Assignment#1

HTML + VCS (Git, Github) using Command Line

Program Name	BSCS
Course Code	CSSE3143
Course Name	Web Application Development
Course Instructor	Mohammad Talha
Time Allowed	Until 31th Oct, 2018
Assessment	HTML + VCS (Git & Github), CMD
Instructions	• Email at mohammad.talha@ucp.edu.pk with subject " WAD-H Assignment#1". • Submit the soft copy of your solution on or before the due date. Late submission will result in some penalty. • Always keep a backup of your solution till it is graded.
Conditions	This is an individual assignment
Total marks	10 + 20 + 20 = 50
Academic Honesty Policy	Academic dishonesty will not be tolerated. Academic dishonesty includes cheating, plagiarism (copying) or any other attempt to gain an academic advantage in a dishonest or unfair manner.

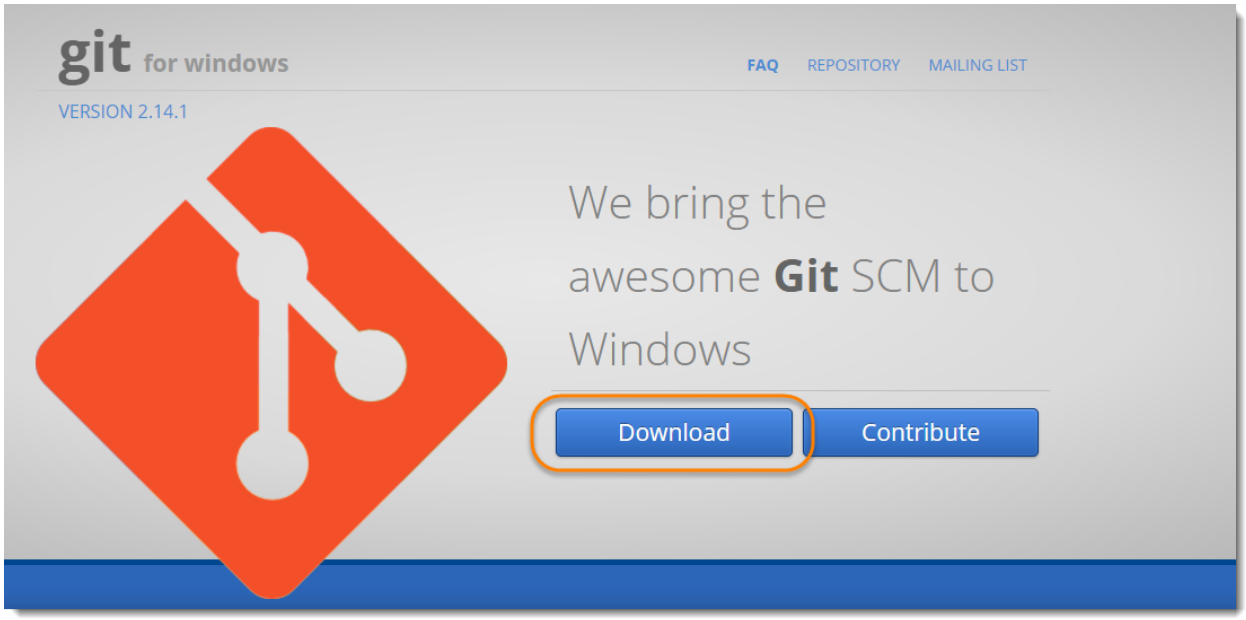
Perform the following tasks

- Create a folder with HTML file
- Code in HTML Table
- Create a resume design and layout with the help of HTML Table
- HTML filename should be index.html
- Create a images folder if you have used any image in the file
- Setup a Git on your system (laptop/computer)
- Create Github account
- Create a git repo
- Configure your Github account on your system (laptop/computer)
- Clone your git repo on your system
- Commit and push your resume HTML files to your git repo

All these tasks instruction are discussed below in details.

Steps to Install Git on Windows

1) Download the latest ***Git for Windows***.

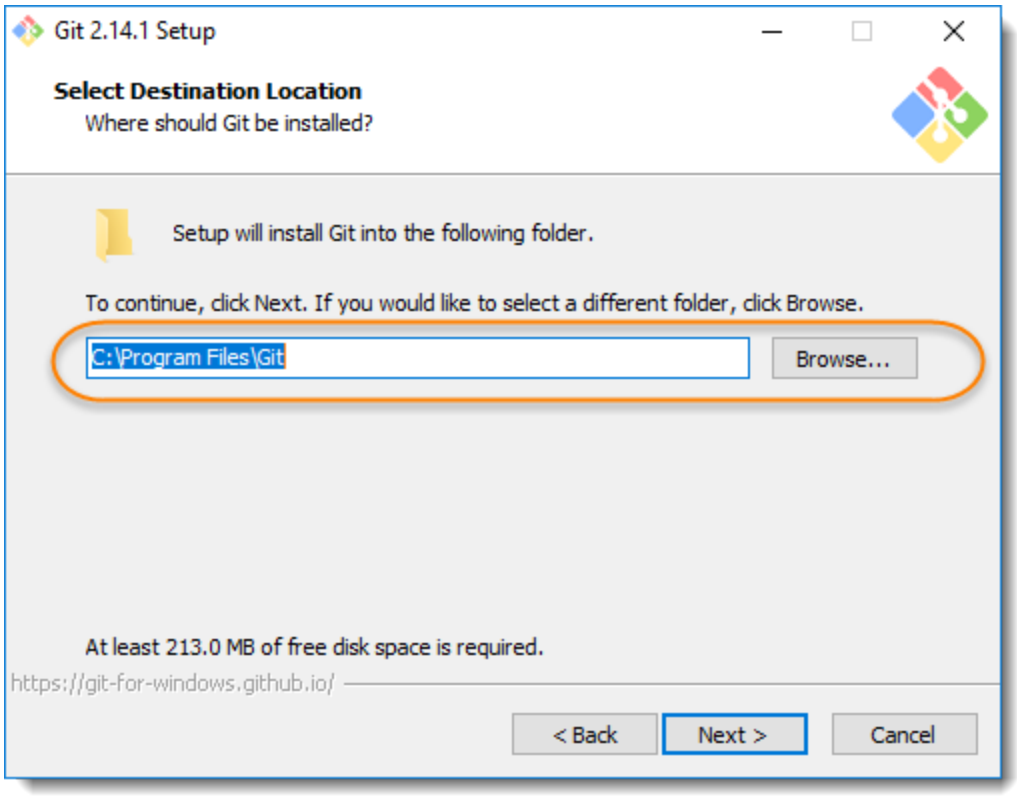


2) Go to the folder where new downloads gets store, at my machine by default folder is ***Download*** folder. ***Double click*** on the installer. The installer gets save on the machine as per the Windows OS configuration. My machine is ***64 bits***.

