# Using Git and Collaborating with others on GitHub

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## Introduction

This guide is meant for beginners and will help you learn the basics of how to use git and how to work with and add to a GitHub repository. Feel free to look over the Git Commands and Git Vocabulary files located in How to Use Git repository to get a better understanding of the commands we are going to use here.

To use this guide follow the numbered instructions. Following the guide will lead you to making your first contribution to a GitHub repository. While using this guide it will be best to type out all the commands instead of just copy and pasting so you get as much hands on typing as possible. Any instructions that are preceded by a ** are extra credit but will be very beneficial.

If the commands are confusing please refer to appendix A to see how to read them.

## Instructions

### 1. Create a Github Account

-Go to https://GitHub.com and create your free GitHub account

### 2. Install Git on Your Computer

-Windows/Linux/MacOS go to https://git-scm.com/downloads
-If the link above does not work, google git then click on the link with the url http://git-scm.com
-For Apple computers it will be significantly more complicated but i suggest following the instructions that include installing homebrew.

### 3. Create a Folder/Directory

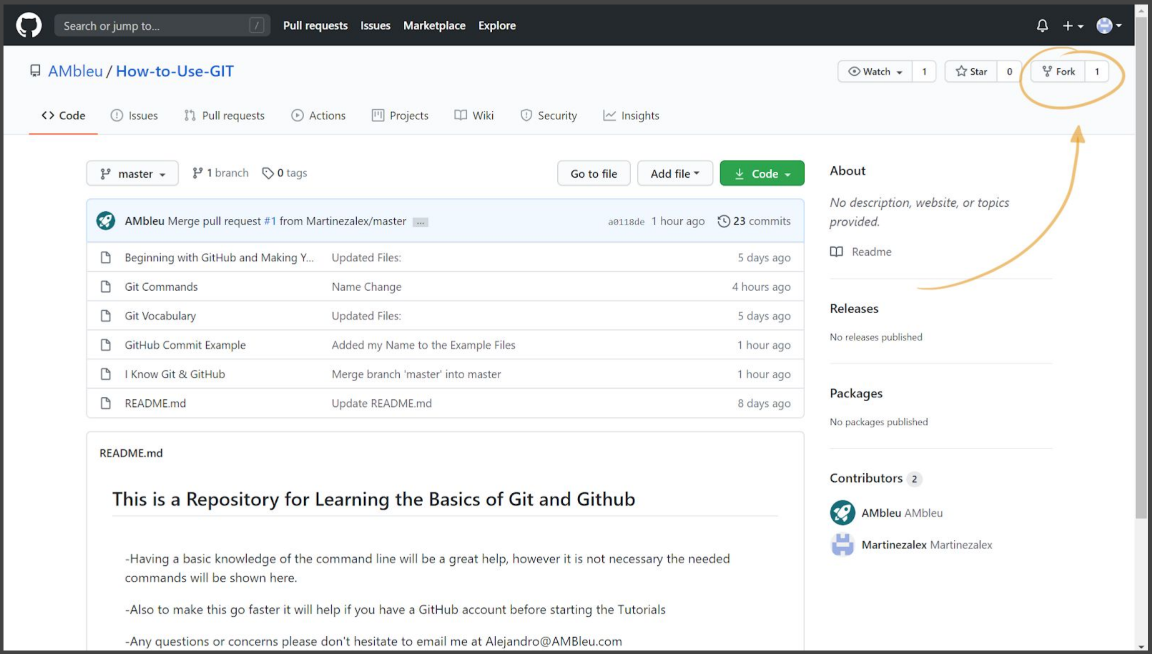
-Create a Folder/Directory in your user directory called GitRepos.

