

# Getting Started with Git and GitHub

## Module 2 Cheat Sheet: Git Commands and Managing GitHub Projects



# Skills Network

Package/Method	Description	Code Example
<b>git add</b>	Used to move changes from the working directory to the staging area	<code>git add sample.md</code>
<b>git add .</b>	Allows to move the changed files into the staging area on GitHub repositories	<code>git add .</code>

Package/Method	Description	Code Example
git am	Used to apply patches emailed to the repository	<code>git am &lt; patchfile.patch</code>
git branch	Allows to create an isolated environment within the repository to make changes	<code>git branch &lt;new-branch&gt;</code>
git checkout	Allows to see and change existing branches	<code>git checkout &lt;existing-branch&gt;</code>
git checkout main	Allows to switch to the main branch	<code>git checkout main</code>
git clone	Allows to create a copy of the remote repository	<code>git clone &lt;repository-url&gt;</code>
git commit	Allows you to take staged snapshots if changes and commit them to the project	<code>git commit -m "Your commit message here"</code>

Package/Method	Description	Code Example
<b>git config --global user.email</b>	Example 1: Sets a global email configuration for Git Example 2: Sets a global username configuration for Git	Example 1: <code>git config --global user.email "your.email@example.com"</code>  Example 2: <code>git config --global user.name "Your Name"</code>
<b>git daemon</b>	Used to allow anonymous download from the repository	<code>git daemon --reuseaddr --verbose</code>
<b>git diff</b>	Helps others to review your code to identify and compare the changes	<code>git diff example.txt</code>
<b>git fetch</b>	Used to transfer the changes from the remote repo to your local repo	<code>git fetch &lt;options&gt; &lt;remote name&gt; &lt;branch name&gt;</code>

Package/Method	Description	Code Example
<b>git fetch upstream/main</b>	Used to grab upstream branches	<code>git fetch upstream main:upstream-main</code>
<b>git format-patch</b>	Generates or prepares e-mail submission if you adopt Linux kernel-style public forum workflow	<code>git format-patch -n &lt;number_of_commits&gt;</code>
<b>git http-backend</b>	Provides a server-side implementation of Git-over-HTTP, allowing both fetch and push services	<code>git clone --bare /path/to/repos/myrepo.git</code> <code>cd myrepo.git</code> <code>git update-server-info</code>
<b>git init</b>	Used to clone an existing repository	<code>git init &lt;directory&gt;</code>
<b>git instaweb</b>	Allows to set up web front-end to Git repositories	<code>git instaweb -p 8080</code>

Package/Method	Description	Code Example
<b>git log</b>	Enables to browse previous changes to a project	<code>git log -p filename</code>
<b>git merge</b>	Used to merge changes in the active branch into another branch	<code>git merge feature_branch</code>
<b>git merge upstream/main</b>	Merges changes from the 'upstream/main' branch to the current branch	<code>git merge upstream/main</code>
<b>git pull</b>	Used to transfer the changes from the remote repo to your local repo, and merge them to a branch	<code>git pull origin main</code>
<b>git pull downstream</b>	Pulls changes from a downstream repository, specifically from the main branch of that repository	<code>git pull downstream main</code>
<b>git pull upstream</b>	Pulls changes from the "upstream" repository into the current branch	<code>git pull upstream main</code>

Package/Method	Description	Code Example
<b>git push</b>	Used to push all the committed changes into the repository	<code>git push origin your_branch_name</code>
<b>git remote</b>	A command to manage a set of tracked repositories	<code>git remote add upstream https://github.com/original/repo.git</code>
<b>git remote add origin &lt;URL&gt;</b>	Adds a remote repository named "origin" with the specified URL	<code>git remote add origin https://github.com/yourusername/your-repo.git</code>
<b>git remote add upstream</b>	Adds the original repository as a new remote repository labeled upstream	<code>git remote add upstream https://github.com/original/repo.git</code>
<b>git remote rename</b>	The git remote rename command is followed by the name of the remote repository(origin) you want to rename and the new name(upstream) you want to give it	<code>git remote rename origin new-origin</code>

Package/Method	Description	Code Example
git remote -v	Allows to view the remotes associated with the local repository	git remote -v
git request-pull	Example 1: Creates a summary of changes for your upstream to pull Example 2: Generates a summary of pending changes for an email request	Example 1: git request-pull origin/main your-branch  Example 2: git request-pull <base> <head> <repository>
git rerere	Reuses recorded resolution of previously resolved merge conflicts	git rerere git rerere diff
git reset	Undoes changes that were made to the files in your working directory	git reset HEAD~1

Package/Method	Description	Code Example
git revert	Used to undo botched commits	git revert HEAD
git send-email	Example 1: Sends your email submission without corruption by your MUA Example 2: Sends a collection of patches as emails	Example 1:  git send-email --to=recipient@example.com path/to/patchfile.patch  Example 2:  git send-email --to recipient@example.com patches/*.patch
git-shell	Used as a restricted login shell for shared central repository users	sudo usermod -s /usr/bin/git-shell gituser
git status	Allows to see the state of your working directory and the staged snapshot of the changes	git status



Package/Method	Description	Code Example
git version	Displays the current Git version installed on your system	git --version