.

Programming Language	2019	2014	2009	2004	1999	1994	1989	1984
Java	1	2	1	2	3	-	-	-
C	2	1	2	1	1	1	1	1
Python	3	7	6	6	22	21	-	-
C++	4	4	3	3	2	2	2	12
Visual Basic .NET	5	9	-	-	-	-	-	-
C#	6	5	5	8	11	-	-	-
JavaScript	7	8	8	9	8	-	-	-
PHP	8	6	4	5	29	-	-	-
SQL	9	-	-	97	-	-	-	-
Objective-C	10	3	25	35	-	-	-	-
Lisp	31	17	16	12	17	5	3	2
Ada	35	31	24	15	10	6	4	3
Pascal	221	15	13	80	7	3	20	5

## 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.

Year	Winner
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

## 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](mailto:tpci@tiobe.com) (<mailto: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.

## Frequently Asked Questions (FAQ)

- *Q: Am I allowed to show the TIOBE index in my weblog/presentation/publication?*  
A: Yes, the only condition is to refer to its original source "www.tiobe.com".
- *Q: How may I nominate a new language to be added to the TIOBE index?*  
A: If a language meets the criteria of being listed (i.e. it is Turing complete and has an own Wikipedia entry that indicates that it concerns a programming language) and it is sufficiently popular (more than 5,000 hits for "+<language> programming" for Google), then please write an e-mail to [tpci@tiobe.com](mailto:tpci@tiobe.com) (<mailto:tpci@tiobe.com>).
- *Q: I would like to have the complete data set of the TIOBE index. Is this possible?*  
A: We spent a lot of effort to obtain all the data and keep the TIOBE index up to date. In order to compensate a bit for this, we ask a fee of 5,000 US\$ for the complete data set. The data set runs from June 2001 till today. It started with 25 languages back in 2001, and now measures more than 150 languages once a month. The data are available in comma separated format. Please contact [sales@tiobe.com](mailto:sales@tiobe.com) (<mailto:sales@tiobe.com>) for more information.
- *Q: Why is the maximum taken to calculate the ranking for a grouping, why not the sum?*  
A: Well, you can do it either way and both are wrong. If you take the sum, then you get the intersection twice. If you take the max, then you miss the difference. Which one to choose? Suppose somebody comes up with a new search term that is 10% of the original. If you take the max, nothing changes. If you take the sum then the ratings will rise 10%. So taking the sum will be an incentive for some to come up with all kinds of obscure terms for a language. That's why we decided to take the max.  
  
The proper way to solve this is of course to take the sum and subtract the intersection. This will give rise to an explosion of extra queries that must be performed. Suppose a language has a grouping of 15 terms, then you have to perform 32,768 queries (all combinations of intersections). So this seems not possible either... If somebody has a solution for this, please let us know.
- *Q: What happened to Java in April 2004? Did you change your methodology?*  
A: No, we did not change our methodology at that time. Google changed its methodology. They performed a general sweep action to get rid of all kinds of web sites that had been pushed up. As a consequence, there was a huge drop for languages such as Java and C++. In order to minimize such fluctuations in the future, we added two more search engines (MSN and Yahoo) a few months after this incident.

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