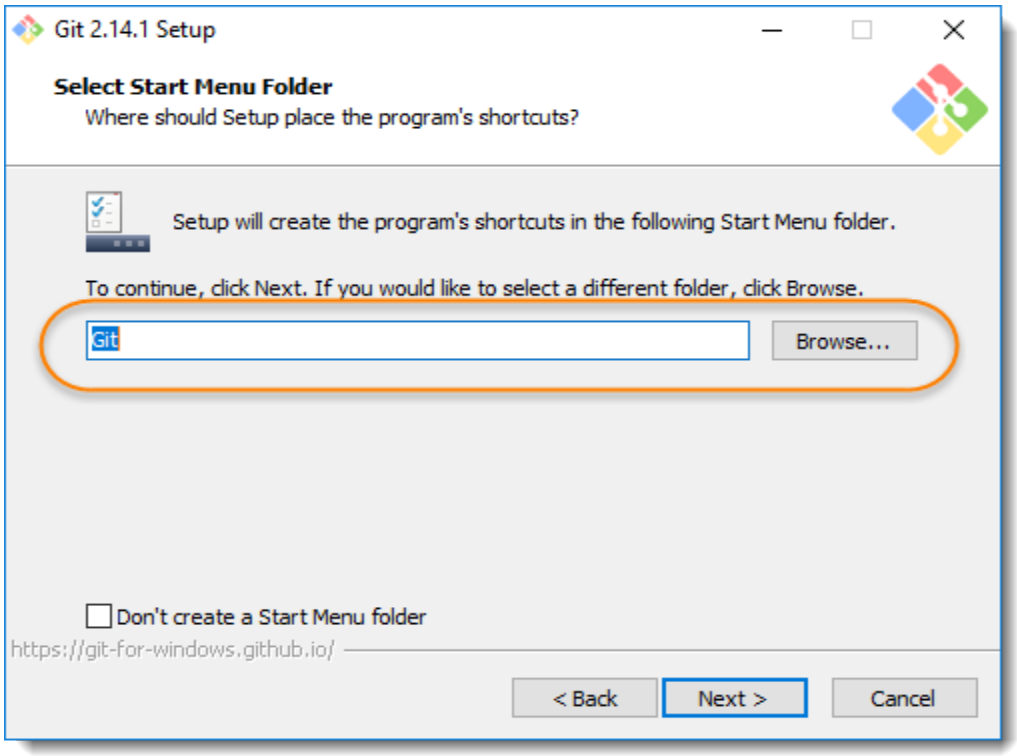
***Note**: When you've successfully started the installer, you should see the Git Setup wizard screen. Follow the Next and Finish prompts to complete the installation. The default options are pretty sensible for most users.*

Note**: At the time of writing the tutorial on 9th Sep'17, the latest version is **Git-2.14.1.

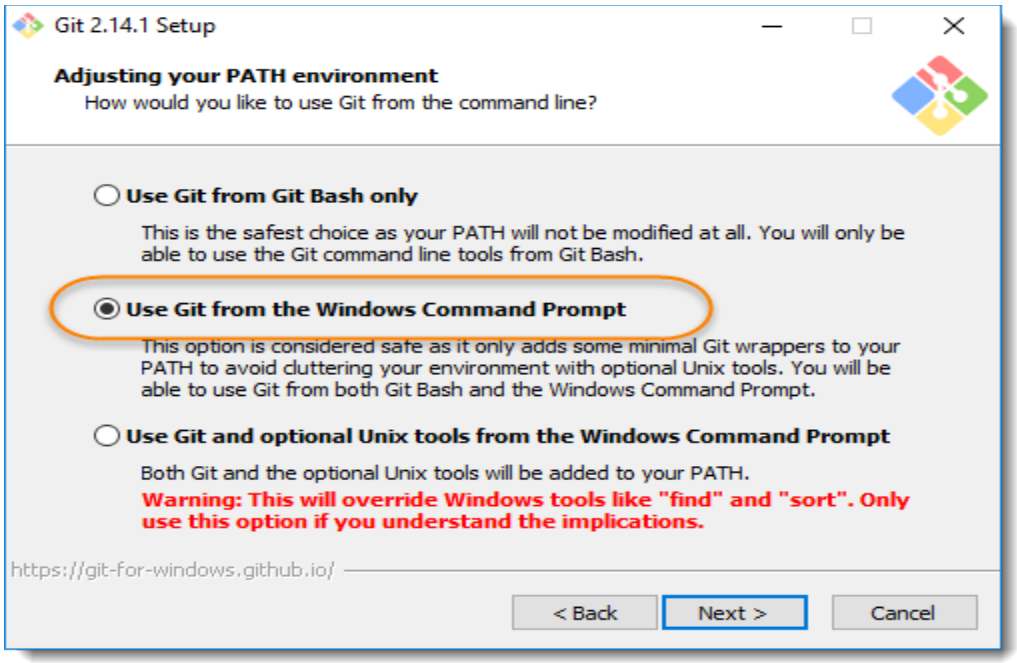
3) You may like to keep the installation to another folder, so here is the chance to do so. I just want to keep it in the suggested default folder in my ***Program Files\Git***.



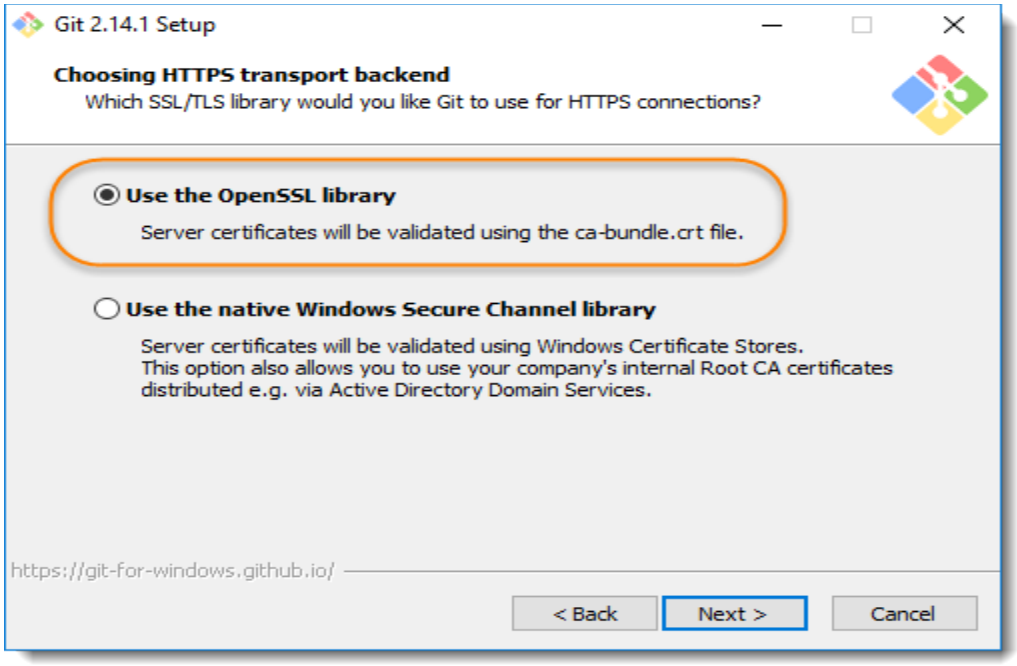
4) This is the option to store the *shortcut of the Git* under the ***Program Menu***.



