

git tutorial

Wojtek Krzemien
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Before we start

- Only commandline approach
- I assume everyone has a laptop with git installed
- Exercises with solutions from github:

<https://github.com/wkrzemien/gitTutorial>

- I am going to cover only a tip of the iceberg

Intro

Why version control systems?

Why version control systems?

- Keep backup, keep history of changes
- Share your work, working in parallel
- Continuous Integration (e.g. Travis/Jenkin)

Ideas behind git design

- fast
- distributed system
- working locally
- assure data integrity (sha-1)
- snapshot concept

A short history of git



https://commons.wikimedia.org/wiki/File:LinuxCon_Europe_Linus_Torvalds_03.jpg

A short history of git



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<https://xkcd.com/1597/>

A short history of git



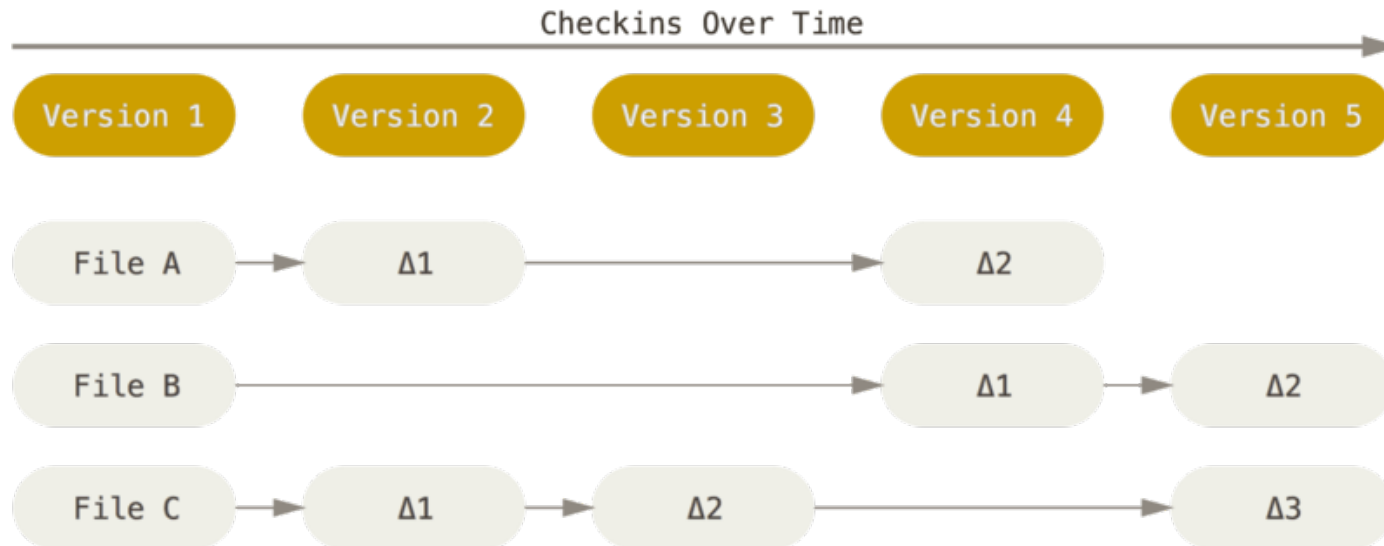
@tabqwerty

chi wai lau

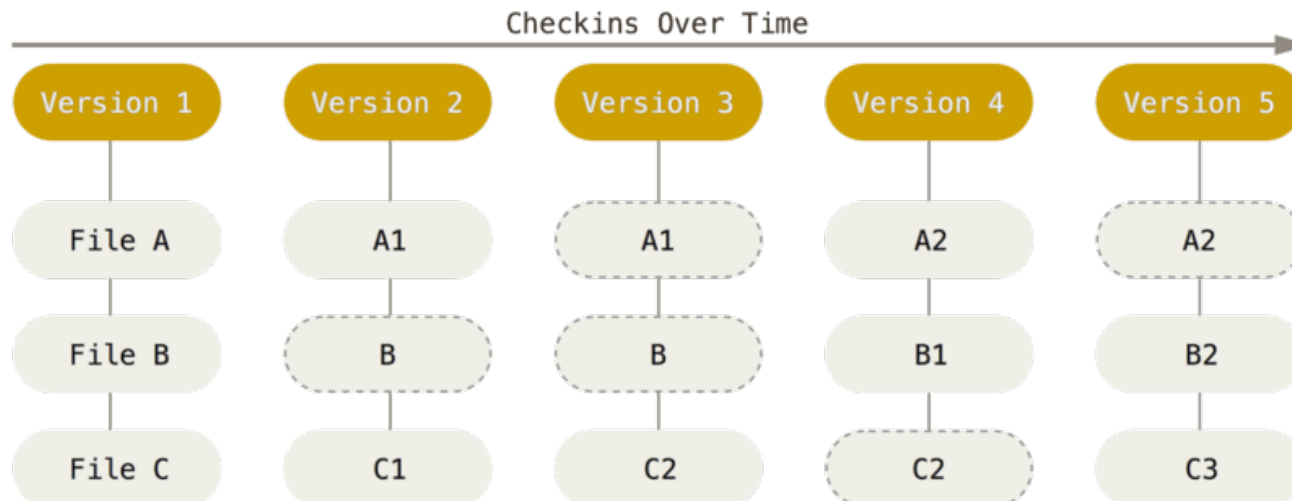
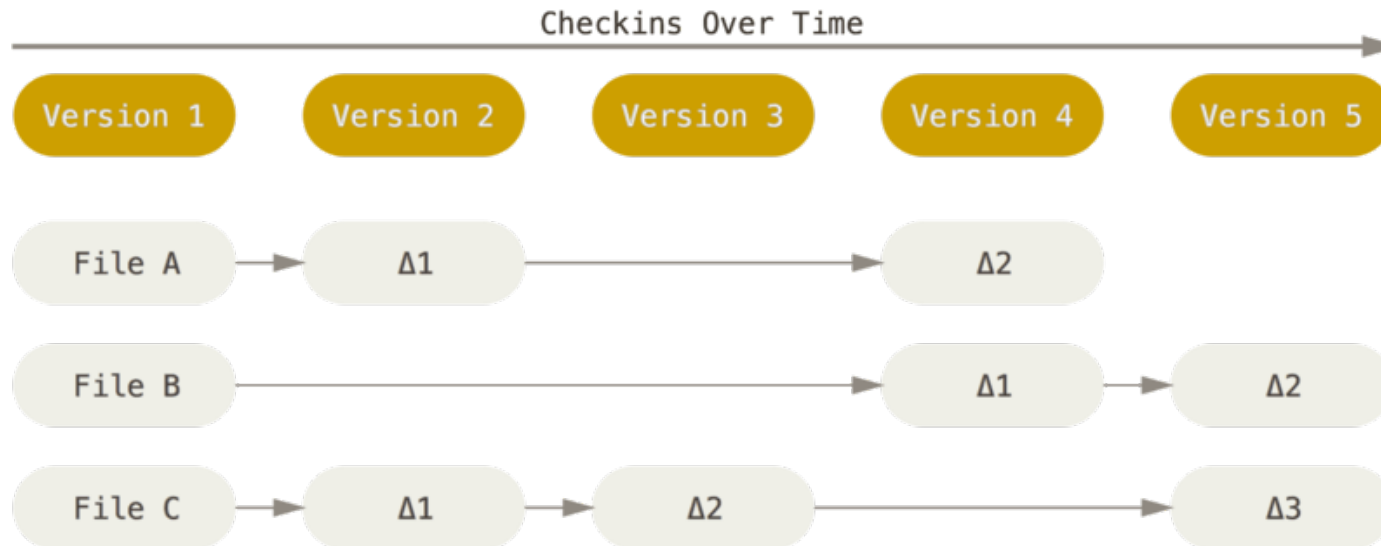
"git gets easier once you get the basic idea that branches are homeomorphic endofunctors mapping submanifolds of a Hilbert space."