**Create the Folder/Directory using the Command Line/Terminal

| Command to Enter | Description on What Command Does |
|---|---|
| cd | :Using this command by itself changes current directory to your default user directory |
| pwd | :Prints the directory you are working in |
| ls -l | :Shows you all the items in your current directory the -l option list them neatly |
| mkdir GitRepos | :Makes the GitReops folder/directory in that directory |
| ls -l | :Compare this list to the previous one your GitRepos folder/directory should be here now |
| cd ./GitRepos | :moves you into the folder/directory you just created |
| pwd | :Prints out what directory your in, it should have a path and end with /GitRepos |

## 4. Fork - Creating a Copy of a GitHub Repository onto your GitHub

-On the Github page How-to-Use-Git you go to the top right of the page and select *Fork*, this creates a copy of the Repository onto your account. This is done if you want to contribute to a project and don't have permission to edit.
-Reference the photo below to see where the fork button is after you click on the link.



AMbleu Merge pull request #1 from Martinezalex/master … a0118de 1 hour ago 23 commits

| | | |
|---|---|---|
| Beginning with GitHub and Making Y... | Updated Files: | 5 days ago |
| Git Commands | Name Change | 4 hours ago |
| Git Vocabulary | Updated Files: | 5 days ago |
| GitHub Commit Example | Added my Name to the Example Files | 1 hour ago |
| I Know Git & GitHub | Merge branch 'master' into master | 1 hour ago |
| README.md | Update README.md | 8 days ago |

README.md

This is a Repository for Learning the Basics of Git and Github

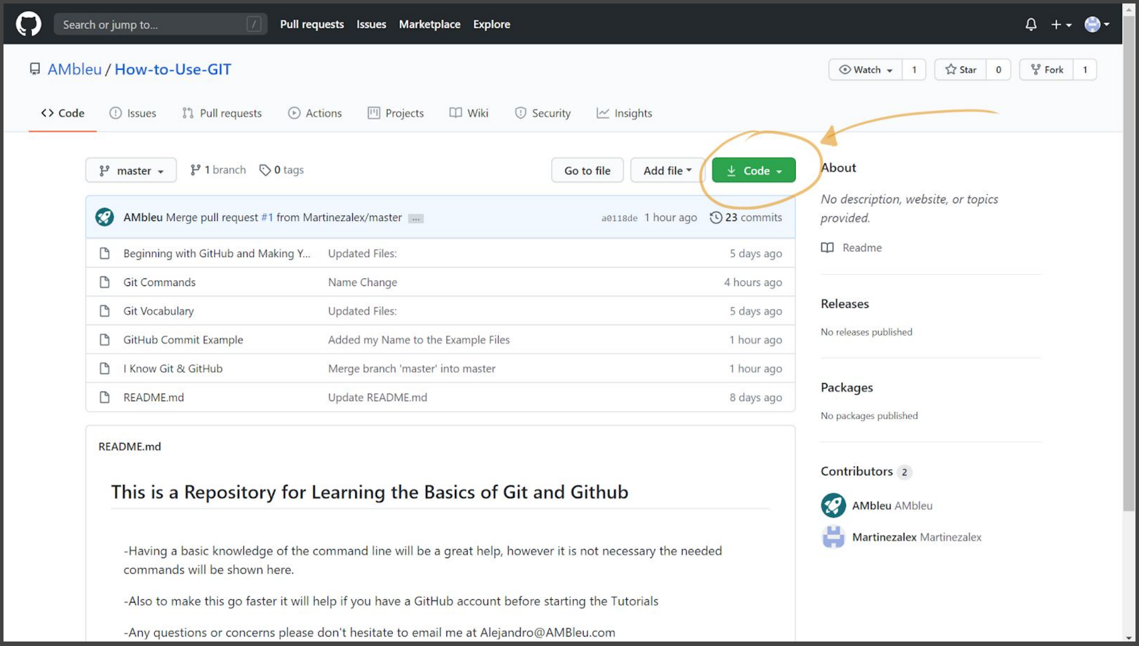
-Having a basic knowledge of the command line will be a great help, however it is not necessary the needed commands will be shown here.