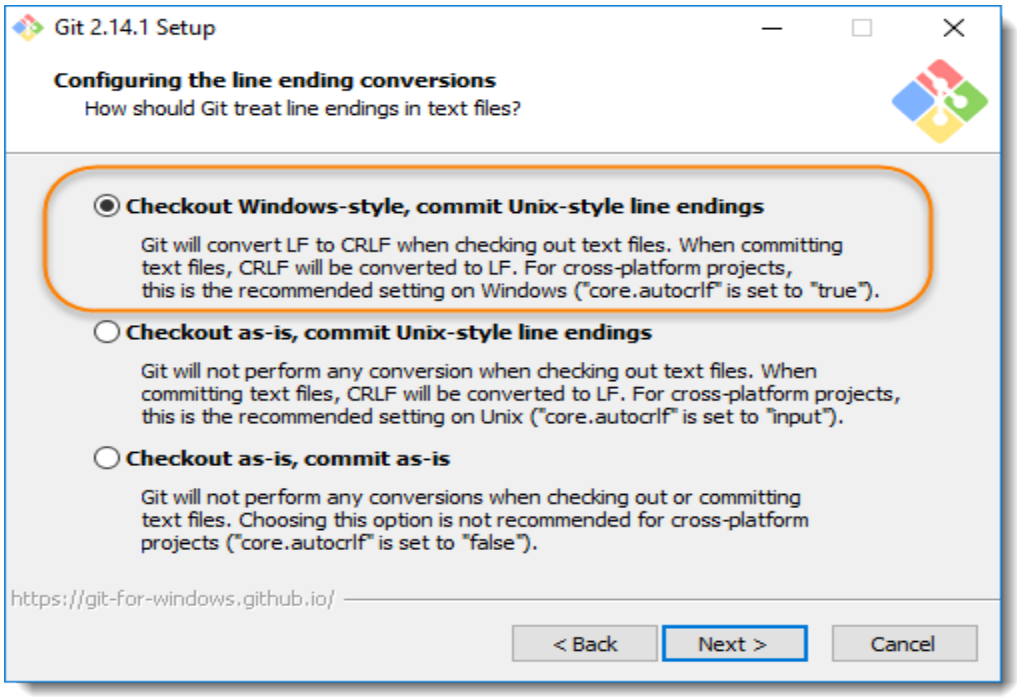
5) This is asking your choice that whether you like to Git from the ***Windows Command Prompt*** or you like to use some other program like ***Git Bash***. As of now just select the *Windows Cmd* for simplicity of the tutorial, later we will cover *Git Bash* and other as well.



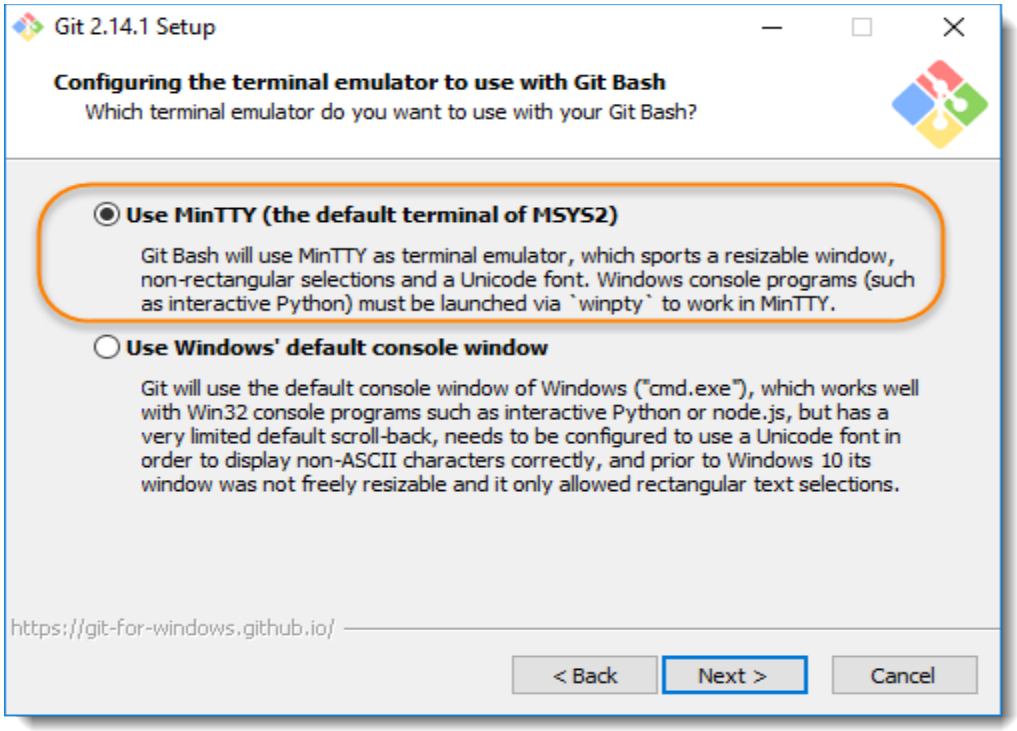
6) If you have *PuTTY/TortoiseSVN* installed, you may see this screen, otherwise just ignore this. Regardless, use ***OpenSSL*** to make things easy.



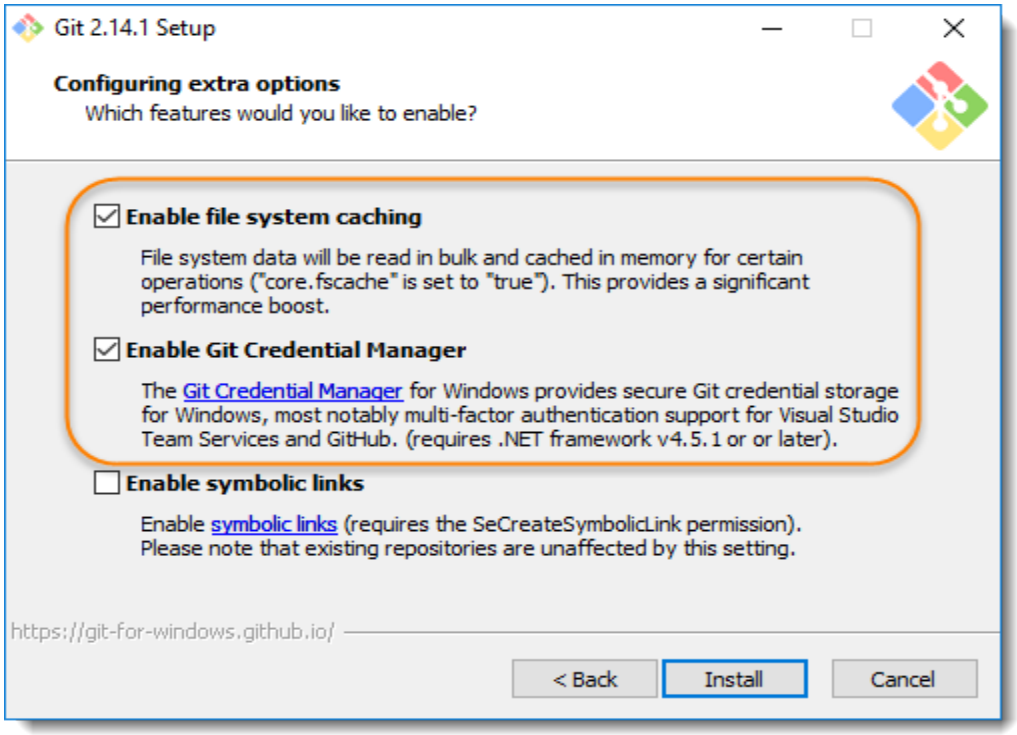
7) Here, we recommend to choose the option of ***Checkout Windows-style, commit Unix-style line endings***. Select next once you have done this.