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Snapshots concept



Snapshots concept

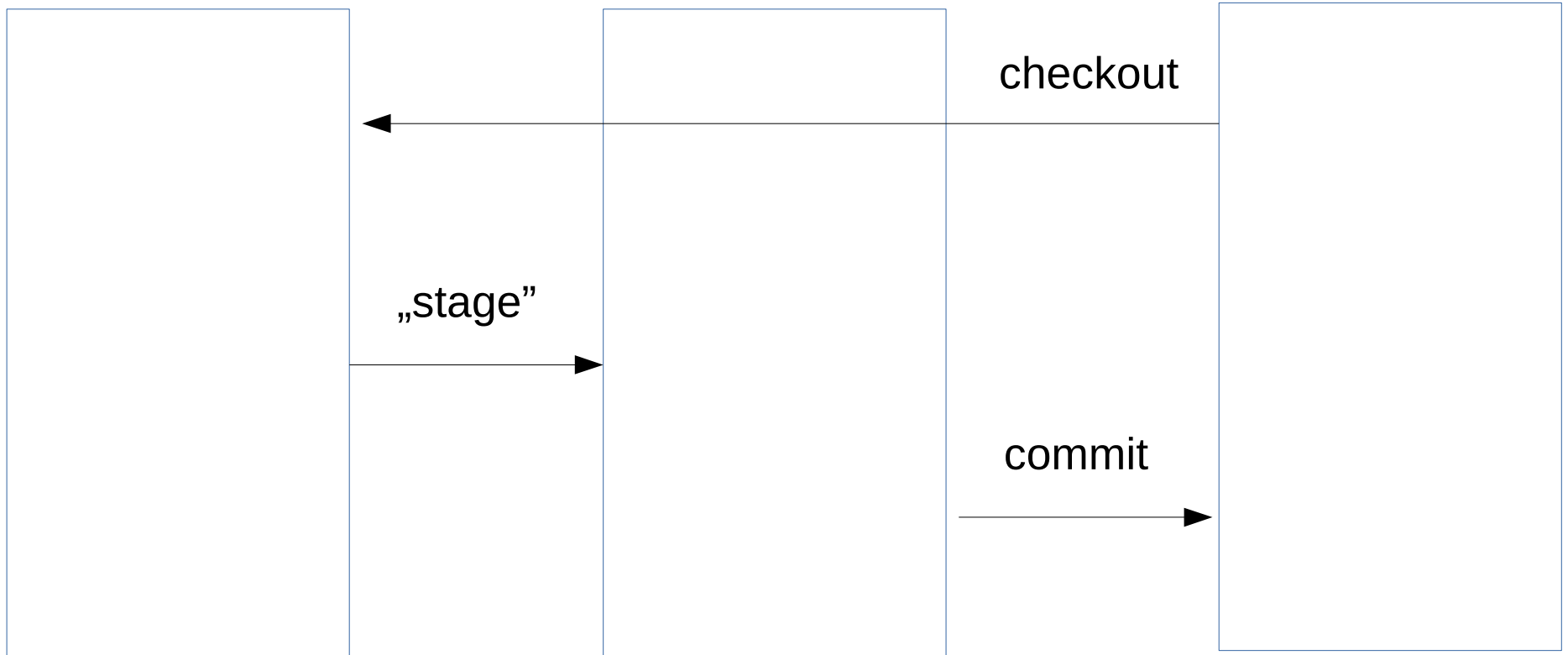


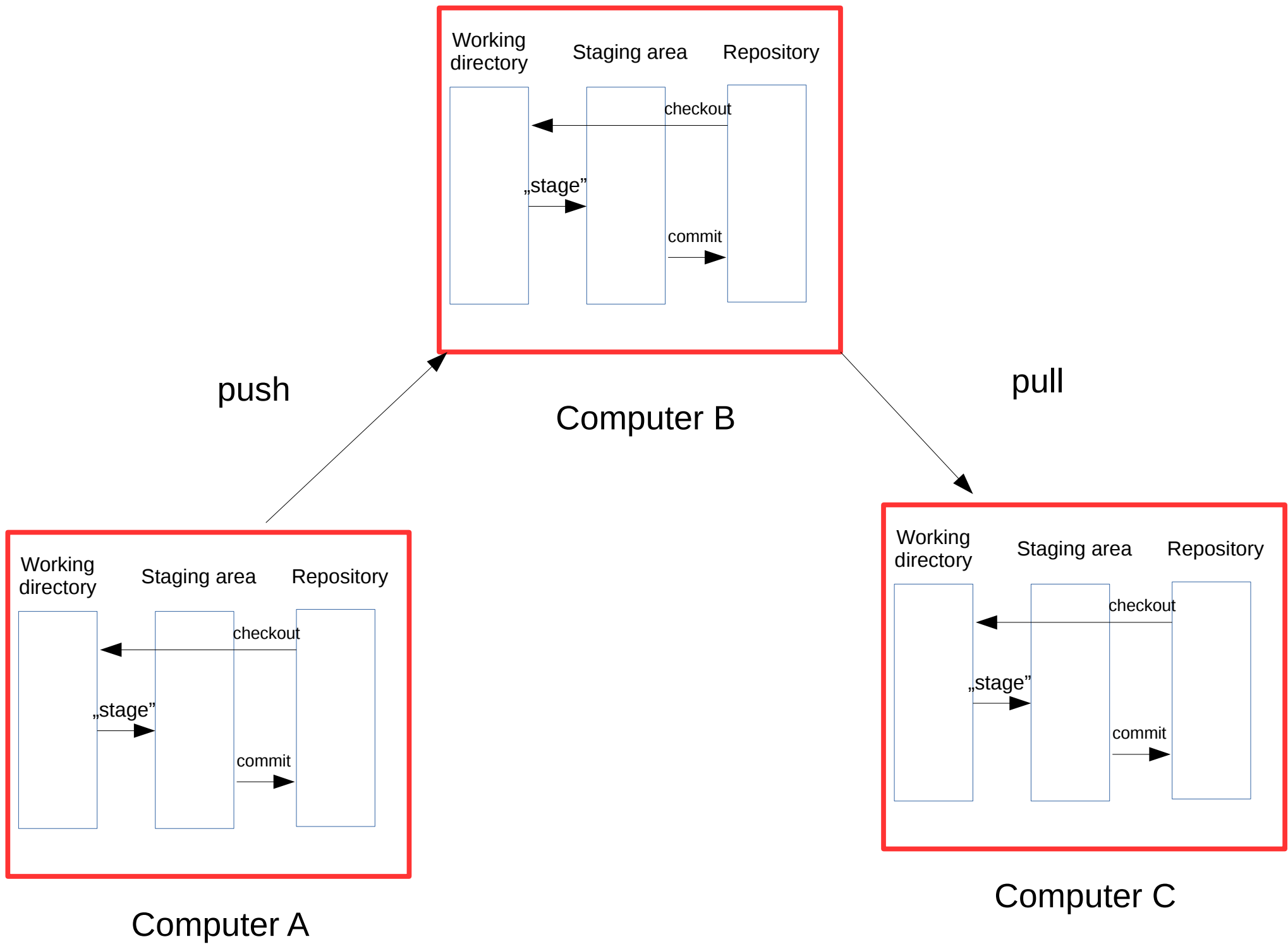
Three areas

Working directory

Staging area

Repository

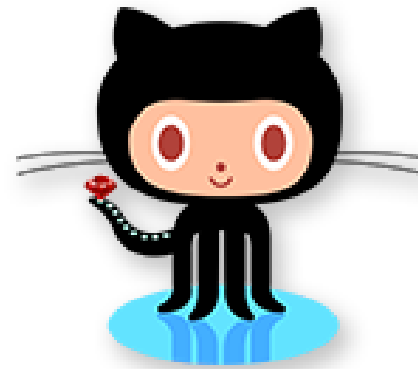




git vs github



git



github
SOCIAL CODING

Basic Staff

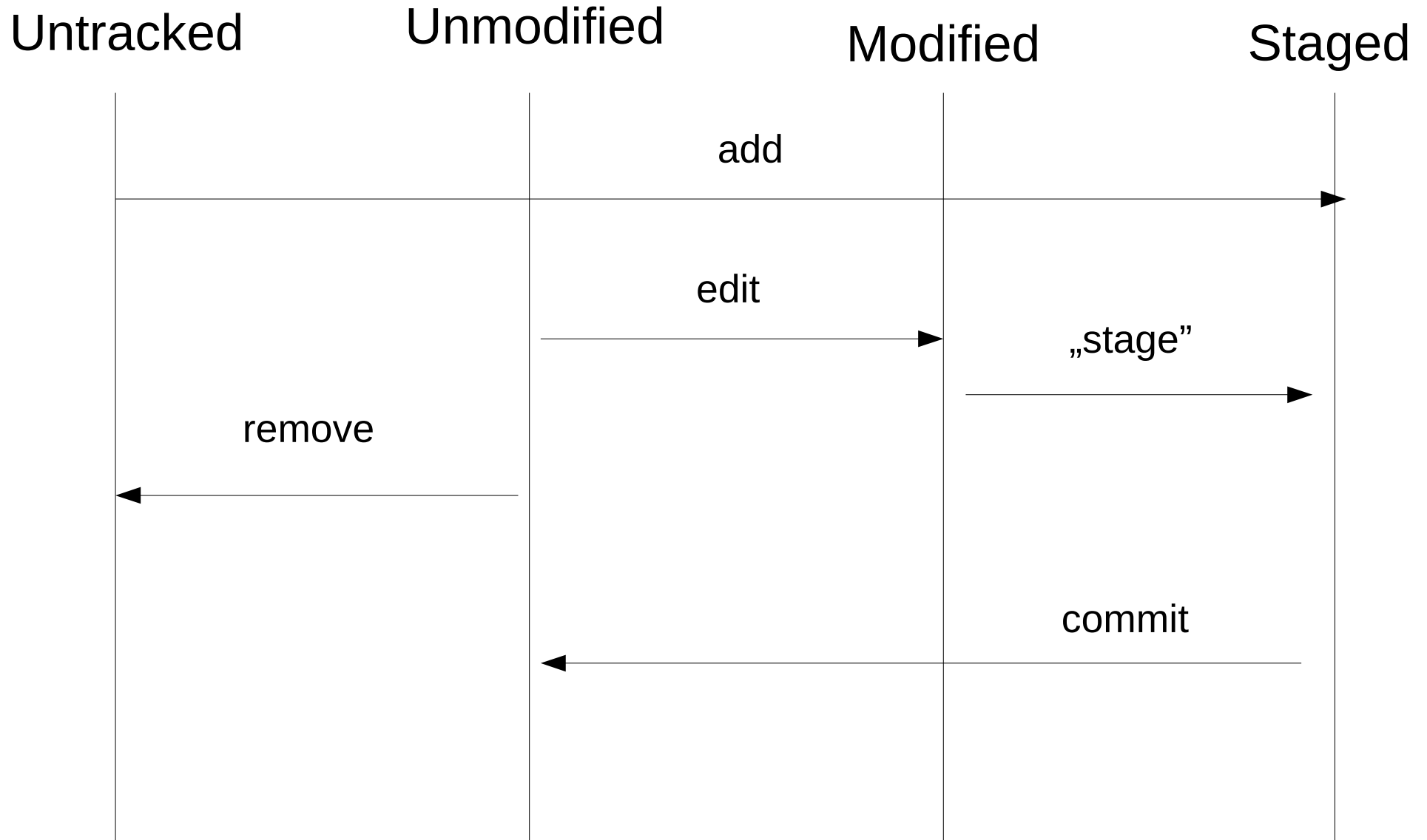
Basic topics

- configs
- initializing/cloning repos
- Adding/editing/committing/removing
- Checking status/history/logs
- Working with remote repositories:
