**Git** ([/ɡɪt/](https://en.wikipedia.org/wiki/Help:IPA/English))[[7]](https://en.wikipedia.org/wiki/Git#cite_note-:0-7) is software for tracking changes in any set of [files](https://en.wikipedia.org/wiki/Computer_file), usually used for coordinating work among [programmers](https://en.wikipedia.org/wiki/Programmer) collaboratively developing [source code](https://en.wikipedia.org/wiki/Source_code) during [software development](https://en.wikipedia.org/wiki/Software_development). Its goals include speed, [data integrity](https://en.wikipedia.org/wiki/Data_integrity), and support for distributed, non-linear workflows (thousands of parallel branches running on different systems).[[8]](https://en.wikipedia.org/wiki/Git#cite_note-kernel_SCM_saga-8)[[9]](https://en.wikipedia.org/wiki/Git#cite_note-integrity_goals-9)[[10]](https://en.wikipedia.org/wiki/Git#cite_note-linusGoogleTalk-10)

Git was created by [Linus Torvalds](https://en.wikipedia.org/wiki/Linus_Torvalds) in 2005 for development of the [Linux kernel](https://en.wikipedia.org/wiki/Linux_kernel), with other kernel developers contributing to its initial development.[[11]](https://en.wikipedia.org/wiki/Git#cite_note-pro-git-1.2-11) Since 2005, Junio Hamano has been the core maintainer. As with most other [distributed version control](https://en.wikipedia.org/wiki/Distributed_version_control) systems, and unlike most [client–server](https://en.wikipedia.org/wiki/Client%E2%80%93server) systems, every Git [directory](https://en.wikipedia.org/wiki/Directory_(computing)) on every [computer](https://en.wikipedia.org/wiki/Node_(networking)) is a full-fledged [repository](https://en.wikipedia.org/wiki/Repository_(version_control)) with complete history and full version-tracking abilities, independent of network access or a central server.[[12]](https://en.wikipedia.org/wiki/Git#cite_note-12) Git is [free and open-source software](https://en.wikipedia.org/wiki/Free_and_open-source_software) distributed under [GNU General Public License Version 2](https://en.wikipedia.org/wiki/GNU_General_Public_License#Version_2).

History[[edit](https://en.wikipedia.org/w/index.php?title=Git&action=edit&section=1)]

Git development began in April 2005, after many developers of the [Linux kernel](https://en.wikipedia.org/wiki/Linux_kernel) gave up access to [BitKeeper](https://en.wikipedia.org/wiki/BitKeeper), a proprietary source-control management (SCM) system that they had been using to maintain the project since 2002.[[13]](https://en.wikipedia.org/wiki/Git#cite_note-13)[[14]](https://en.wikipedia.org/wiki/Git#cite_note-linux.com44147-14) The copyright holder of BitKeeper, [Larry McVoy](https://en.wikipedia.org/wiki/Larry_McVoy), had withdrawn free use of the product after claiming that [Andrew Tridgell](https://en.wikipedia.org/wiki/Andrew_Tridgell) had created [SourcePuller](https://en.wikipedia.org/wiki/SourcePuller) by [reverse engineering](https://en.wikipedia.org/wiki/Reverse_engineering) the BitKeeper protocols.[[15]](https://en.wikipedia.org/wiki/Git#cite_note-15) The same incident also spurred the creation of another version-control system, [Mercurial](https://en.wikipedia.org/wiki/Mercurial).

[Linus Torvalds](https://en.wikipedia.org/wiki/Linus_Torvalds) wanted a distributed system that he could use like BitKeeper, but none of the available free systems met his needs. Torvalds cited an example of a source-control management system needing 30 seconds to apply a patch and update all associated metadata, and noted that this would not scale to the needs of Linux kernel development, where synchronizing with fellow maintainers could require 250 such actions at once. For his design criterion, he specified that patching should take no more than three seconds, and added three more points:[[8]](https://en.wikipedia.org/wiki/Git#cite_note-kernel_SCM_saga-8)

* Take [Concurrent Versions System](https://en.wikipedia.org/wiki/Concurrent_Versions_System) (CVS) as an example of what *not* to do; if in doubt, make the exact opposite decision.[[10]](https://en.wikipedia.org/wiki/Git#cite_note-linusGoogleTalk-10)
* Support a distributed, [BitKeeper](https://en.wikipedia.org/wiki/BitKeeper)-like workflow.[[10]](https://en.wikipedia.org/wiki/Git#cite_note-linusGoogleTalk-10)
* Include very strong safeguards against corruption, either accidental or malicious.[[9]](https://en.wikipedia.org/wiki/Git#cite_note-integrity_goals-9)

These criteria eliminated every version-control system in use at the time, so immediately after the 2.6.12-rc2 Linux kernel development release, Torvalds set out to write his own.[[10]](https://en.wikipedia.org/wiki/Git#cite_note-linusGoogleTalk-10)

The development of Git began on 3 April 2005.[[16]](https://en.wikipedia.org/wiki/Git#cite_note-selfhost-16) Torvalds announced the project on 6 April and became [self-hosting](https://en.wikipedia.org/wiki/Self-hosting_(compilers)) the next day.[[17]](https://en.wikipedia.org/wiki/Git#cite_note-17)[[16]](https://en.wikipedia.org/wiki/Git#cite_note-selfhost-16) The first merge of multiple branches took place on 18 April.[[18]](https://en.wikipedia.org/wiki/Git#cite_note-18) Torvalds achieved his performance goals; on 29 April, the nascent Git was benchmarked recording patches to the Linux kernel tree at the rate of 6.7 patches per second.[[19]](https://en.wikipedia.org/wiki/Git#cite_note-19) On 16 June, Git managed the kernel 2.6.12 release.[[20]](https://en.wikipedia.org/wiki/Git#cite_note-20)

Torvalds turned over [maintenance](https://en.wikipedia.org/wiki/Software_maintenance) on 26 July 2005 to Junio Hamano, a major contributor to the project.[[21]](https://en.wikipedia.org/wiki/Git#cite_note-21) Hamano was responsible for the 1.0 release on 21 December 2005 and remains the project's core maintainer.[[22]](https://en.wikipedia.org/wiki/Git#cite_note-22)

**Naming**[[edit](https://en.wikipedia.org/w/index.php?title=Git&action=edit&section=2)]

Torvalds sarcastically quipped about the name *git* (which means "unpleasant person" in [British English](https://en.wikipedia.org/wiki/British_English) slang): "I'm an egotistical bastard, and I name all my projects after myself. First '[Linux](https://en.wikipedia.org/wiki/Linux_kernel)', now 'git'."[[23]](https://en.wikipedia.org/wiki/Git#cite_note-whythegitname-23)[[24]](https://en.wikipedia.org/wiki/Git#cite_note-24) The [man page](https://en.wikipedia.org/wiki/Man_page) describes Git as "the stupid content tracker".[[25]](https://en.wikipedia.org/wiki/Git#cite_note-25) The read-me file of the source code elaborates further:[[26]](https://en.wikipedia.org/wiki/Git#cite_note-26)

"git" can mean anything, depending on your mood.

* Random three-letter combination that is pronounceable, and not actually used by any common UNIX command. The fact that it is a mispronunciation of "get" may or may not be relevant.
* Stupid. Contemptible and despicable. Simple. Take your pick from the dictionary of slang.
* "Global information tracker": you're in a good mood, and it actually works for you. Angels sing, and a light suddenly fills the room.
* "Goddamn idiotic truckload of sh\*t": when it breaks.