

What is GitHub?

GitHub is a web-based interface that uses Git, the open source version control software that lets multiple people make separate changes to web pages at the same time. As Carpenter notes, because it allows for real-time collaboration, GitHub encourages teams to work together to build and edit their site content.

Git is used to store the source code for a project and track the complete history of all changes to that code. It allows developers to collaborate on a project more effectively by providing tools for managing possibly conflicting changes from multiple developers. GitHub allows developers to change, adapt and improve software from its public repositories for free, but it charges for private repositories, offering various paid plans. Each public or private repository contains all of a project's files, as well as each file's revision history. Repositories can have multiple collaborators and can be either public or private.

GitHub facilitates social coding by providing a web interface to the Git code repository and management tools for collaboration. GitHub can be thought of as a serious social networking site for software developers. Members can follow each other, rate each other's work, receive updates for specific projects and communicate publicly or privately.

Three important terms used by developers in GitHub are fork, pull request and merge. A *fork*, also known as a *branch*, is simply a repository that has been copied from one member's account to another member's account. Forks and branches allow a developer to make modifications without affecting the original code. If the developer would like to share the modifications, she can send a *pull request* to the owner of the original repository. If, after reviewing the modifications, the original owner would like to pull the modifications into the repository, she can accept the modifications and *merge* them with the original repository. Commits are, by default, all retained and interleaved onto the master project, or can be combined into a simpler merge via commit squashing.