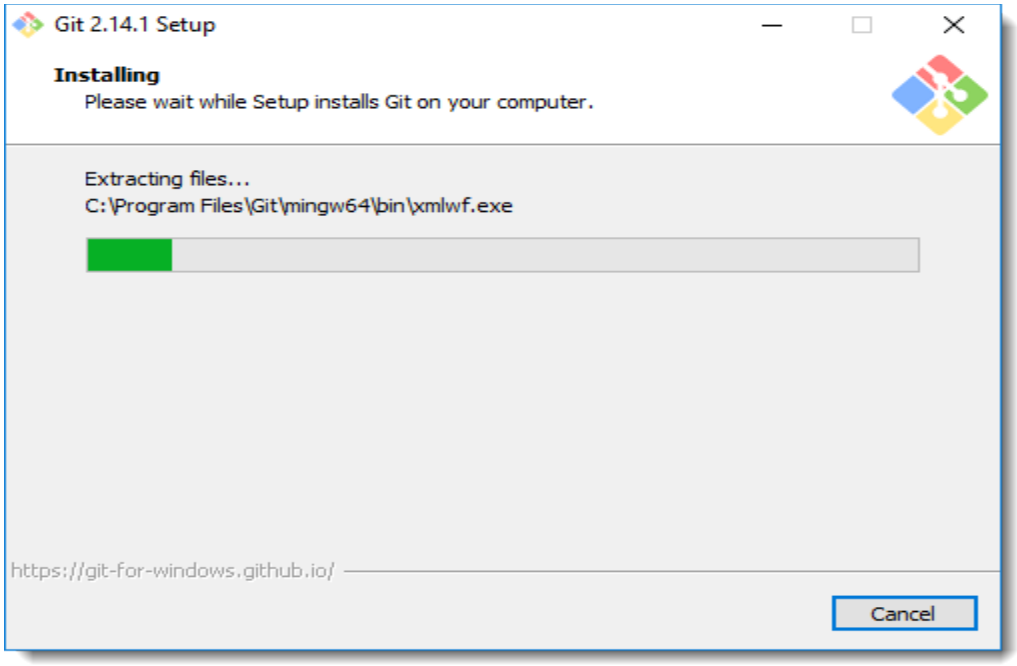
8) Again, just go with default selection and move forward.



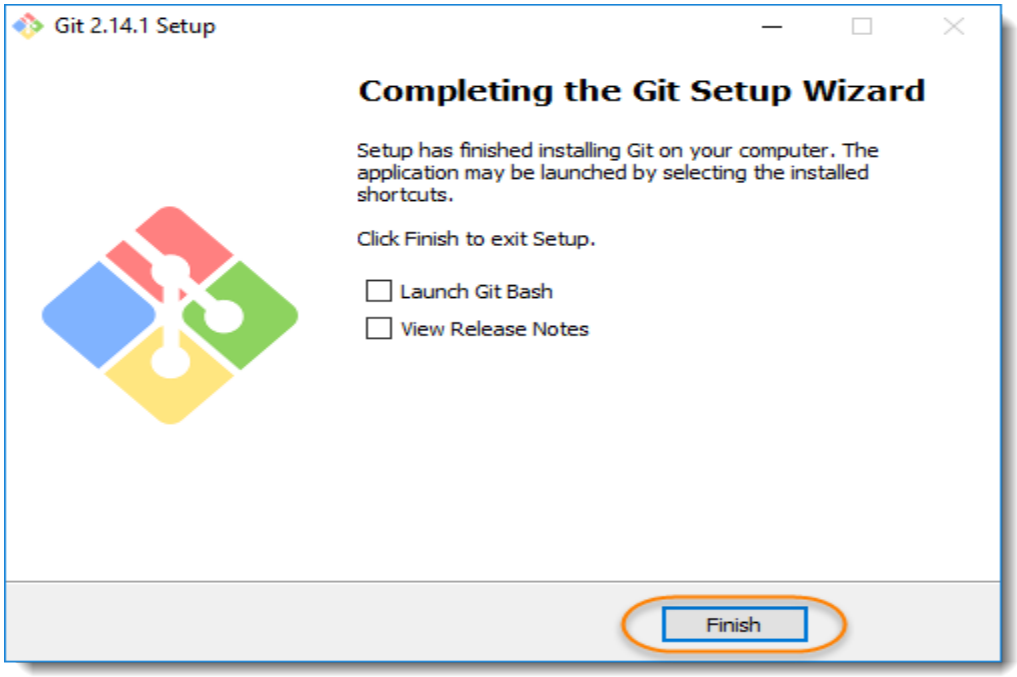
9) Just go with default selections, as we will cover the details in later advance chapter.



10) Now, it's all done. This will just take few minutes to complete the installation as per your machine speed.



11) Once done, just click on Finish button.



12) Let's just verify if the installation went well for Git. Go to ***cmd*** and type ***git*** and press ***enter***. you should get the following output on the screen.

