

Versioning & Deployment

Les 7 20191114



Fictieve Usecase

The screenshot shows a GitHub repository page for 'aelaen / RandS'. The repository has 7 commits, 5 branches, and 0 packages. It contains files like README.md, RouterDefaultConfig, and grp.project.pkt. A pull request is listed under 'RandS'. The 'RouterDefaultConfig' file is shown in its raw text form:

```
1 en
2 config t
3 host Host
4 enable secret CLASS
5 line con 0
6 password CISCO
7 line vty 0 15
8 password CISCO
9 login
10 Banner motd *Unauthorized Access Prohibited*
11 service pass
12 no ip domain look
13 security pass min 5
14 username Admin secret CISCO
15 ip domain-name cisco.com
16 crypt key gen rsa
17 1024
18 line vty 0 15
19 login local
20 transport input ssh
21 ipv6 unicast
```

Configuratiebestanden staan op GitHub!
Wat nu?

GitHub



Search or jump to...

/ Pull requests Issues Marketplace Explore



Learn Git and GitHub without any code!

Using the Hello World guide, you'll create a repository, start a branch, write comments, and open a pull request.

[Read the guide](#)

[Start a project](#)

Repositories [New repository](#)

You don't have any repositories yet!

Browse activity

[Discover repositories](#)

Discover interesting projects and people to populate your personal news feed.

Your news feed helps you keep up with recent activity on repositories you [watch](#) and people you [follow](#).

[Explore GitHub](#)



GitHub

GitHub is een populaire^[1] website waarop **software** kan geplaatst worden. GitHub is gebouwd rond het **Git-versiebeheersysteem**, waardoor GitHub alle mogelijkheden van Git en eigen toevoegingen aanbiedt.

Het beschikt onder ander over **toegangscontrole** en verschillende samenwerkingsfuncties, zoals een **issue tracker**, een forum voor het aanvragen van functies, takenlijsten en **wiki's** voor ieder project.^[2]

Op GitHub staat veel **opensourcesoftware** omdat bij de gratis versie standaard de **broncode** kan ingekijken worden door derden.

GitHub biedt zowel gratis en privé-**repositories**. Om privé-projecten te kunnen hosten op Github is een betaald abonnement nodig.^[3]

Bron: Wikipedia <https://nl.wikipedia.org/wiki/GitHub>

Alternatieven

- | | |
|----------------|-------------------------|
| - Self hosting | - Gogs |
| - GitLab | - Gitea |
| - Bitbucket | - Apache Allura |
| - Beanstalk | - Cloud Source (Google) |
| - Launchpad | - AWS CodeCommit |
| - Sourceforge | - GitKraken |
| - Phabricator | - Buddy |
| - GitBucket | - RhodeCode |
| - CodeGiant | - ... |

Repositories

The <https://www.freecodecamp.org> open source codebase and curriculum. Learn to code for free together with millions of people.

learn-to-code nonprofits programming nodejs react d3 careers education teachers javascript certification curriculum
math community

19,164 commits 4 branches 0 releases 2,310 contributors BSD-3-Clause

Branch: master New pull request Create new file Upload files Find file Clone or download

Cyb3rN4u7 and raisedadead fix: site width is increasing for no reason (#34313) Latest commit 12ad9eb 30 minutes ago
.github Update CODEOWNERS (#30280) 2 days ago
api-server fix: Handle no user request 22 hours ago
client fix: site width is increasing for no reason (#34313) 30 minutes ago
config Feat: News in the client app (#34392) 4 days ago
curriculum fix: added consistency to capitalization and punctuation (#29201) 35 minutes ago
docs fix: Broken Links and Formatting (#32171) 2 days ago
guide Updated "More Information" link from 4.0 to 4.1 (#24027) 13 hours ago
mock-guide Add PHP data types article (#25508) 7 days ago
tools chore(security 🔥): Update packages to remove security issue flagged by... 4 days ago
.editorconfig Add .editorconfig to enforce certain automatic behavior on all editors, 4 years ago
.eslintignore feat(seed): "unpack" and "repack" scripts 8 months ago
footprint for modern challenges (#115791)