-Also to make this go faster it will help if you have a GitHub account before starting the Tutorials

-Any questions or concerns please don't hesitate to email me at Alejandro@AMBleu.com

## 5. Clone - Creating a Local Copy of your GitHub Repository

-Go to your github profile and click on the “How-to-Use-Git” Repository click on the green code button and copy the link shown.



AMbleu Merge pull request #1 from Martinezalex/master   a0118de 1 hour ago   23 commits

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About

No description, website, or topics provided.

Readme

Releases

No releases published

Packages

No packages published

Contributors 2

AMbleu AMbleu

Martinezalex Martinezalex

-Open Terminal, if not already in it, make sure you are in your GitRepos directory using the pwd command. If not, use the cd command to navigate to the GitRepos directory. Now use the copied link in the following command.

| Command to Enter | Description on What Command Does |
|---|---|
| git clone -Link copied from Github- | :Paste the link you copied from GitHub into this command |
| cd How-to-Use-Git | :This puts you in the repository you just cloned |
| ls -l | :Allows you to see all the files previously on GitHub now on your local machine |

## 6. Setting Up Identity to Log your Changes Locally

-In order to be able to use Git and store changes you have to set your name and email so Git can track who is making changes.

-To set these you use the followings commands:

| Command to Enter | Description on What Command Does |
|---|---|
| git config user.name "Your Name" | :Enter the name you want to log your changes with. |
| git config user.email "Your Email" | :Enter the email you used for your Github account. |
| git config -l | :Shows you the a list of global fields |

## 7. Creating a Branch and Switching to It

-Now that you have a local copy of the repository and have set up your identity we can start editing the files. To do this we will make a branch and edit that branch.
-Even though edits to the master branch made in your copy will not edit the master branch in the original repository, when we request to merge into it later it will, so for now we will make our edits in a new branch and later merge that branch into the original repository.

| Command to Enter | Description of What Command Does |
|---|---|
| git branch | :Shows you all the  branches. The asterisk shows what branch you are currently in. |
| git branch Your First and Last Name | :This creates a branch with your name as the branch name |
| git branch | :If the list of branches is short enough you should see your branch added here. |
| git checkout Your First and Last Name | :This lets you switch from working in the master branch to your unique branch |
| git branch | :Now you should see the list again with the asterisk next to the branch with your name on it. |
| git push --set-upstream origin Your First and Last Name | :Since we created the branch locally we have to use this to create the branch in GitHub |

## 8. Editing a File in Your Local Repository

-Now we are going to start editing the files
-Navigate to the file “GitHub Commit Example” in your file explorer and edit the file save and exit.
**Edit the file called “GitHub Commit Example” on the command line using the following command:

| Command to Enter | Description on What Command Does |
|---|---|
| nano ‘GitHub Commit Example’ | :This opens up a command line text editor, now put your name in the file like instructed. |
| (press Crtl + x) | :This exits the command and asks if you want to save your changes. |
| (press y) | :It should exit the text editor after this however sometimes after you press y it will ask for the name. Just press enter to keep the same name and it will exit. The edits have been made to the file “GitHub Commit Example” it is time to get ready to commit the changes. |

## 9. Add - Adding Files to Your Staging Area

-The edits have been made to the file “GitHub Commit Example” it is time to stage your changes to get ready to commit. Use the following command to add files to the staging area:

| Command to Enter | Description on What Command Does |
|---|---|
| git add ‘GitHub Commit Example’ | :Moves the file into the staging area |
| git status | :Shows you what files are in your staging area ready to be committed |

## 10. Commit - Committing Changes to Your Local System

- Committing makes a record that changes have been made, so later in the future you can come back to those changes. It is like a checkpoint, committing places a marker that you can come back to later if necessary
-Now that the file you want to change has been moved into the staging area it is ready to be committed. Committing makes a "checkpoint" of your changes, which can be accessed later. To commit use:

| Command to Enter | Description on What Command Does |
|---|---|
| git commit -m "Enter Your Message Here" | :This commits the change and makes a log of the change, putting in a substantial message is important here because the message will be used to find the changes at a future date. |
| git status | :Shows that there is nothing to be committed |
| git log | :Shows all the commits you have made. To Exit this screen type q then enter. |