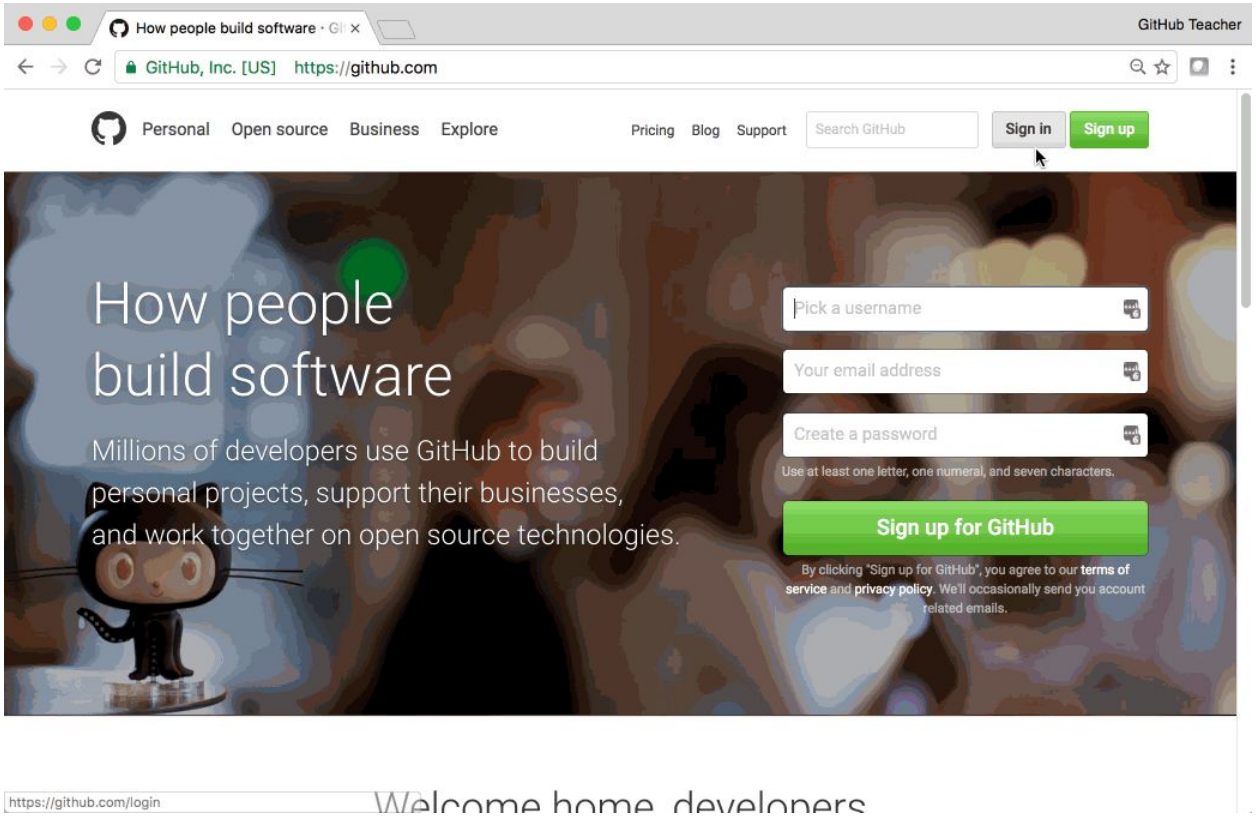
```
Command Prompt
Microsoft Windows [Version 10.0.15063]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\Lenovo>git
usage: git [--version] [--help] [-C <path>] [-c name=value]
           [--exec-path[=<path>]] [--html-path] [--man-path] [--info-path]
           [-p | --paginate | --no-pager] [--no-replace-objects] [--bare]
           [--git-dir=<path>] [--work-tree=<path>] [--namespace=<name>]
           <command> [<args>]

These are common Git commands used in various situations:

start a working area (see also: git help tutorial)
   clone      Clone a repository into a new directory
   init       Create an empty Git repository or reinitialize an existing one

work on the current change (see also: git help everyday)
   add        Add file contents to the index
   mv         Move or rename a file, a directory, or a symlink
   reset      Reset current HEAD to the specified state
   rm         Remove files from the working tree and from the index

examine the history and state (see also: git help revisions)
   bisect     Use binary search to find the commit that introduced a bug
   grep       Print lines matching a pattern
   log        Show commit logs
   show       Show various types of objects
   status     Show the working tree status

grow, mark and tweak your common history
   branch     List, create, or delete branches
   checkout   Switch branches or restore working tree files
   commit     Record changes to the repository
   diff       Show changes between commits, commit and working tree, etc
   merge      Join two or more development histories together
   rebase     Reapply commits on top of another base tip
   tag        Create, list, delete or verify a tag object signed with GPG

collaborate (see also: git help workflows)
   fetch      Download objects and refs from another repository
   pull       Fetch from and integrate with another repository or a local branch
   push       Update remote refs along with associated objects

'git help -a' and 'git help -g' list available subcommands and some
concept guides. See 'git help <command>' or 'git help <concept>'
to read about a specific subcommand or concept.

C:\Users\Lenovo>
```

The cmd window will display different options and commands you can try with git. Just get little warm up and use the following commands and observe the outputs for your understanding:

- *git –version*
- *git –help*

Create an account on GitHub.com

If you already have a Github.com account you are ready to get started. Otherwise, you can set up your free account by following these steps:



1. Access GitHub.com and click and enter a username, email address, and password in the supplied field and click Sign up for GitHub.
2. Select the Unlimited public repositories for free option.
3. You will receive a verification email at the address provided.
4. Click the emailed link to complete the verification process.

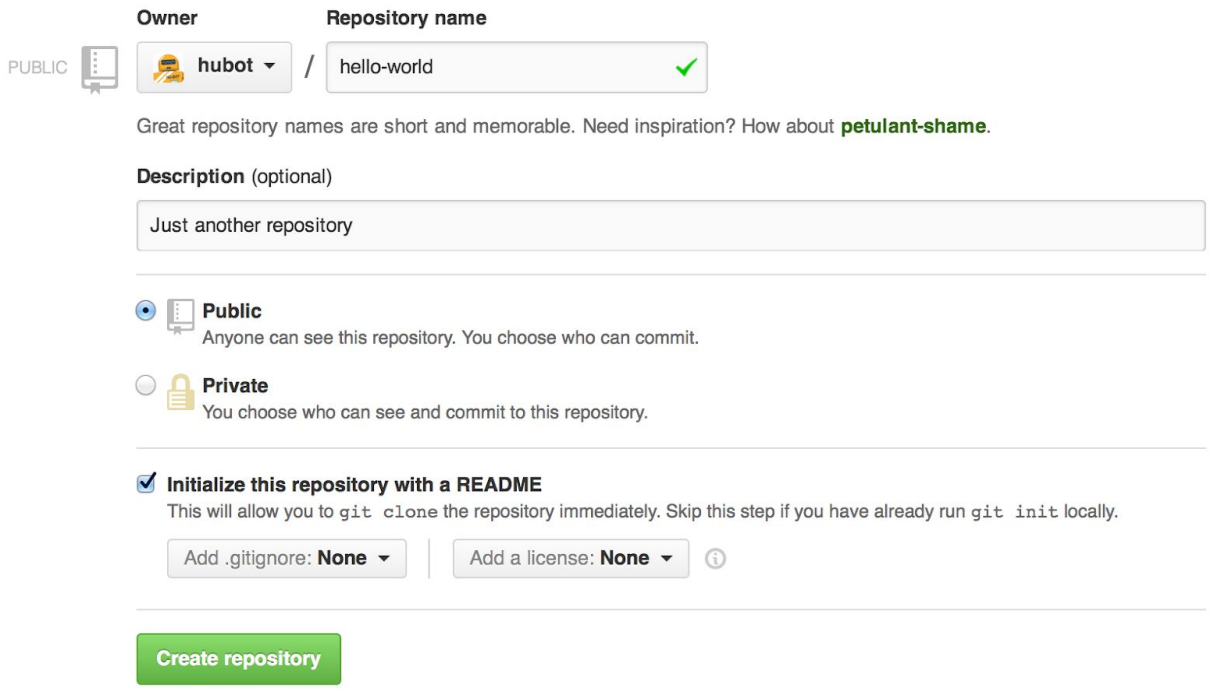
Create a Repository

A **repository** is usually used to organize a single project. Repositories can contain folders and files, images, videos, spreadsheets, and data sets – anything your project needs. We recommend including a *README*, or a file with information about your project. GitHub makes it easy to add one at the same time you create your new repository. *It also offers other common options such as a license file.*

Your hello-world repository can be a place where you store ideas, resources, or even share and discuss things with others.

