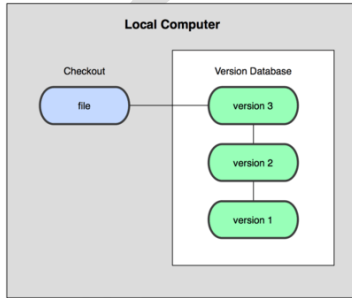
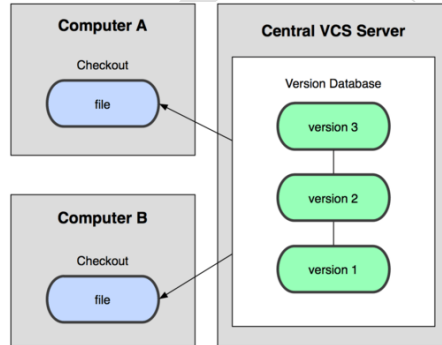


Einführung in GIT

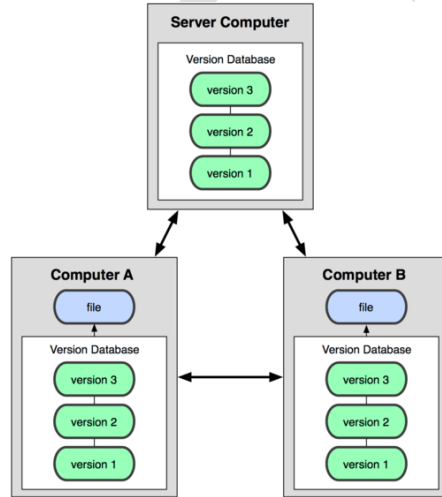
Sebastian Reichel <sre@mainframe.io>



Versionskontrollsystem



Versionskontrollsystem



■ Linux

- ▶ apt install git
- ▶ yum install git
- ▶ ...

■ Windows/Mac

- ▶ <https://desktop.github.com/>

git - Konfiguration

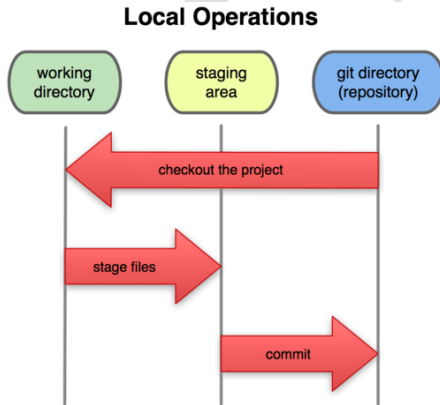
```
git config --global user.name "Sebastian Reichel"  
git config --global user.email "sre@ring0.de"  
git config --global core.editor vim
```

Variante 1:

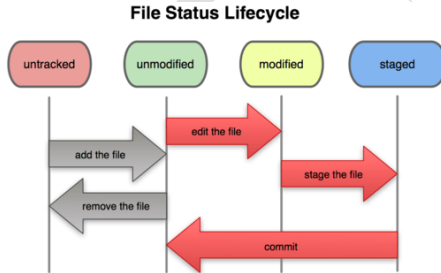
- 1 In das Projektverzeichnis wechseln
- 2 "git init" ausführen
- 3 Ab jetzt können Dateien zum Projekt hinzugefügt werden

Variante 2:

- 1 Projekt bei GitHub anlegen
- 2 Projekt auschecken (git clone URL)
- 3 Ab jetzt können Dateien zum Projekt hinzugefügt werden



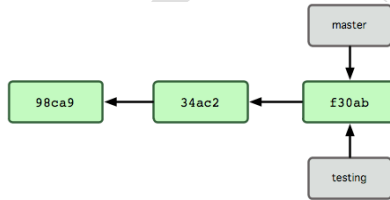
```
git add foobar.c foobar.h
git add README.txt
git commit --author "Sebastian Reichel <sre@ring0.de>" -m "Initiales Commit"
```



