(./rss.xml)

TIOBE Index for February 2022

February Headline: TIOBE index top 3 benefits from technology changes

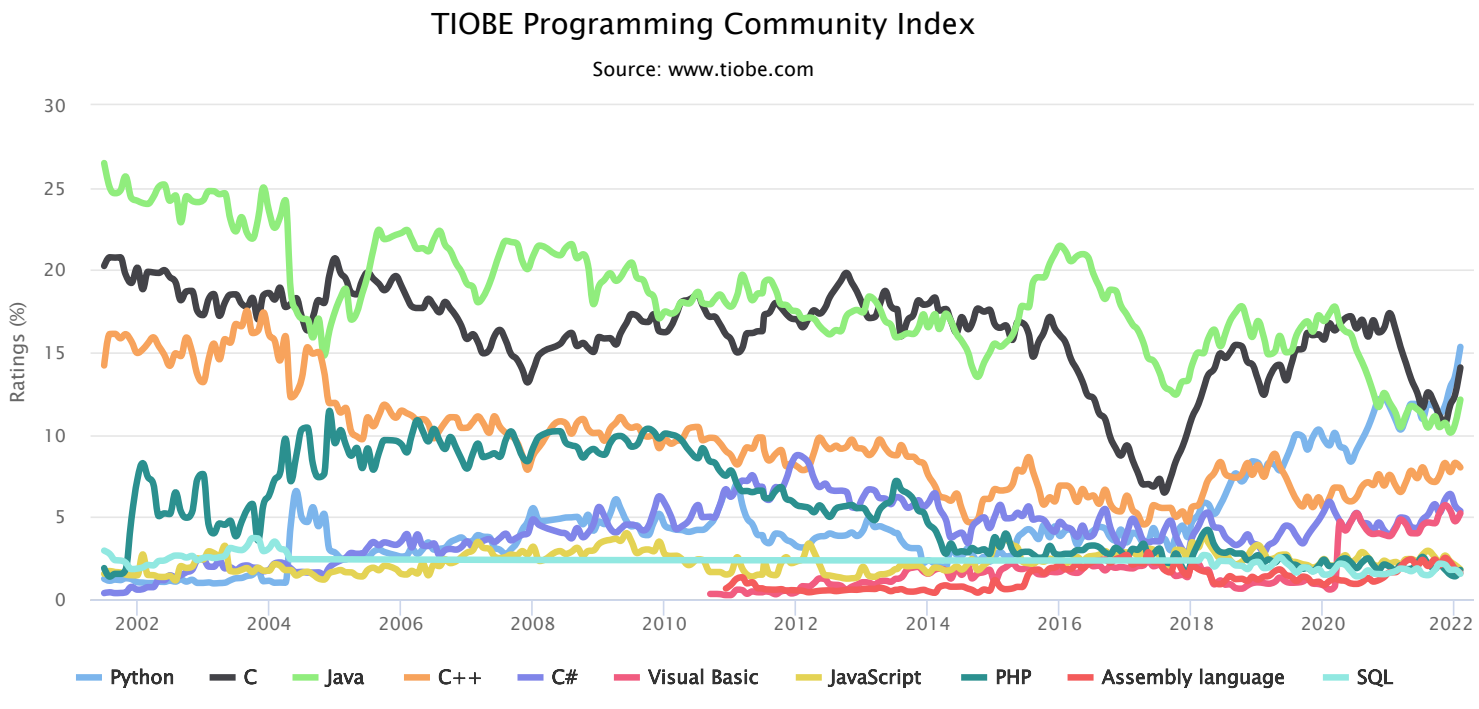
As of the 1st of May, the Alexa web traffic ranking engine is going to stop its services. Alexa was used to select the search engines for the TIOBE index until now. So now something has to change. Similarweb has been chosen as the alternative for Alexa. We have used Similarweb for the first time this month to select search engines and fortunately, there are no big changes in the index due to this swap. The only striking difference is that the top 3 languages, Python, C, and Java, all gained more than 1 percent in the rankings. We are still fine-tuning the integration with Similarweb, which is combined with a shift to HtmlUnit in the back-end. Some websites are not onboarded yet, but will follow soon. Now that HtmlUnit is applied for web crawling, it will become possible to add more sites to the index, such as Stackoverflow and Github. This will hopefully happen in the next few months. *--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 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/).