To create a new repository

1. In the upper right corner, next to your avatar or identicon, click
1. and then select **New repository**.
2. Name your repository hello-world.
3. Write a short description.
4. Select **Initialize this repository with a README**.



Click **Create repository**. 🎉

Create a Branch

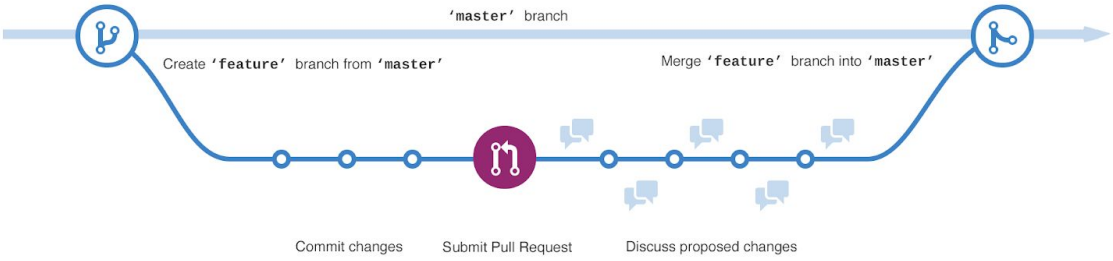
Branching is the way to work on different versions of a repository at one time.

By default your repository has one branch named master which is considered to be the definitive branch. We use branches to experiment and make edits before committing them to master.

When you create a branch off the master branch, you're making a copy, or snapshot, of master as it was at that point in time. If someone else made changes to the master branch while you were working on your branch, you could pull in those updates.

This diagram shows:

- The master branch
- A new branch called feature (because we're doing 'feature work' on this branch)
- The journey that feature takes before it's merged into master



Have you ever saved different versions of a file? Something like:

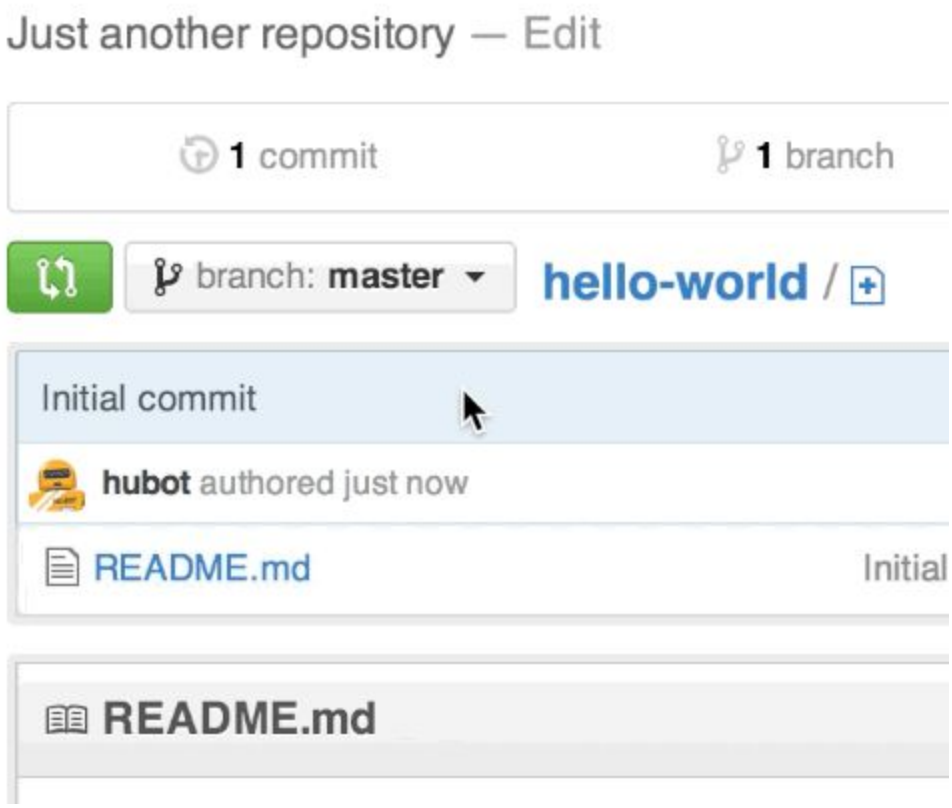
- story.txt
- story-joe-edit.txt
- story-joe-edit-reviewed.txt

Branches accomplish similar goals in GitHub repositories.

Here at GitHub, our developers, writers, and designers use branches for keeping bug fixes and feature work separate from our master (production) branch. When a change is ready, they merge their branch into master.

To create a new branch

1. Go to your new repository hello-world.
2. Click the drop down at the top of the file list that says **branch: master**.
3. Type a branch name, readme-edits, into the new branch text box.
4. Select the blue **Create branch** box or hit "Enter" on your keyboard.



Now you have two branches, master and readme-edits. They look exactly the same, but not for long! Next we'll add our changes to the new branch.