## 11. Push - Pushing Files to GitHub

-Now you are ready to push files onto your repository on GitHub. This moves all the changes you made locally onto Github. To do this do the following:

| Command to Enter | Description on What Command Does |
|---|---|
| git push | :This pushes all your changes onto GitHub. If this is your first time doing this it will ask you for your GitHub username and Password. |

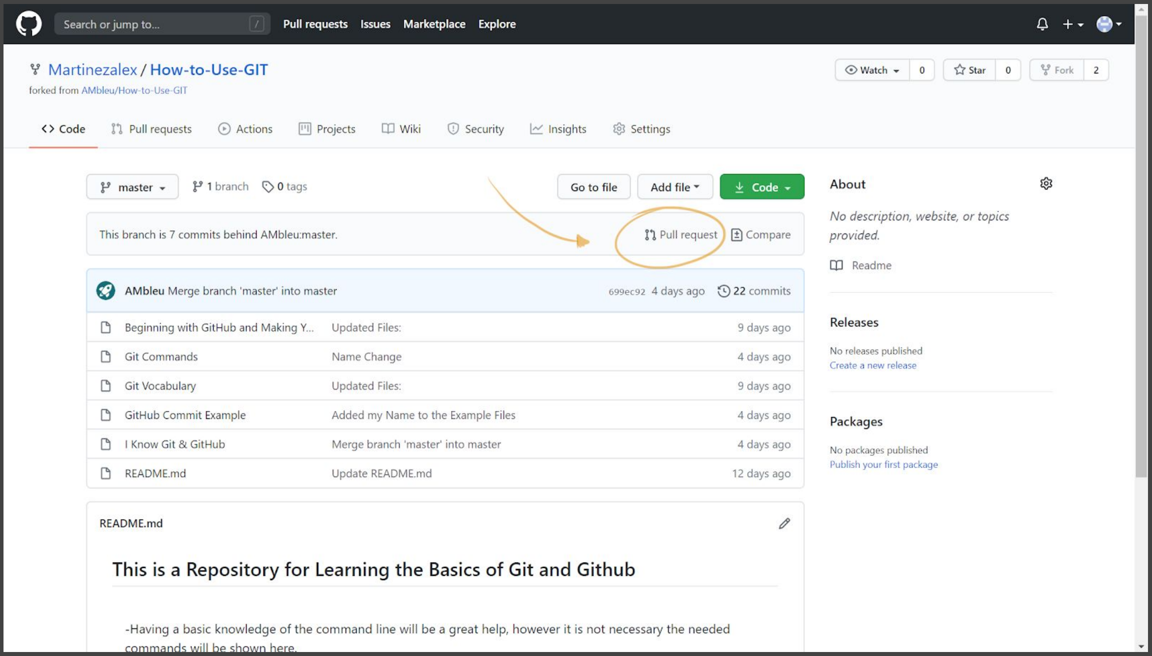
-After you push these changes to GitHub go onto your GitHub page to check if the files have been edited

## 12. Extra Practice

-To get extra practice before finishing the tutorial redo the steps 8 - 11 on the file called “I Know Git and GitHub”. Goodluck and if you get stuck for whatever reason just start over or go to the common errors file and check if that helps, if not contact me at alejandro@ambleu.com

## 13. Making a Pull Request to Original Repository

-Now you have uploaded your changes to GitHub. However where you uploaded them to was a copy of the original How-to-Use-Git repository. In order to contribute to projects you must now make a pull request which asks the owner of the repository to look at the changes you made and add them to the original. They have the option to either accept or reject them but the whole point of Git is contributing so whether your change gets accepted or rejected is ok as long as you contribute.
-To make this pull request follow the pictures and instructions below.
-Once a few changes have been made and committed to GitHub, the popup will appear and you can click on Pull Request to begin the process of contributing to the original repository.