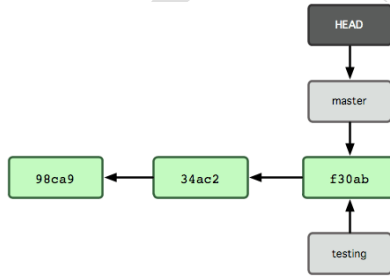
```
git add foobar.c  
git commit -m "Problem mit foo beheben"
```

```
git log
b39eaca8c908 - README: wireshark 2.x required (3 weeks ago) <Sebastian Reichel>
27609aefbbf5 - sort register/handoff of resource dissectors (3 weeks ago) <Sebastian Reichel>
3698173bf664 - fix filename in headers (3 weeks ago) <Sebastian Reichel>
4d206bfed4fa - Wireshark 2.0 API update (3 weeks ago) <Sebastian Reichel>
78051fb3ea7e - Add README (6 months ago) <Sebastian Reichel>
c01e4ddfe876 - Update location/gps support (7 months ago) <Sebastian Reichel>
bcc6be4eec56 - NET_RSSI_IND: Show Percentage in info column (7 months ago) <Sebastian Reichel>
1e96728c936c - Handle SMS_GSM_SUBMIT requests (7 months ago) <Sebastian Reichel>
...
4af535f240fc - update for usage with wireshark 1.12 (7 months ago) <Sebastian Reichel>
0d0f11085dc41 - wireshark provides a pkg-config file now (1 year, 10 months ago) <Sebastian Reichel>
c801db6599ba - new plugin position (2 years ago) <Sebastian Reichel>
9acf18a0c2ae - update for new wireshark API (2 years ago) <Sebastian Reichel>
51e96ec112b4 - update for usage with wireshark 1.8 (3 years, 6 months ago) <Sebastian Reichel>
...
8588f347d9f9 - import the ISI wireshark plugin from libisi (5 years ago) <Sebastian Reichel>
```

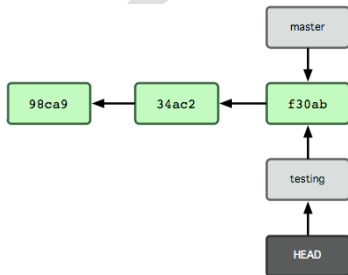
```
git tag version42  
git tag version23 <commit id>
```



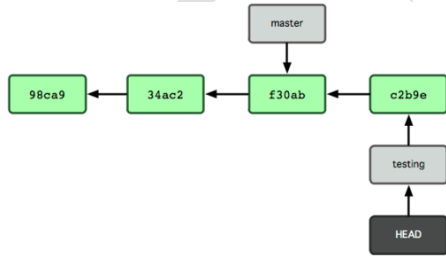
- Neue Branch anlegen:
 - ▶ git branch testing



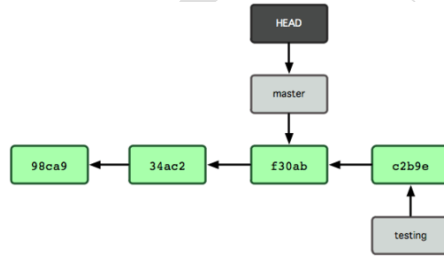
- HEAD = Code welcher gerade ausgecheckt ist



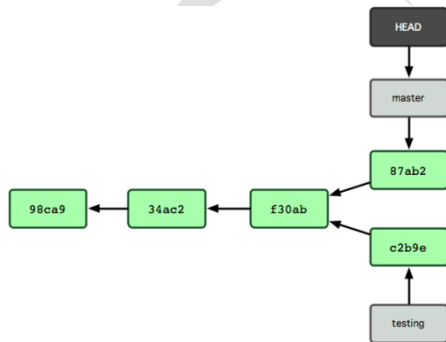
- Zur testing Branch wechseln:
 - ▶ `git checkout testing`



