

Basic GIT

- Simple tutorial -

GIT

=

Distributed version control system

Git repository


- The history of a collection of files starting from a certain directory
 - Why is such a thing useful?
- **GitHub** : a web-based git repository hosting
 - + issue tracker, wiki support, code review, pull requests support, etc.

Let's start!


- Create an account at <https://github.com>


A screenshot of the GitHub sign-up form. It features three white input fields on a dark background. The first field is labeled 'Pick a username', the second 'Your email address', and the third 'Create a password'. Below the password field, there is a line of text: 'Use at least one letter, one numeral, and seven characters.' A prominent green button with the text 'Sign up for GitHub' is positioned below the text. At the bottom, a line of smaller text states: 'By clicking "Sign up for GitHub", you agree to our terms of service and privacy policy. We'll occasionally send you account related emails.'

Create new repository

 Search GitHub

Pull requestsIssuesGist

+▼



ipuser

[Add a bio](#)

Edit profile

ProTip! Updating your profile with your name, location, and a profile picture helps GitHub users get to know you.

[New repository](#)
[Import repository](#)
[New gist](#)
[New organization](#)

OverviewRepositories 0Stars 0Followers 0Following 0

Popular repositories

You don't have any public repositories yet.

1 contribution in the last year

Contribution settings ▼

Create new repository

Owner

 ipuser ▾

Repository name

/ mycoolproject ✓

Great repository names are short and memorable. Need inspiration? How about **crispy-palm-tree**.

Description (optional)

Simple demo project

☒  **Public**
Anyone can see this repository. You choose who can commit.

☐  **Private**
You choose who can see and commit to this repository.

☒ **Initialize this repository with a README**

This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: **None** ▾

Add a license: **None** ▾



Create repository

Creating successful

Quick setup — if you've done this kind of thing before

 Set up in Desktop or **HTTPS** **SSH** <https://github.com/ipuser/mycoolproject.git>



We recommend every repository include a [README](#), [LICENSE](#), and [.gitignore](#).

...or create a new repository on the command line

```
echo "# mycoolproject" >> README.md
git init
git add README.md
git commit -m "first commit"
git remote add origin https://github.com/ipuser/mycoolproject.git
git push -u origin master
```



Cloning on the local machine

- Git installation: <https://git-scm.com/downloads>
- Windows: <https://git-scm.com/download/win>
- At command line:

```
git clone https://github.com/ipuser/mycoolproject.git
```

- Branch: master vs. origin

Case study: adding README file

1. Create file

1. Create file README.md (in local folder mycoolproject)
2. Add the following lines:
My cool project

This is a simple demo.

2. Preparation for commit :

```
git add README.md
```

3. Local commit

```
git commit -m "Added README file."
```

4. Sending updates to git:

```
git push origin master
```

On Github:



ipuser Added README file.

Latest commit 8e780ab 33 seconds ago



README.md

Added README file.