This branch is 7 commits behind AMbleu:master.

AMbleu Merge branch 'master' into master 699ec92 4 days ago 22 commits

| | | |
|---|---|---|
| Beginning with GitHub and Making Y... | Updated Files: | 9 days ago |
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| I Know Git & GitHub | Merge branch 'master' into master | 4 days ago |
| README.md | Update README.md | 12 days ago |

No description, website, or topics provided.

No releases published
Create a new release

No packages published
Publish your first package

README.md

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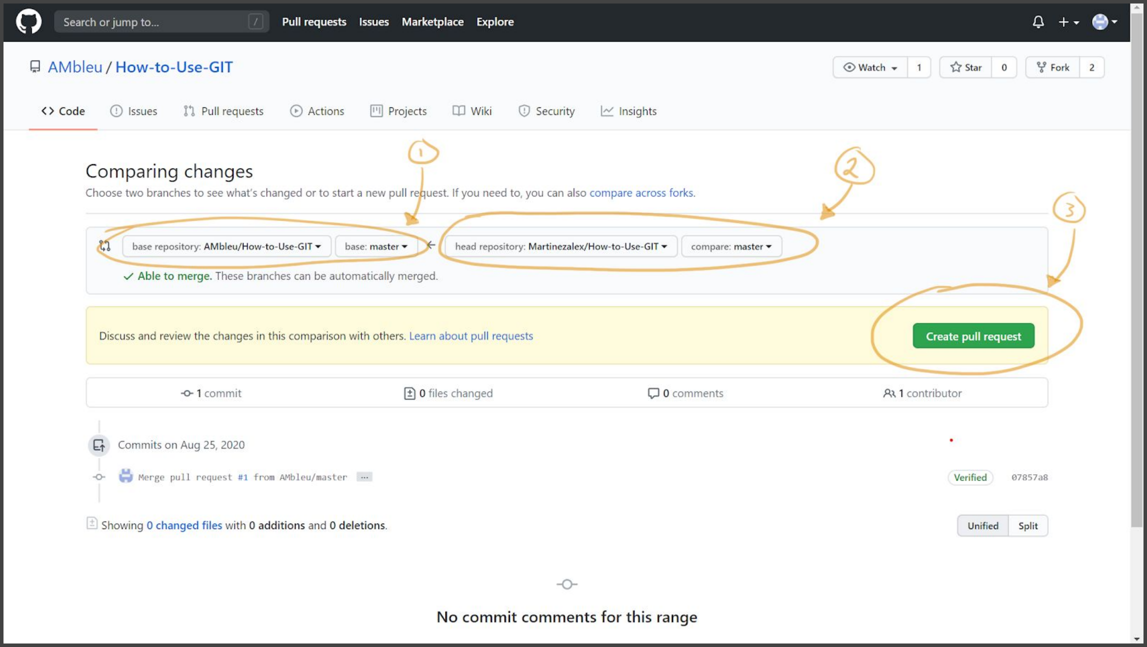
-Having a basic knowledge of the command line will be a great help, however it is not necessary the needed commands will be shown here.

-For the following picture I numbered 3 main items to focus on.