- Neues Commit hinzufügen
 - ▶ `git commit -m "just a test"`

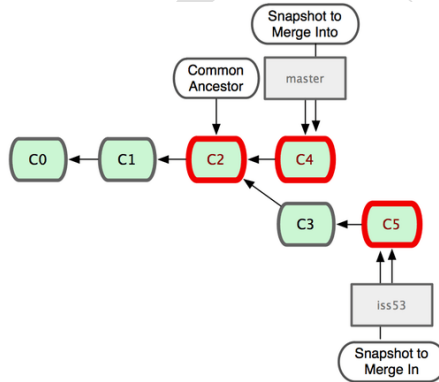


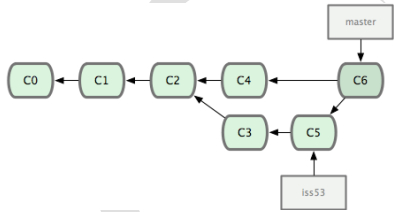
- Zurück zur master-Branch wechseln
 - ▶ `git checkout master`



- Neues Commit hinzufügen
 - ▶ `git commit -m "just a test"`

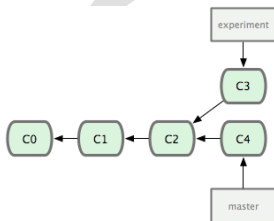
git - Merging

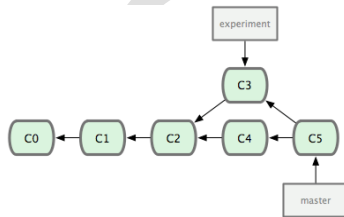


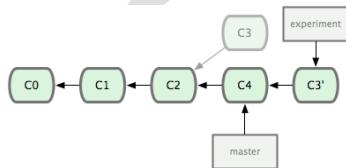


- Branch 1: foobar.c wurde geändert
 - Branch 2: test.c wurde geändert
 - ⇒ automatischer merge möglich
-

- Branch 1: foobar.c wurde geändert
- Branch 2: foobar.c wurde geändert
- ⇒ automatischer merge evtl. nicht möglich

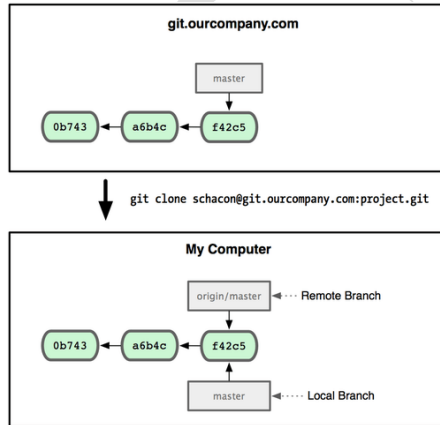




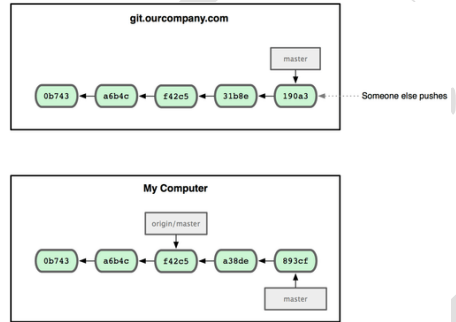


- sehr mächtig
- **gefährlich** - es können Daten verloren gehen
- verändert die History
- weniger „Müll“ im Log

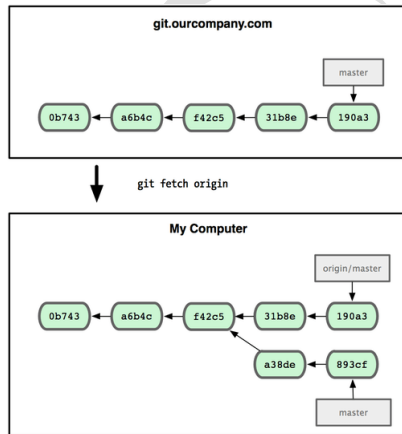
git - Externe Branches



git - Externe Branches



git - Externe Branches



- Nun kann man origin/master in master mergen
 - ▶ git merge origin/master

- Shortcut: git pull
 - ▶ git fetch + git merge
-
- git push = branch zum server pushen
 - ▶ ggf. zunächst git fetch + git merge ausführen

- <https://git-scm.com/book/de/v1>
 - ▶ Offenes Buch zum Thema Git
 - ▶ Quelle für alle Grafiken aus dem Vortrag