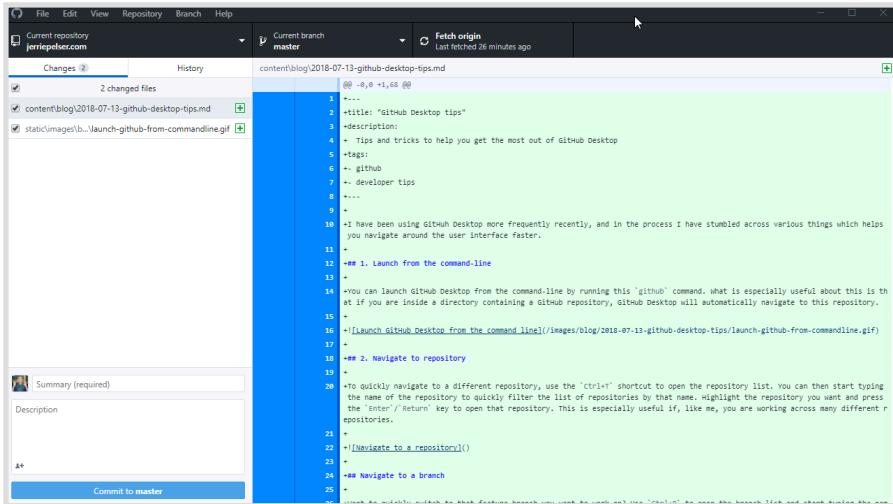
Repositories

The screenshot shows the GitHub repository page for `freeCodeCamp / freeCodeCamp`. The page displays various metrics: 19,164 commits, 4 branches, 0 releases, and 2,310 contributors. A prominent red circle highlights the **Clone or download** button and its associated options. The options include **Clone with HTTPS** (with a link to <https://github.com/freeCodeCamp/freeCodeCamp>), **Use SSH**, **Open in Desktop**, and **Download ZIP**.

The repository page also lists recent commits:

- Cyb3rN4u7 and raisedadead fix: site width is increasing for no reason (#34313)
- .github Update CODEOWNERS (#30280)
- api-server fix: Handle no user request
- client fix: site width is increasing for no reason (#34313)
- config Feat: News in the client app (#34392)
- curriculum fix: added consistency to capitalization and punctuation (#29201)
- docs fix: Broken Links and Formatting (#32171)
- guide Updated "More Information" link from 4.0 to 4.1 (#24027)
- mock-guide Add PHP data types article (#25508)
- tools chore(security): Update packages to remove security issue flagged by...
- .editorconfig Add .editorconfig to enforce certain automatic behavior on all editors,
- .eslintignore feat(seed): "unpack" and "repack" scripts
- eslint-plugin-freeCodeCamp for modern challenges (#15701)

Desktop VS CLI



```
[milans-MacBook-Pro:~ doc$ git --help
usage: git [--version] [--help] [-C <path>] [-c name=value]
           [--exec-path=<path>] [--html-path] [--man-path] [--info-path]
           [-p | --paginate | --no-pager] [-c 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.
milans-MacBook-Pro:~ doc$ ]
```

Install Git

Git: <https://git-scm.com/downloads>

MacOS brew: \$ brew install git

Linux: sudo apt-get install git

GitHub

Windows: <https://central.github.com/deployments/desktop/desktop/latest/win32>

Mac: <https://central.github.com/deployments/desktop/desktop/latest/darwin>

<https://gist.github.com/derhuerst/1b15ff4652a867391f03>

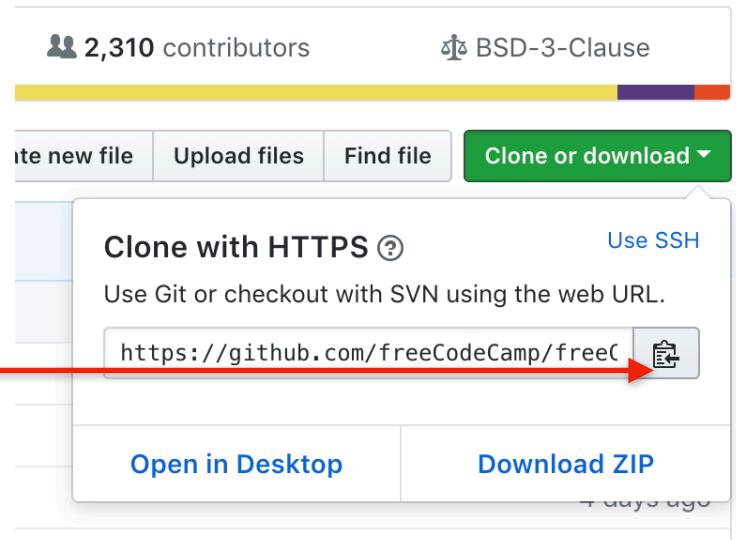


Git clone

= lokaal een kopie maken van een online repo
bv. Alles van freeCodeCamp lokaal kopiëren

Stappenplan:

1. Maak een lokale directory
2. Kopieer de clone link van git
3. In de lokale directory:



git clone https://github.com/freeCodeCamp/freeCodeCamp.git

```
[milans-MacBook-Pro:~ doc$ mkdir freecodecamp
[milans-MacBook-Pro:~ doc$ cd freecodecamp/
[milans-MacBook-Pro:freecodecamp doc$ git clone https://github.com/freeCodeCamp/freeCodeCamp.git
Cloning into 'freeCodeCamp'...
remote: Enumerating objects: 108, done.
remote: Counting objects: 100% (108/108), done.
remote: Compressing objects: 100% (70/70), done.
remote: Total 176227 (delta 48), reused 55 (delta 37), pack-reused 176119
Receiving objects: 100% (176227/176227), 100.03 MiB | 2.03 MiB/s, done.
Resolving deltas: 100% (84100/84100), done.
Checking out files: 100% (36465/36465), done.
[milans-MacBook-Pro:freecodecamp doc$ ls
freeCodeCamp
milans-MacBook-Pro:freecodecamp doc$
```