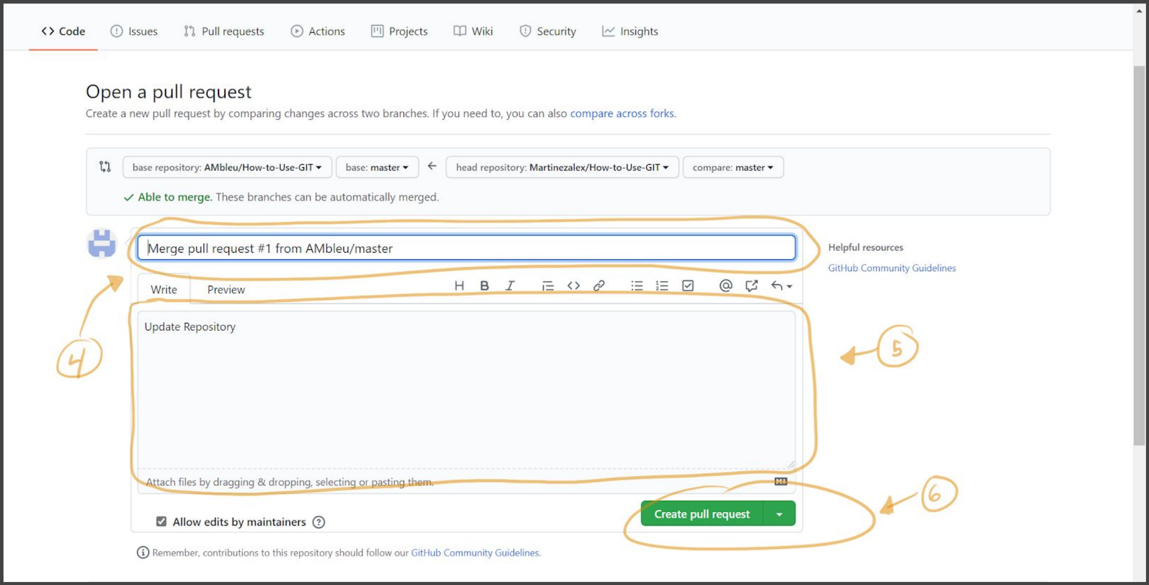
1) This is where it is going to be merged to, it should say AMbleu/How-to-Use-Git.
2) This is what is going to be merged, this should be <Your GitHub Username>/How-to-Use-Git
3) Once you have confirmed the information above you can press the green “Create pull request” button.



AMbleu / How-to-Use-GIT
Comparing changes
Choose two branches to see what's changed or to start a new pull request. If you need to, you can also compare across forks.
base repository: AMbleu/How-to-Use-GIT
base: master
head repository: Martinezalex/How-to-Use-GIT
compare: master
✓ Able to merge. These branches can be automatically merged.
Discuss and review the changes in this comparison with others. Learn about pull requests
Create pull request
1 commit
0 files changed
0 comments
1 contributor
Commits on Aug 25, 2020
Merge pull request #1 from AMbleu/master
Verified
07857a8
Showing 0 changed files with 0 additions and 0 deletions.
No commit comments for this range
1
2
3

-Similar to a commit you must create a message for your pull request. As before there are numbered items to focus on.

4) That is the title of the pull request, you can title this First Github Pull Request, Finished GitHub Startup Guide, or Simply your name
5) A message explaining what is in your pull request, how it will benefit the code, and/or a quick explanation why you made the pull request.
6) Once those fields have been filled out then once again click on the green "Create pull request" button and then your job is done all that is left to do is wait until you get a response to the pull request.



Open a pull request
Create a new pull request by comparing changes across two branches. If you need to, you can also compare across forks.
base repository: AMbleu/How-to-Use-GIT
base: master
head repository: Martinezalex/How-to-Use-GIT
compare: master
✓ Able to merge. These branches can be automatically merged.
Merge pull request #1 from AMbleu/master
Write
Preview
Update Repository
Attach files by dragging & dropping, selecting or pasting them.
Allow edits by maintainers
Create pull request
Helpful resources
GitHub Community Guidelines
Remember, contributions to this repository should follow our GitHub Community Guidelines.
4
5
6

## Appendix A

Text in green should be entered exactly as it is typed, text in white is a command to the user to enter that type of information

Ex.

-git config user.name “Your Name”

-In this case the git config user.name” is typed in the terminal and then the white text is replaced with your name and then the last “ is added. If your name was John Doe then the command in the terminal would look like this: git config user.name “John Doe”