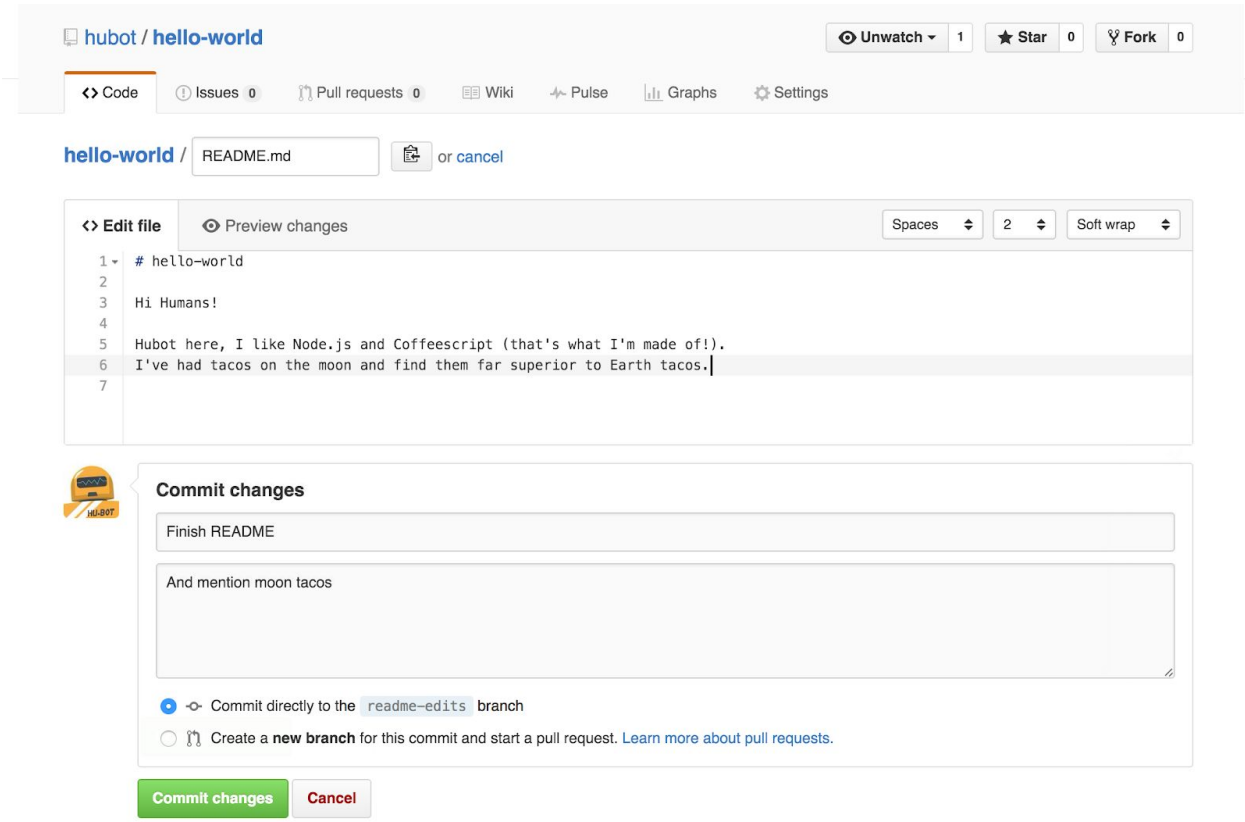
Make and commit changes

Bravo! Now, you're on the code view for your readme-edits branch, which is a copy of master. Let's make some edits.

On GitHub, saved changes are called *commits*. Each commit has an associated *commit message*, which is a description explaining why a particular change was made. Commit messages capture the history of your changes, so other contributors can understand what you've done and why.

Make and commit changes

1. Click the README.md file.
2. Click the
1. pencil icon in the upper right corner of the file view to edit.
2. In the editor, write a bit about yourself.
3. Write a commit message that describes your changes.
4. Click **Commit changes** button.



These changes will be made to just the README file on your readme-edits branch, so now this branch contains content that's different from master.

Open a Pull Request

Nice edits! Now that you have changes in a branch off of master, you can open a *pull request*.

Pull Requests are the heart of collaboration on GitHub. When you open a *pull request*, you're proposing your changes and requesting that someone review and pull in your contribution and merge them into their branch. Pull requests show *diffs*, or differences, of the content from both branches. The changes, additions, and subtractions are shown in green and red.

As soon as you make a commit, you can open a pull request and start a discussion, even before the code is finished.

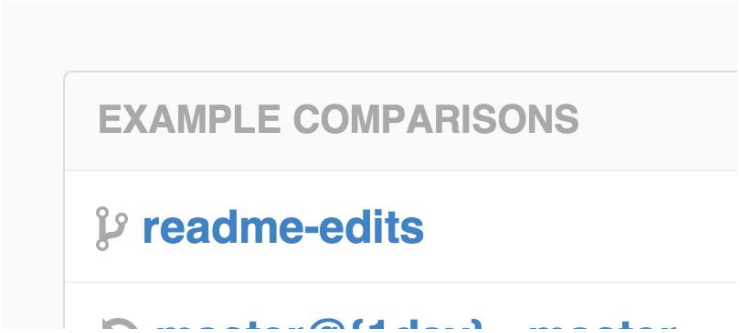
By using GitHub's @mention system in your pull request message, you can ask for feedback from specific people or teams, whether they're down the hall or 10 time zones away.

You can even open pull requests in your own repository and merge them yourself. It's a great way to learn the GitHub flow before working on larger projects.

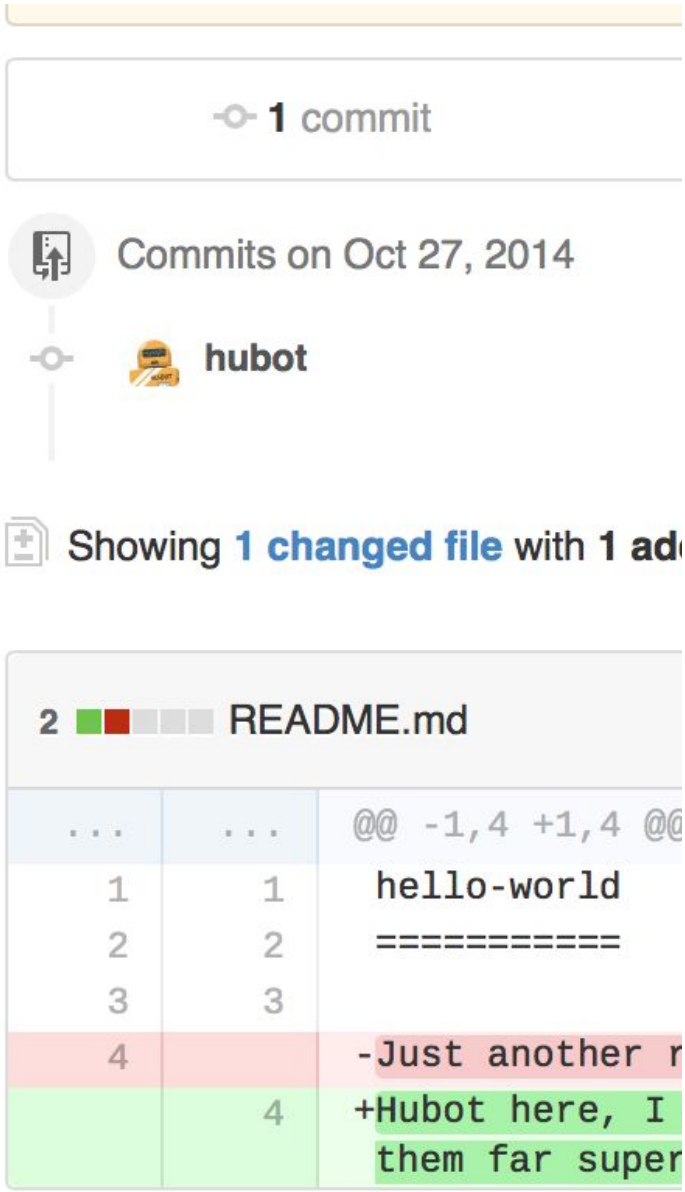
Open a Pull Request for changes to the README

Pull Request tab, then from the Pull Request page, click the green **New pull request** button.