Zelf een repository aanmaken

A screenshot of a web browser displaying the GitHub homepage. The URL in the address bar is <https://github.com>. The page features a prominent green banner with the text "Learn Git and GitHub without any code!" and a subtext explaining the "Hello World" guide. Below the banner are two buttons: a green "Read the guide" button and a white "Start a project" button. A red arrow points from the top-left towards the "New repository" button. The main content area includes sections for "Browse activity" and "Discover repositories". On the left, there's a sidebar with a message about updated terms and privacy statements, a "Repositories" link, a "New repository" button (which is highlighted with a red arrow), and a message stating "You don't have any repositories yet!". At the bottom, there's an "Explore GitHub" button. The bottom navigation bar shows a tab for "GitHubDesktop....exe Cancelled".

Our new Terms of Service and Privacy Statement are in effect.

Repositories New repository

You don't have any repositories yet!

Discover interesting projects and people to populate your personal news feed.

Your news feed helps you keep up with recent activity on repositories you [watch](#) and people you [follow](#).

Explore GitHub

GitHubDesktop....exe Cancelled

Show All

Zelf een repository aanmaken

The screenshot shows the GitHub 'Create a new repository' interface. At the top, the URL is https://github.com/new. The repository name is set to 'testRepo'. The description field contains 'Een testrepository'. The visibility is set to 'Public'. A checkbox for initializing with a README is unchecked. A large green 'Create repository' button is at the bottom. Red arrows point from the text labels to their corresponding UI elements: one arrow points to the 'testRepo' input field, another to the 'Public' visibility option, and a third to the 'Create repository' button.

Create a new repository

A repository contains all the files for your project, including the revision history.

Owner / Repository name

Great repository names are short and memorable. Need inspiration? How about [verbose-octo-broccoli](#).

Description (optional)
Een testrepository

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

Zelf een repository aanmaken

A screenshot of a GitHub repository page for 'MilanVives/testRepo'. A red arrow points from the top left towards the repository name 'MilanVives / testRepo'. Another red arrow points from the bottom left towards the 'HTTPS' link in the 'Quick setup' section. A large red circle highlights the command-line instructions for creating a new repository or pushing an existing one.

MilanVives / testRepo

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

Set up in Desktop or **HTTPS** <https://github.com/MilanVives/testRepo.git>

Get started by [creating a new file](#) or [uploading an existing file](#). We recommend every repository include a [README](#), [LICENSE](#), and [.gitignore](#).

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

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

...or push an existing repository from the command line

```
git remote add origin https://github.com/MilanVives/testRepo.git  
git push -u origin master
```

or import code from another repository

Zelf een repository aanmaken

Create a new repository on the command line

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

STAPPENPLAN

1. git init // git lokaal initialiseren
2. git add . // alle files toevoegen
3. git remote add origin <https://github.com/MilanVives/testRepo.git>
// naar waar wil ik pushen?
4. git commit -m "commitboodschap" // wijzigingen committen
5. git push -u origin master // push alles naar remote

Zelf een repository aanmaken

```
[milans-MacBook-Pro:~ doc$ mkdir testRepo  
[milans-MacBook-Pro:~ doc$ cd testRepo/  
[milans-MacBook-Pro:testRepo doc$ touch file1  
[milans-MacBook-Pro:testRepo doc$ touch file2  
[milans-MacBook-Pro:testRepo doc$ git init  
Initialized empty Git repository in /Users/doc/testRepo/.git/  
[milans-MacBook-Pro:testRepo doc$ git add .  
[milans-MacBook-Pro:testRepo doc$ git remote add origin https://github.com/MilanVives/testRepo.git  
[milans-MacBook-Pro:testRepo doc$
```

```
[milans-MacBook-Pro:testRepo doc$ git add .  
[milans-MacBook-Pro:testRepo doc$ git commit -m "eerste commit"  
[master (root-commit) 0974c59] eerste commit  
Committer: doc <doc@milans-MacBook-Pro.local>  
Your name and email address were configured automatically based  
on your username and hostname. Please check that they are accurate.  
You can suppress this message by setting them explicitly. Run the  
following command and follow the instructions in your editor to edit  
your configuration file:  
  
    git config --global --edit  
  
After doing this, you may fix the identity used for this commit with:  
  
    git commit --amend --reset-author  
  
2 files changed, 0 insertions(+), 0 deletions(-)  
create mode 100644 file1  
create mode 100644 file2  
[milans-MacBook-Pro:testRepo doc$ git push -u origin master  
Username for 'https://github.com': diMilan  
Password for 'https://diMilan@github.com':
```

