

Einführung in Git

Semesterprojekt Wintersemester 2018/19

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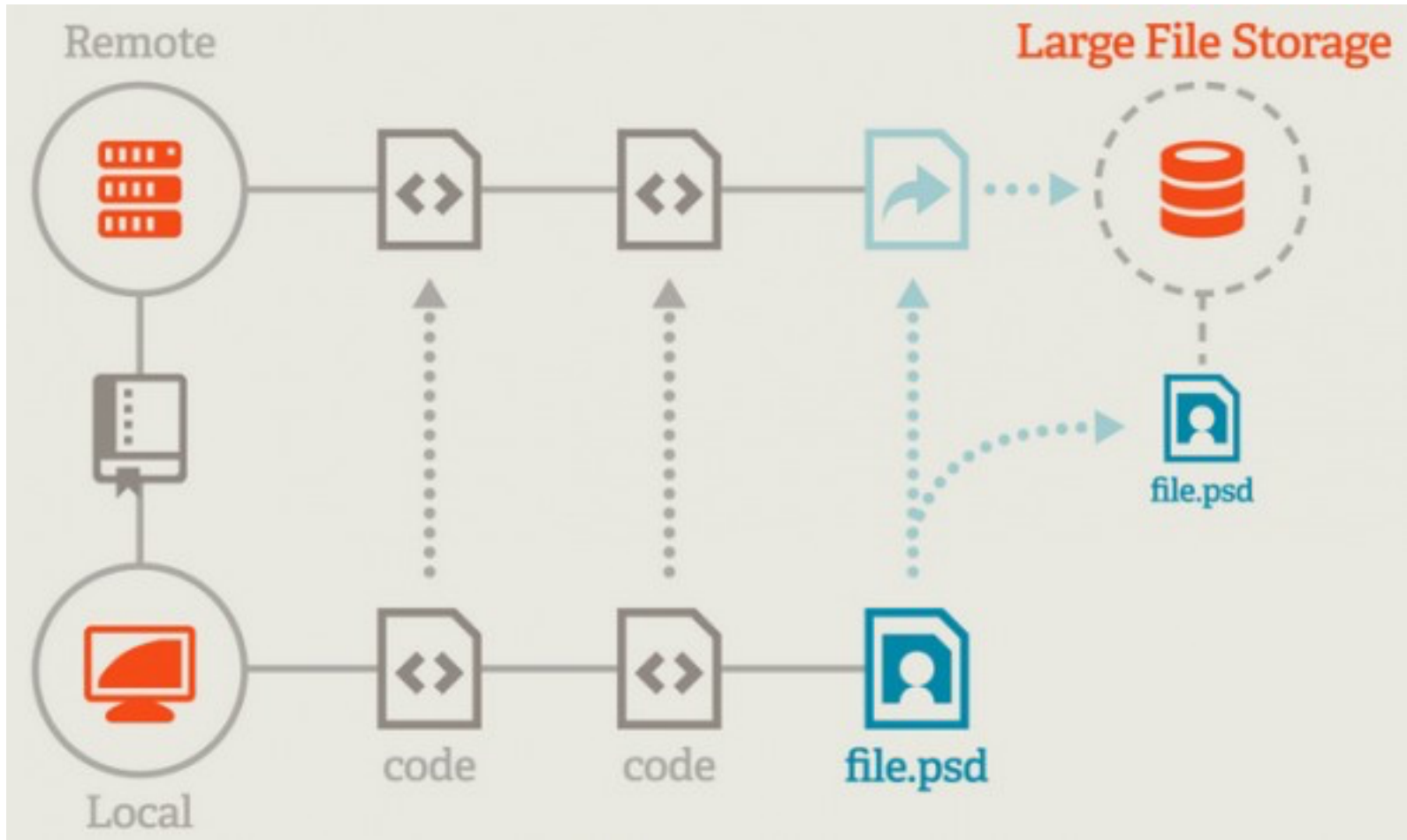
Stephan Fahrenkrog-Petersen

Was ist Git?



git

Versionsverwaltung



Commits



carparts-website

File View Repository Working Copy Help

Open Fetch Pull Push Apply Save Merge Rebase Git-Flow Terminal Refresh

Repositories carparts-website (master) Clone Beta Version - Thanks for Testing!

Workspace

Working Copy 5

History

Stashes

Settings

Branches

master HEAD

Tags

Remotes

origin

master

Submodules

Commit Subject

Stage All Commit

Status

Filename

.gitignore

about.html

css

error.html

img

imprint.html

index.html

js

product.html

robots.txt

index.html

2 chunks, 3 insertions, 2 deletions.

@@ -13,7 +13,8 @@

Discard Lines Stage Lines

13 13 <div id="navigation">

14 14

15 15 Home

-16 About

+16 About Us

+17 Product

17 18 Imprint

18 19

19 20 </div>

@@ -27,7 +28,7 @@

Discard Chunk Stage Chunk

27 28 Visit our "learn" section.

