

Collaborating using git

Git Basics

Elke Fasshauer

University of Tübingen

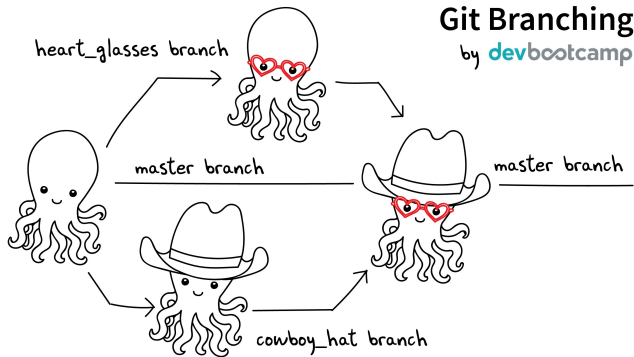
15th October 2021

Motivation

```
mylib-1.2.4_18.3.07.tgz      somecode_CP_10.8.07.tgz
mylib-1.2.4_27.7.07.tgz     somecode_CP_17.5.07.tgz
mylib-1.2.4_29.4.08.tgz     somecode_CP_23.8.07_final.tgz
mylib-1.2.4_6.10.07.tgz     somecode_CP_24.5.07.tgz
mylib-1.2.5_23.4.08.tgz     somecode_CP_25.5.07.tgz
mylib-1.2.5_25.5.07.tgz     somecode_CP_29.5.07.tgz
mylib-1.2.5_6.6.07.tgz      somecode_CP_30.5.07.tgz
mylib-1.2.5_bexc.tgz        somecode_CP_6.10.07.tgz
mylib-1.2.5_d0.tgz          somecode_CP_6.6.07.tgz
mylib-1.3.0_4.4.08.tgz      somecode_CP_8.6.07.tgz
mylib-1.3.1_4.4.08.tgz      somecode_KT.tgz
mylib-1.3.2_22.4.08.tgz     somecode_PI1_2007.tgz
mylib-1.3.2_4.4.08.tgz      somecode_PI_2007.tgz
mylib-1.3.2_5.4.08.tgz      somecode_PI2_2007.tgz
mylib-1.3.3_1.5.08.tgz      somecode_PI_CP_18.3.07.tgz
mylib-1.3.3_20.5.08.tgz     somecode_11.5.08.tgz
mylib-1.3.3_tstrm_27.6.08.tgz somecode_15.4.08.tgz
mylib-1.3.3_wk_10.8.08.tgz  somecode_17.6.09_unfinished.tgz
mylib-1.3.3_wk_11.8.08.tgz  somecode_19.7.09.tgz
mylib-1.3.3_wk_13.8.08.tgz  somecode-20.7.09.tgz
...
```

Source: <https://coderefinery.github.io/git-intro/01-motivation>

Motivation



Coderefinery: https://twitter.com/jay_gee/status/703360688618536960

Workflow: Creating a git repository

```
$ mkdir project
```

```
$ cd project
```

```
$ git init
```

Most important command

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$ git status
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Leeres Git-Repository in /home/elke/project/.git/ initialisiert
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Most important command

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```

Auf Branch main

Noch keine Commits

nichts zu committen (erstellen/kopieren Sie Dateien und benutzen Sie
git add zum Versionieren)

Workflow: Staging area and commit

Adding files to staging area

```
$ git add file.txt
```

Commit

```
$ git commit
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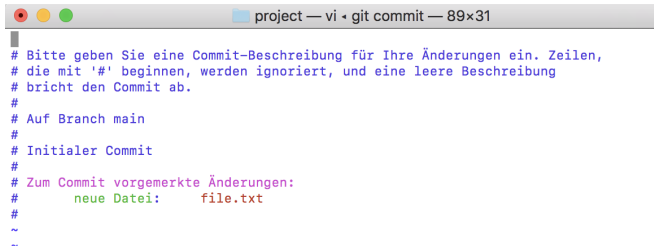
Workflow: Staging area and commit

Adding files to staging area

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Commit

```
$ git commit
```

A screenshot of a terminal window with a macOS-style title bar. The title bar contains three colored window control buttons (red, yellow, green) on the left and the text 'project — vi · git commit — 89×31' on the right. The terminal content shows the output of the 'git commit' command, including instructions in German and a summary of the commit.

```
project — vi · git commit — 89×31
# Bitte geben Sie eine Commit-Beschreibung für Ihre Änderungen ein. Zeilen,
# die mit '#' beginnen, werden ignoriert, und eine leere Beschreibung
# bricht den Commit ab.
#
# Auf Branch main
#
# Initialer Commit
#
# Zum Commit vorgemerkte Änderungen:
#   neue Datei:   file.txt
#
~
~
```

Workflow: History

Inspect history

```
$ git log  
$ git log --oneline
```

Workflow: History

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```
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Inspect history

```
$ git log  
$ git log -oneline
```

```
[d27401:project au596578$ git log  
commit 0ca5dc0c6fa3e264cc856722a77cd5e118c55f18 (HEAD -> main)  
Author: Elke Fasshauer <elke.fasshauer@gmail.com>  
Date: Tue Oct 19 15:47:02 2021 +0200
```

```
example file
```

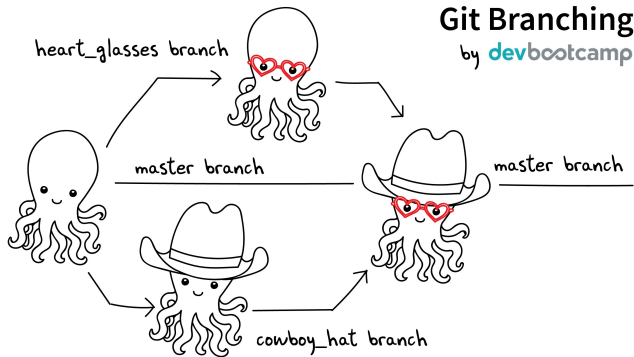
```
-
```





**Stop before the optional tasks and come
back here**

Motivation



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Merging

Exercises:

- On which branch are we?
- Creating and working with branches
- Exercise: create and commit to branches
- Merging branches
- Deleting branches safely
- Summary
- Typical workflow