Zelf een repository aanmaken

```
[milans-MacBook-Pro:testRepo doc]$ git push -u origin master
Username for 'https://github.com': milanVives
[Password for 'https://milanVives@github.com']:
Counting objects: 3, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 218 bytes | 109.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
remote:
remote: Create a pull request for 'master' on GitHub by visiting:
remote:     https://github.com/MilanVives/testRepo/pull/new/master
remote:
To https://github.com/MilanVives/testRepo.git
 * [new branch]      master -> master
Branch master set up to track remote branch master from origin.
milans-MacBook-Pro:testRepo doc$
```

The screenshot shows a Mac desktop environment. In the top half, a terminal window titled "testRepo — bash — 112x19" displays the command "git push -u origin master" and its execution results. In the bottom half, a web browser window is open to the GitHub repository page for "MilanVives / testRepo". The repository summary shows 1 commit, 1 branch, 0 releases, and 0 contributors. The commit list includes two commits for "file1" and "file2", both labeled "eerste commit" and timestamped "4 minutes ago". A green "Clone or download" button is visible. The GitHub interface includes standard navigation tabs like Code, Issues, Pull requests, Projects, Wiki, Insights, and Settings. The bottom right corner features a large red heart-shaped graphic with the word "vives" written on it.

Zelf een repository aanmaken

Push an existing repository from the command line

```
git remote add origin https://github.com/MilanVives/testRepo.git
```



Commands

CREATE



Clone an existing repository

```
$ git clone ssh://user@domain.com/repo.git
```



Create a new local repository

```
$ git init
```

LOCAL CHANGES

Changed files in your working directory

```
$ git status
```

Changes to tracked files

```
$ git diff
```

Add all current changes to the next commit

```
$ git add .
```



Add some changes in <file> to the next commit

```
$ git add -p <file>
```

Commit all local changes in tracked files

```
$ git commit -a
```

Commit previously staged changes

```
$ git commit
```

-m (message)



Change the last commit

Don't amend published commits!

```
$ git commit --amend
```

olieke hogeschool
associatie KU Leuven



Commands

UPDATE & PUBLISH



List all currently configured remotes

```
$ git remote -v
```



Add new remote repository, named <remote>

```
$ git remote add <shortname> <url>
```



Download all changes from <remote>,
but don't integrate into HEAD

```
$ git fetch <remote>
```

Download changes and directly
merge/integrate into HEAD

```
$ git pull <remote> <branch>
```