Feb 2022	Feb 2021	Change	Programming Language	Ratings	Change
1	3	↑	Python	15.33%	+4.47%
2	1	↓	C	14.08%	-2.26%
3	2	↓	Java	12.13%	+0.84%
4	4		C++	8.01%	+1.13%
5	5		C#	5.37%	+0.93%
6	6		Visual Basic	5.23%	+0.90%
7	7		JavaScript	1.83%	-0.45%
8	8		PHP	1.79%	+0.04%

Feb 2022	Feb 2021	Change	Programming Language	Ratings	Change
9	10	↑	Assembly language	1.60%	-0.06%
10	9	↓	SQL	1.55%	-0.18%
11	13	↑	Go	1.23%	-0.05%
12	15	↑	Swift	1.18%	+0.04%
13	11	↓	R	1.11%	-0.45%
14	16	↑	MATLAB	1.03%	-0.03%
15	17	↑	Delphi/Object Pascal	0.90%	-0.12%
16	14	↓	Ruby	0.89%	-0.35%
17	18	↑	Classic Visual Basic	0.83%	-0.18%
18	20	↑	Objective-C	0.81%	-0.08%
19	19		Perl	0.79%	-0.13%
20	12	⇊	Groovy	0.74%	-0.76%



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). Please also check the overview of all programming languages (./programming-languages-definition/#instances) that we monitor.

Position	Programming Language	Ratings
21	SAS	0.66%
22	Scratch	0.64%
23	Fortran	0.58%
24	Rust	0.54%
25	(Visual) FoxPro	0.52%
26	COBOL	0.42%
27	Dart	0.42%
28	Kotlin	0.41%
29	Lua	0.40%
30	Julia	0.40%
31	Prolog	0.39%
32	Ada	0.39%
33	PL/SQL	0.37%
34	ABAP	0.35%
35	Lisp	0.34%
36	D	0.32%
37	Scala	0.26%
38	TypeScript	0.21%
39	VBScript	0.21%
40	LabVIEW	0.21%
41	Scheme	0.20%
42	Awk	0.18%
43	Ladder Logic	0.18%
44	Apex	0.18%
45	PowerShell	0.18%
46	Logo	0.18%
47	Haskell	0.17%
48	Bash	0.17%
49	RPG	0.16%
50	ML	0.16%

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).

- ActionScript, Alice, APL, Arc, AspectJ, Avenue, B4X, bc, BCPL, Bourne shell, C shell, C++/CLI, CLIPS, Dylan, Elixir, Elm, Erlang, F#, Icon, IDL, Inform, Io, J#, Korn shell, Lingo, M4, MEL, MQL4, MUMPS, Nim, Oberon, OCaml, OpenCL, Oz, Pike, Pure Data, Q, Racket, REXX, Ring, Simulink, Snap!, Solidity, SPARK, Stata, Tcl, Transact-SQL, VHDL, XBase++, Xojo

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This Month's Changes in the Index

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

- 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.

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	2022	2017	2012	2007	2002	1997	1992	1987
C	1	2	2	2	2	1	1	1
Python	2	5	8	7	12	28	-	-
Java	3	1	1	1	1	16	-	-
C++	4	3	3	3	3	2	2	4
C#	5	4	4	8	14	-	-	-
Visual Basic	6	14	-	-	-	-	-	-
JavaScript	7	7	10	9	9	21	-	-
Assembly language	8	10	-	-	-	-	-	-
PHP	9	6	5	5	8	-	-	-
SQL	10	-	-	-	34	-	-	-
Prolog	24	33	43	27	28	19	13	3
Lisp	32	30	13	14	11	11	11	2
Pascal	271	97	15	20	18	6	3	6
(Visual) Basic	-	-	7	4	4	3	7	5

There are 2 important remarks here:

1. 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".
2. The programming language SQL has not been in the TIOBE index for a long time. In 2018, somebody pointed out that SQL is Turing Complete. From that moment on, SQL is part of the TIOBE index. So although this language is very old, it has only a short history in the index.

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
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++

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).

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).

- *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) 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 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.

Latest news

MORE NEWS (/NEWS/)

January 2022
ECB assessment
TIOBE has conducted a TUViT Trusted Product Maintainability assessment for the European Central Bank (ECB).

(https://www.ecb.europa.eu)

January 2022
TIOBE evaluation body TUViT
TUViT and TIOBE join forces to measure Trusted Product Maintainability according to the ISO/IEC 25010 model.

(https://www.tuvit.de/de/leistungen/zertifizierung/anerkannte-pruefstellen/)

January 2022
Python Language of Year 2021
Programming language Python is the language of 2021 in the TIOBE index (most increase in ratings in one year).

(/tiobe-index/)

TIOBE checks more than 1056 million lines of software code for its customers world-wide, realtime, each day.

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Victory House II, Esp 401, 5633 AJ Eindhoven, The Netherlands +31 40 400 2800 info@tiobe.com (mailto:info@tiobe.com)