 - remote settings
 - fetch/push/pull

You can download materials from:

<https://github.com/wkrzemien/gitTutorial>

File lifetime :-)



git comments...

	COMMENT	DATE
○	CREATED MAIN LOOP & TIMING CONTROL	14 HOURS AGO
○	ENABLED CONFIG FILE PARSING	9 HOURS AGO
○	MISC BUGFIXES	5 HOURS AGO
○	CODE ADDITIONS/EDITS	4 HOURS AGO
○	MORE CODE	4 HOURS AGO
○	HERE HAVE CODE	4 HOURS AGO
○	AAAAAAA	3 HOURS AGO
○	ADKFJSLKDFJSDKLFJ	3 HOURS AGO
○	MY HANDS ARE TYPING WORDS	2 HOURS AGO
○	HAAAAAAAAAANDS	2 HOURS AGO

AS A PROJECT DRAGS ON, MY GIT COMMIT
MESSAGES GET LESS AND LESS INFORMATIVE.

More advanced staff ...

More advanced topics

- undoing changes
- branches/moving around commits
- merge/rebase
- push vs pull request (github)

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Advanced staff
(or omitted before)

Advanced topics

- git reflog
- cherry-picking
- stashing
- tagging
- continuous integration

Materials

- <https://git-scm.com/book/en/v2>
- <http://rogerdudler.github.io/git-guide/>
- <https://guides.github.com/>

Thank you !