Publish local changes on a remote

```
$ git push <remote> <branch>
```

Delete a branch on the remote

```
$ git branch -dr <remote/branch>
```

Publish your tags

```
$ git push --tags
```

MERGE & REBASE

Merge <branch> into your current HEAD

```
$ git merge <branch>
```

Rebase your current HEAD onto <branch>

Don't rebase published commits!

```
$ git rebase <branch>
```

Abort a rebase

```
$ git rebase --abort
```

Continue a rebase after resolving conflicts

```
$ git rebase --continue
```

Use your configured merge tool to
solve conflicts

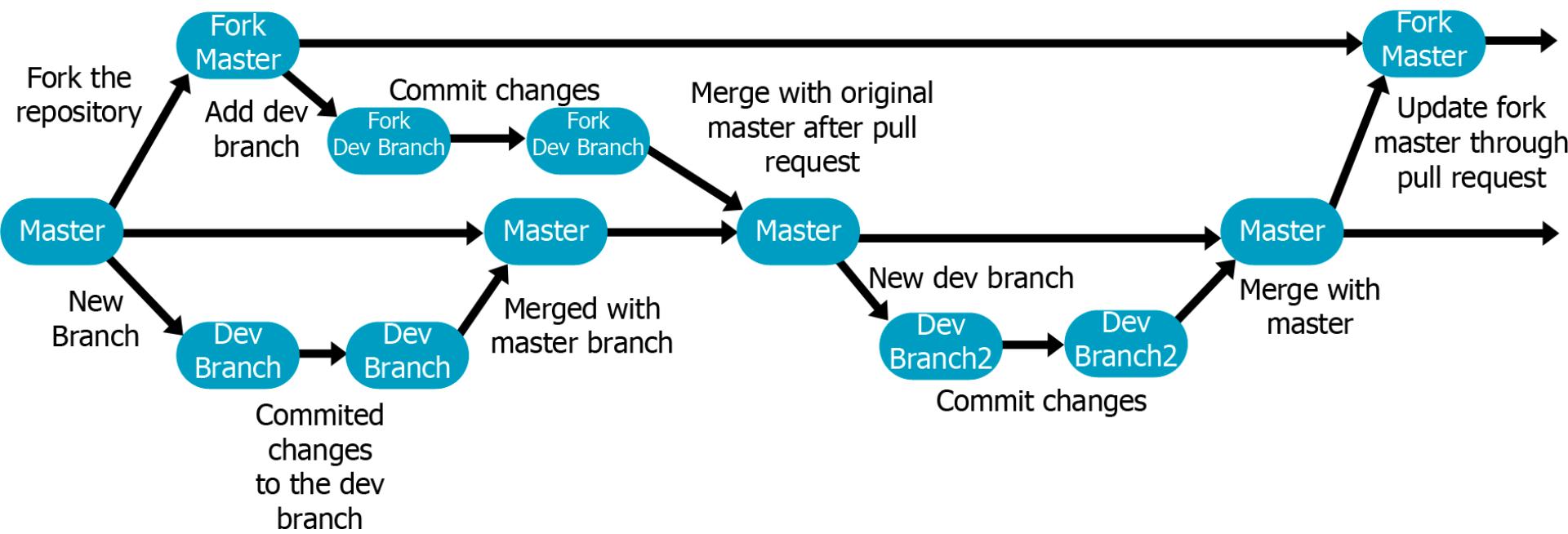
```
$ git mergetool
```

Use your editor to manually solve conflicts
and (after resolving) mark file as resolved

```
$ git add <resolved-file>
```

```
$ git rm <resolved-file>
```

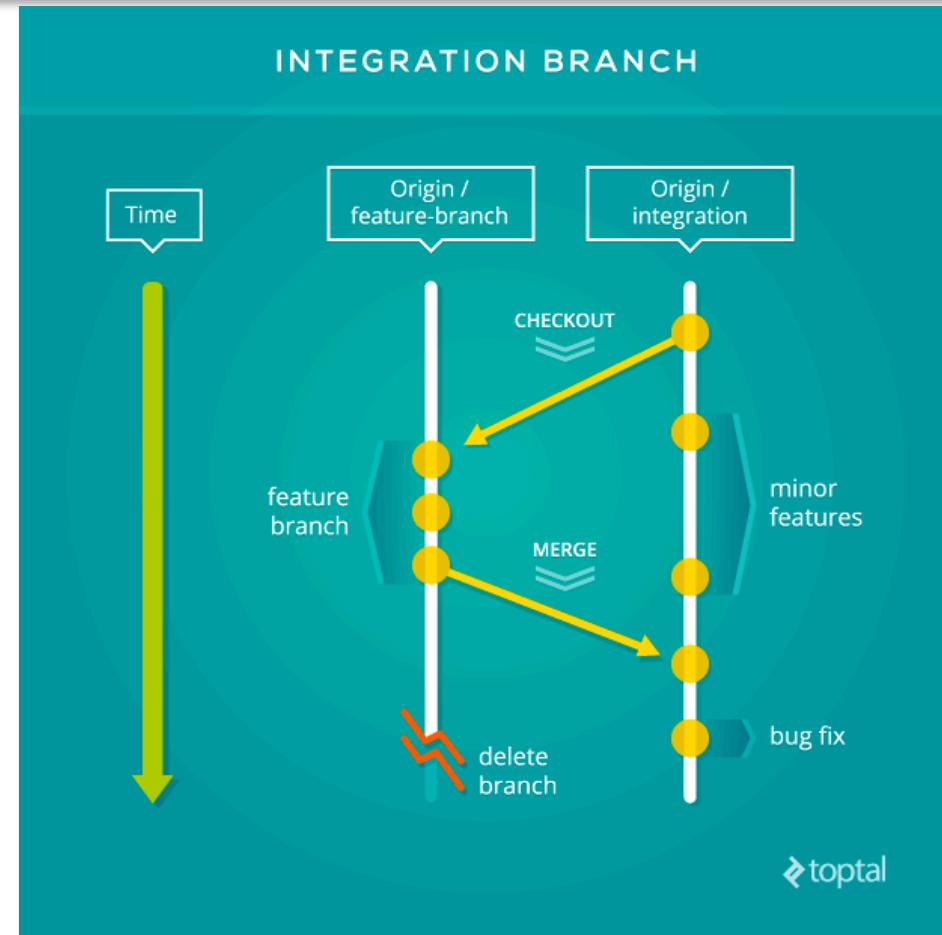
Fork - Branch - Pull request - Merge



Branch - Merge

- Branch project = (een eigen branch van de repo maken om eigen features aan te maken)
- Je kan veel verschillende branches maken van een Master. Zo kan iedereen aan zijn eigen stuk werken.
- Eenmaal klaar kan je je branch mergen d.w.z. je wijzigingen worden toegevoegd aan de Master-branch.
- Master = default branch aangemaakt door git bij het initialiseren

Fork /= Branch!



Bron afbeelding: <https://www.toptal.com/git/git-workflows-for-pros-a-good-git-guide>