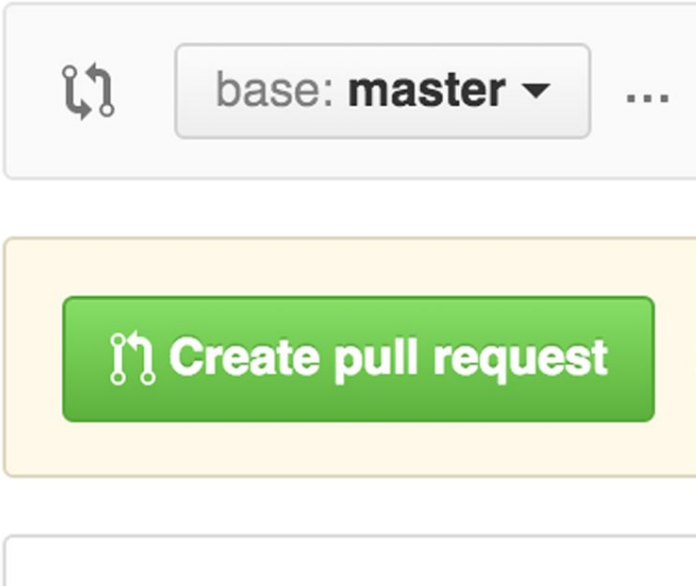
In the **Example Comparisons** box, select the branch you made, readme-edits, to compare with master (the original).



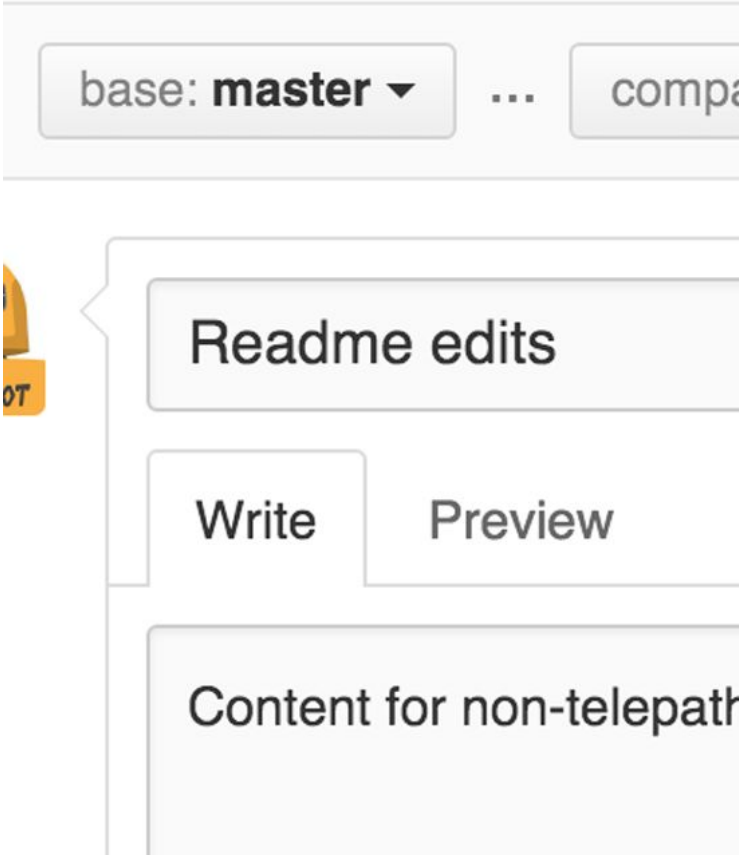
Look over your changes in the diffs on the Compare page, make sure they're what you want to submit.



When you're satisfied that these are the changes you want to submit, click the big green **Create Pull Request** button.



Give your pull request a title and write a brief description of your changes.

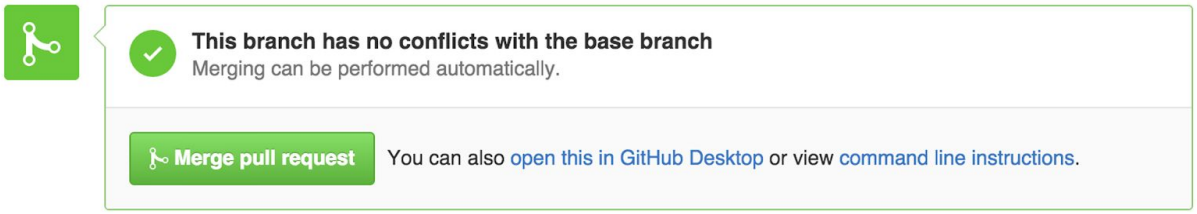


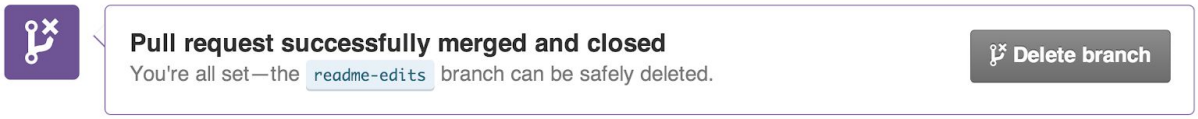
When you're done with your message, click **Create pull request**!

Merge your Pull Request

In this final step, it's time to bring your changes together – merging your readme-edits branch into the master branch.

1. Click the green **Merge pull request** button to merge the changes into master.
2. Click **Confirm merge**.
3. Go ahead and delete the branch, since its changes have been incorporated, with the **Delete branch** button in the purple box.





Celebrate!

By completing this tutorial, you've learned to create a project and make a pull request on GitHub! 🎉 ⚡

Here's what you accomplished in this tutorial:

- Created an open source repository
- Started and managed a new branch
- Changed a file and committed those changes to GitHub
- Opened and merged a Pull Request

Command Line

create a new repository

- create a new directory, open it and perform a
- git init
- to create a new git repository.

checkout a repository

- create a working copy of a local repository by running the command
- git clone /path/to/repository
- when using a remote server, your command will be
- git clone username@host:/path/to/repository

add & commit

- You can propose changes (add it to the **Index**) using
- git add <filename>
- git add *
- This is the first step in the basic git workflow. To actually commit these changes use
- git commit -m "Commit message"
- Now the file is committed to the **HEAD**, but not in your remote repository yet.

Pushing changes

- Your changes are now in the **HEAD** of your local working copy. To send those changes to your remote repository, execute
- git push origin master
- Change *master* to whatever branch you want to push your changes to.
- If you have not cloned an existing repository and want to connect your repository to a remote server, you need to add it with
- git remote add origin <server>
- Now you are able to push your changes to the selected remote server