32 seconds ago



README.md

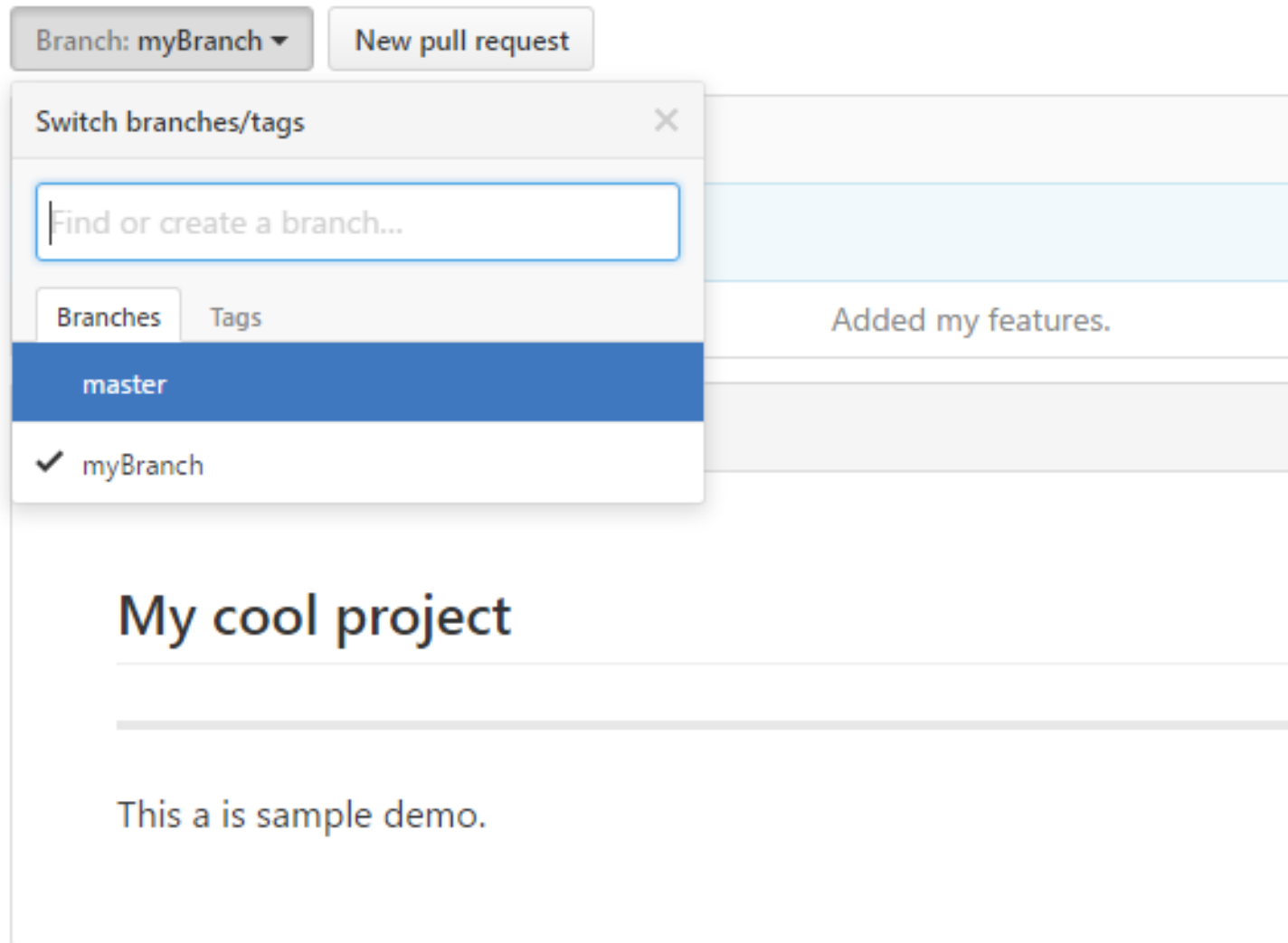
My cool project

This is simple demo.

Branches

- Most times it is better not to work directly in master
- It is preferable to have a branch (copy) in which you can work independently of others
- To create a branch:
`git checkout -b myBranch master`
- To make the push of a branch:
`git push origin myBranch`

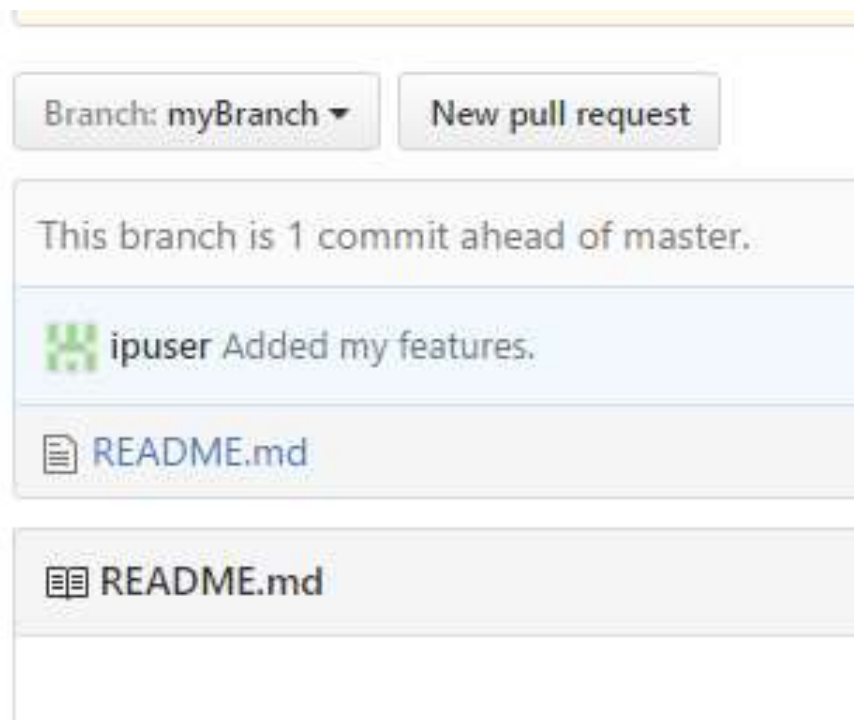
The branch is visible on GitHub



Pull request

1. How to get changes in master?

Press “New pull request”



Added my features. #1



ipuser wants to merge 1 commit into master from myBranch



Conversation 0



Commits 1



Files changed 1



ipuser commented just now

Owner



Modified README.



Added my features.

ce203b1

Add more commits by pushing to the myBranch branch on ipuser/mycoolproject.



This branch has no conflicts with the base branch

Merging can be performed automatically.

Merge pull request



You can also [open this in GitHub Desktop](#) or [view command line instructions](#).



Write

Preview

AA B i



Leave a comment

Code review



ipuser commented 4 minutes ago

Owner



Modified README.



Added my features.

ce203b1




Code review

Changes from all commits ▾ 1 file ▾ +1 -1   

Added my features.



ipuser committed 15 minutes ago

2    README.md

... ... @@ -1,4 +1,4 @@

1 1 ## My cool project

2 2

3 3 -----

4 -This is simple demo.

4 +This a is sample demo.

Unified

Split

Review changes ▾

Submit your review

Review summary

Leave a comment

☒ Comment

Submit general feedback without explicit approval.

☐ Approve

Submit feedback and approve merging these changes.

☐ Request changes

Submit feedback that must be addressed before merging.

Submit review

Merging



This branch has no conflicts with the base branch

Merging can be performed automatically.

Merge pull request



You can also [open this in GitHub Desktop](#) or [view command line instructions](#).



Merge pull request #1 from ipuser/myBranch

Added my features.


Confirm merge

Cancel



Pull request successfully merged and closed

You're all set—the `myBranch` branch can be safely deleted.

 **Delete branch**

Git and IDEs

- **Using Git Support in NetBeans IDE**
- <https://netbeans.org/kb/docs/ide/git.html>
- **Develop with Git in Eclipse**
- <https://eclipse.github.io/>
- **IntelliJ - Using GitHub Integration**
- <https://www.jetbrains.com/help/idea/2016.3/using-github-integration.html>

Conclusions

- GIT: distributed "versioning system"
- Each working on their own copy
- The changes are visible only to pull request
- It makes code review -> higher quality of code
- Not alter the master, only tested and verified changes from branches