Branch - Merge

```
milans-MacBook-Pro:~ mbpt$ mkdir GitTest
milans-MacBook-Pro:~ mbpt$ cd GitTest
milans-MacBook-Pro:GitTest mbpt$ git init
Initialized empty Git repository in /Users/mbpt/GitTest/.git/
milans-MacBook-Pro:GitTest mbpt$ touch file1
milans-MacBook-Pro:GitTest mbpt$ touch file2
milans-MacBook-Pro:GitTest mbpt$ git add .
milans-MacBook-Pro:GitTest mbpt$ git commit -m 'eerste commit'
[master (root-commit) 1efdfb7] eerste commit
 2 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 file1
 create mode 100644 file2
milans-MacBook-Pro:GitTest mbpt$ git branch nieuweBranchVoorFixes
milans-MacBook-Pro:GitTest mbpt$ git checkout nieuweBranchVoorFixes
Switched to branch 'nieuweBranchVoorFixes'
milans-MacBook-Pro:GitTest mbpt$ touch file3
milans-MacBook-Pro:GitTest mbpt$ git add .
milans-MacBook-Pro:GitTest mbpt$ git commit -m 'branch commit'
[nieuweBranchVoorFixes 4e5efb2] branch commit
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 file3
milans-MacBook-Pro:GitTest mbpt$ ls
file1 file2 file3
milans-MacBook-Pro:GitTest mbpt$ git checkout master
Switched to branch 'master'
milans-MacBook-Pro:GitTest mbpt$ ls
file1 file2
milans-MacBook-Pro:GitTest mbpt$
```

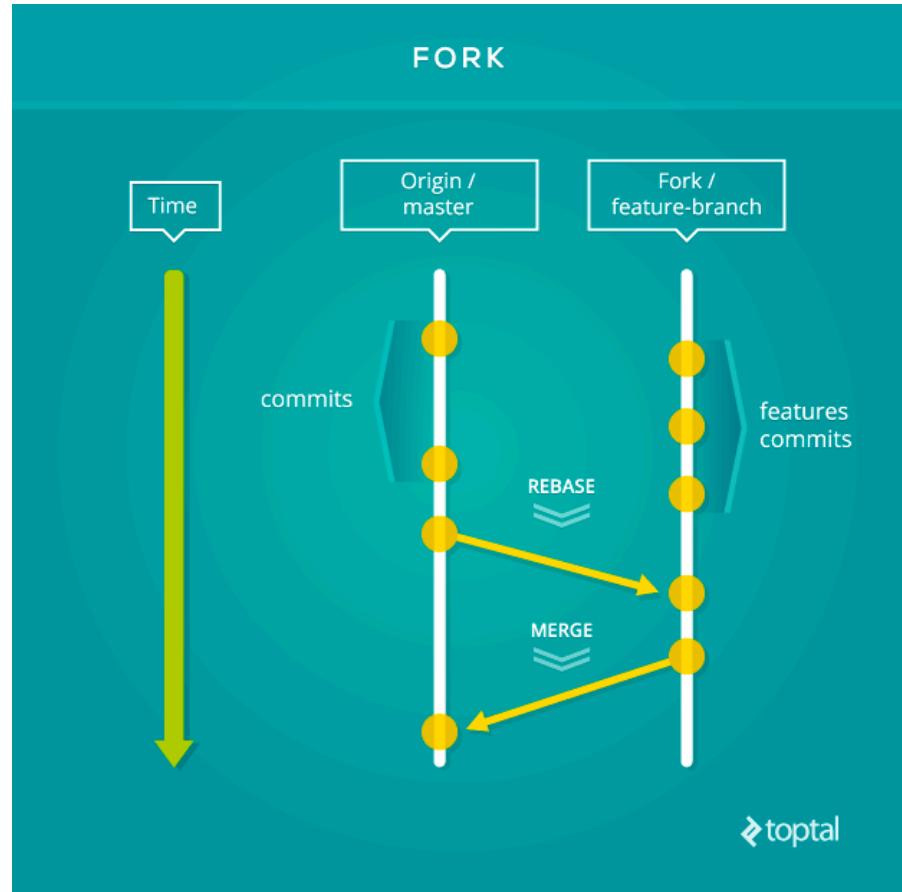
Branch - Merge

```
milans-MacBook-Pro:GitTest mbpt$ git merge nieuweBranchVoorFixes
Updating 1efdfb7..4e5efb2
Fast-forward
 file3 | 0
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 file3
milans-MacBook-Pro:GitTest mbpt$ ls
file1  file2  file3
milans-MacBook-Pro:GitTest mbpt$
```

Fork - Pull request

- Fork project = (een eigen kopie van de repo maken om eigen wijzigingen Aan te brengen)
- Later kan je eventueel een pull-request aanvragen (wil je mijn wijzigingen aan de Master repo toevoegen?)
- Als de pull request aanvaard wordt wordt de Master aangepast met de laatste wijzigingen

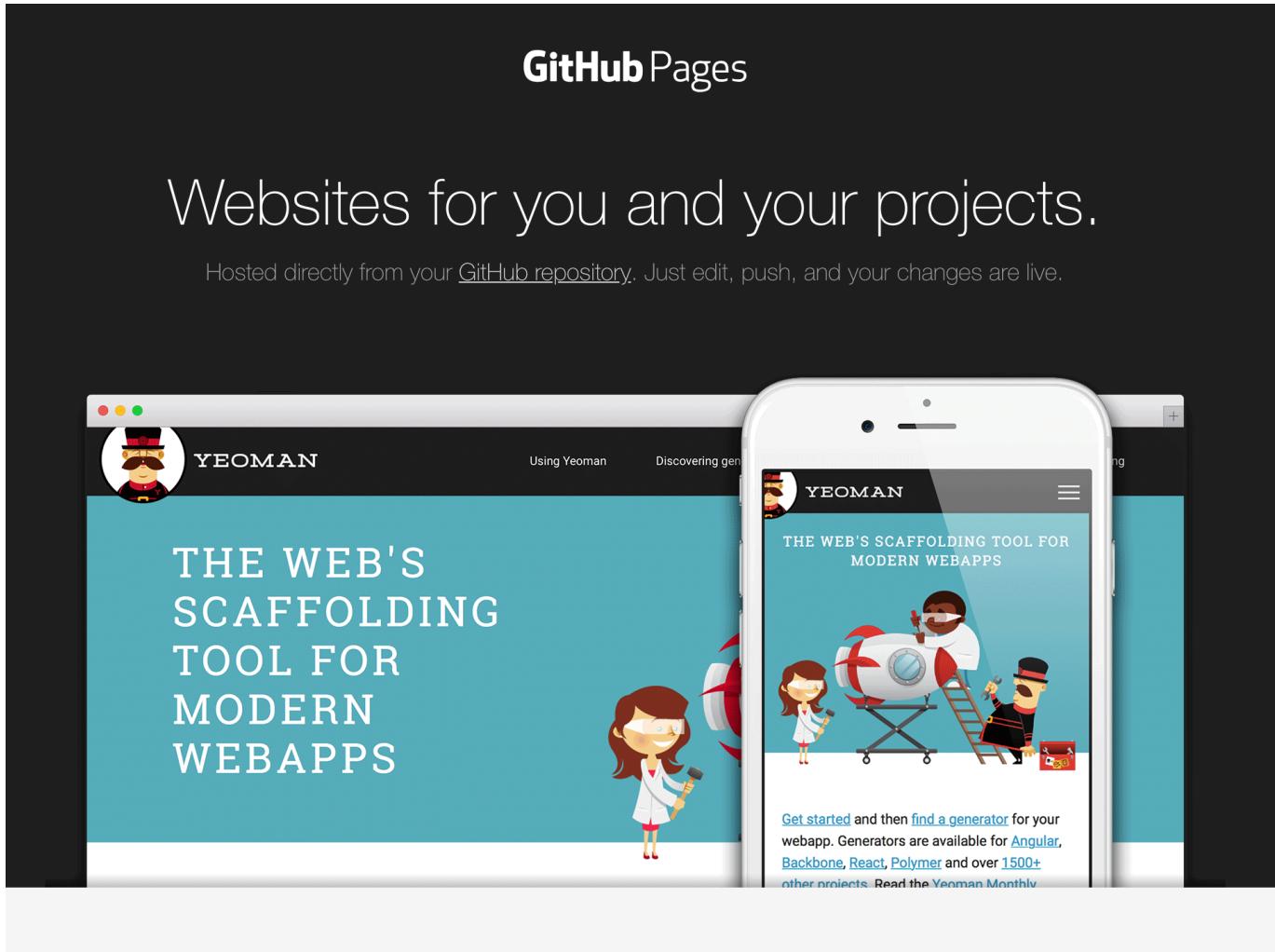
Fork =/= Clone!



Bron afbeelding: <https://www.toptal.com/git/git-workflows-f>



Website Deployment - GitHub Pages



The image shows a screenshot of a website deployed via GitHub Pages. The header reads "GitHub Pages" and "Websites for you and your projects." Below this, a sub-header says "Hosted directly from your [GitHub repository](#). Just edit, push, and your changes are live." The main content area features the Yeoman logo (a cartoon character wearing a top hat) and the text "THE WEB'S SCAFFOLDING TOOL FOR MODERN WEBAPPS". To the right, there's a mobile phone icon displaying the same page, illustrating responsive design. At the bottom, a URL is provided: <https://pages.github.com/>.



Website Deployment - GitHub Pages

Pull requests Issues Marketplace Explore

1

Create a repository

Head over to [GitHub](#) and [create a new repository](#) named `username.github.io`, where `username` is your username (or organization name) on GitHub.

If the first part of the repository doesn't exactly match your username, it won't work, so make sure to get it right.

Create a new repository

A repository contains all the files for your project, including the revision history.

Owner



MilanVives

Repository name

MilanVives.github.io



Great repository names are short and memorable. Need inspiration? How about [vigilant-memory](#).

Description (optional)

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



Website Deployment - GitHub Pages

Clone the repository

Go to the folder where you want to store your project, and clone the new repository:

```
$ git clone https://github.com/MilanVives/MilanVives.github.io.git
```

Hello World

Enter the project folder and add an index.html file:

```
$ cd MilanVives.github.io/
$ echo "Hello World" > index.html
```

Push it

Add, commit, and push your changes:

```
$ git add --all
$ git commit -m 'initial commit'
$ git push -u origin master
```



Website Deployment - GitHub Pages

Pull requests Issues Marketplace Explore

MilanVives / MilanVives.github.io

Watch 1 Star 0 Fork 0

Code Issues 0 Pull requests 0 Projects 0 Wiki Insights Settings

No description, website, or topics provided. Edit

Manage topics

1 commit 1 branch 0 releases 1 contributor

Branch: master New pull request Create new file Upload files Find file Clone or download

MilanVives initial commit Latest commit 1fd9bac a minute ago

index.html initial commit a minute ago

Add a README



Website Deployment - GitHub Pages

5

...and you're done!

Fire up a browser and go to <https://username.github.io>.

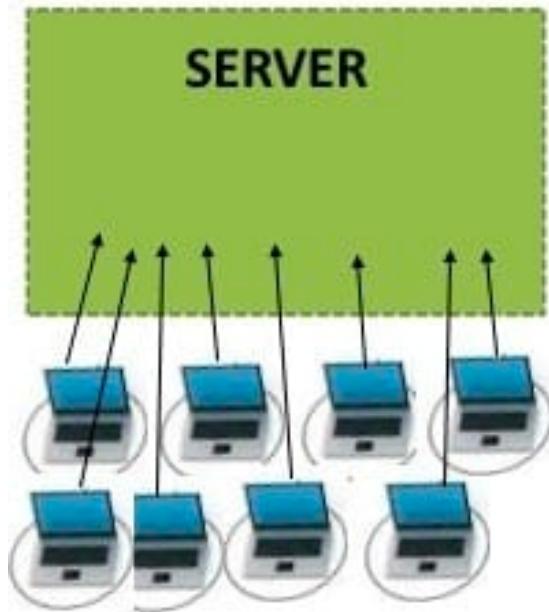


Hello World

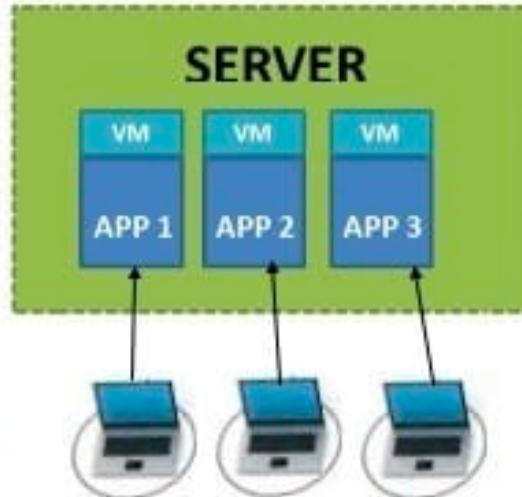


Website Deployment - Andere

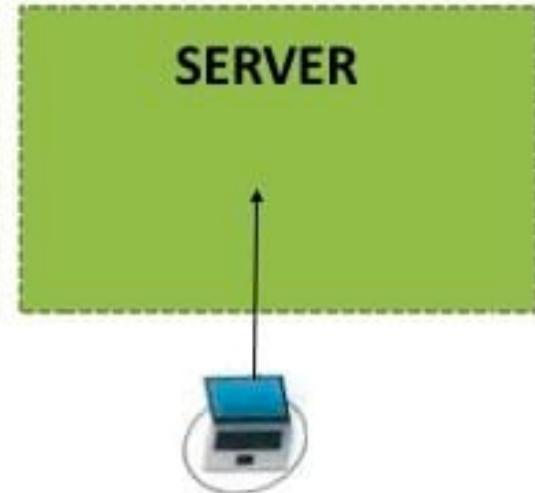
Shared Hosting



VPS hosting



Dedicated Server



Website Deployment - Andere

1. Register Domain name - Nog vrij?

<https://www.dnsbelgium.be/nl>

<https://whois.eurid.eu/en/>

<https://whois.icann.org/en>

<https://www.eurodns.com/whois-search/eu-domain-name>

2. Vind webserver hosting

- eigen (ISP - poorten?)
- Online (gratis telenet, InfinityFree, Freehostia)
- Online betalend: Transip, Versio, Mijnhostingpartner, godaddy.com, 000webhost.com, ...

3. Link en upload website

- Drag and drop
- FTP
- Website form
- ...



1. Registreer bij GitHub <https://github.com/>

1. Maak een private repository aan met als naam het “Internettechnologie”
2. Maak een map op je PC met alle slides van de lessen internettechnologie. Respecteer de mappenstructuur. Push alle bestanden naar je GitHub repo. Plak de link van je Repo en screenshots in je taak
3. Gebruik bij het committen een passende commit boodschap

2. Registreer op een website naar keuze een gratis hostingpakket

1. Verbind via FTP met je hostingserver en upload een beperkte HTML website. Bezorg me de website link en screenshots van de FTP verbinding.
2. Zoek via Wireshark hoe de FTP connectie gemaakt wordt (screenshot)

3. Leg me uit in enkele zinnen wat de volgende softwarepakketten doen:

- Cpanel
- Directadmin
- Plesk

4. Zoek zoveel mogelijk informatie over de website www.vives.be. (IP adres, wie is de eigenaar, waar wordt het gehost, enz...)