28 29 </p>

29 30 <p class="blogParagraph">

-30 Read our blog.

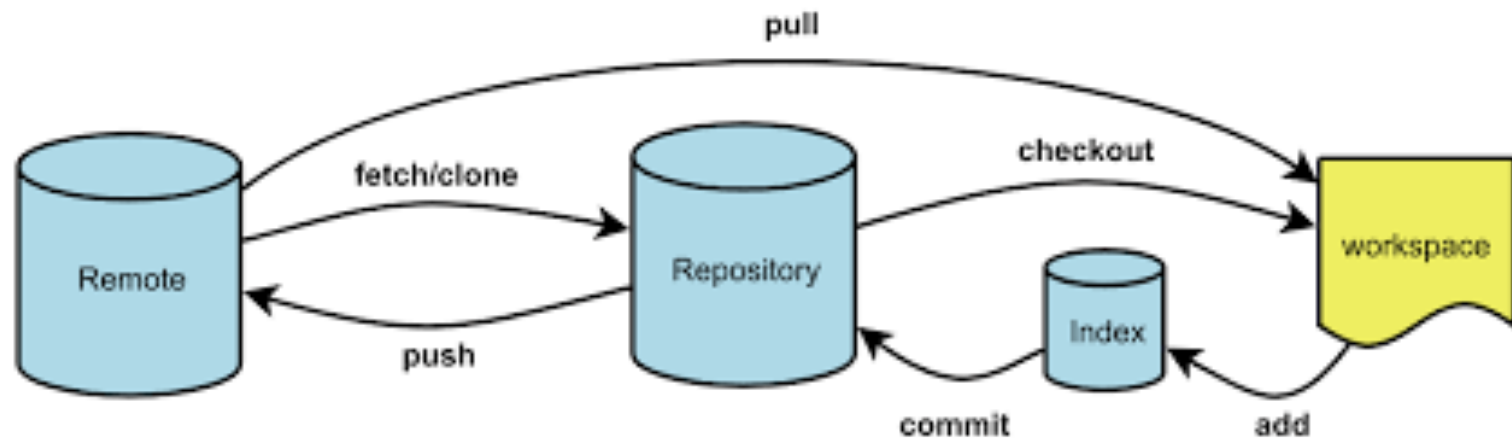
+31 Read our new blog.

31 32 </p>

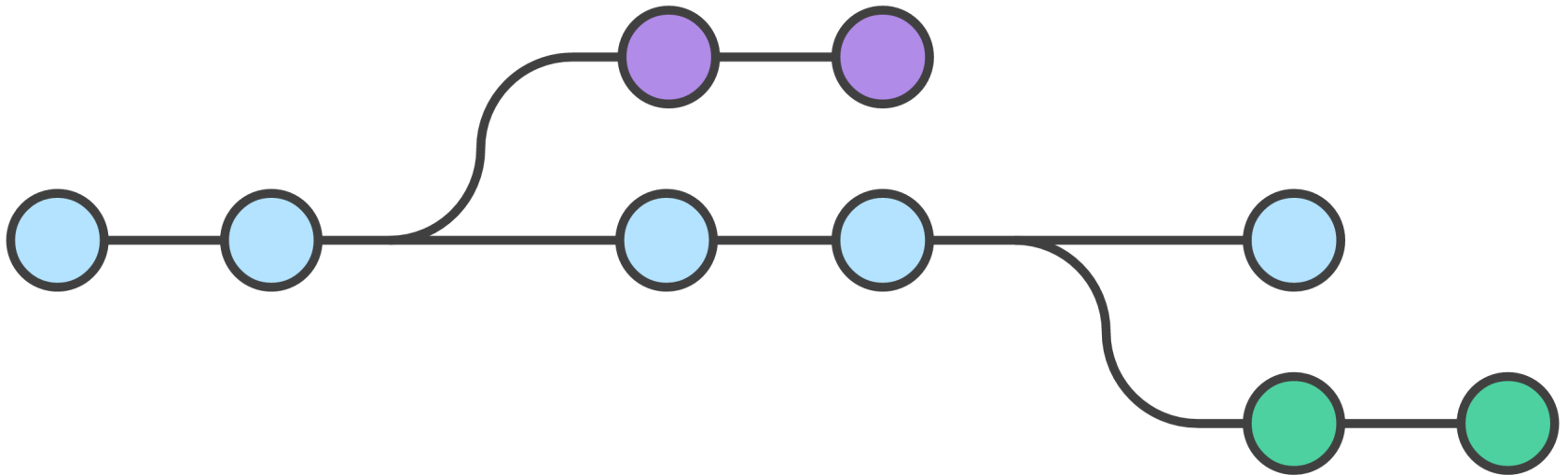
32 33 <p class="twitterParagraph">

33 34 Follow us.

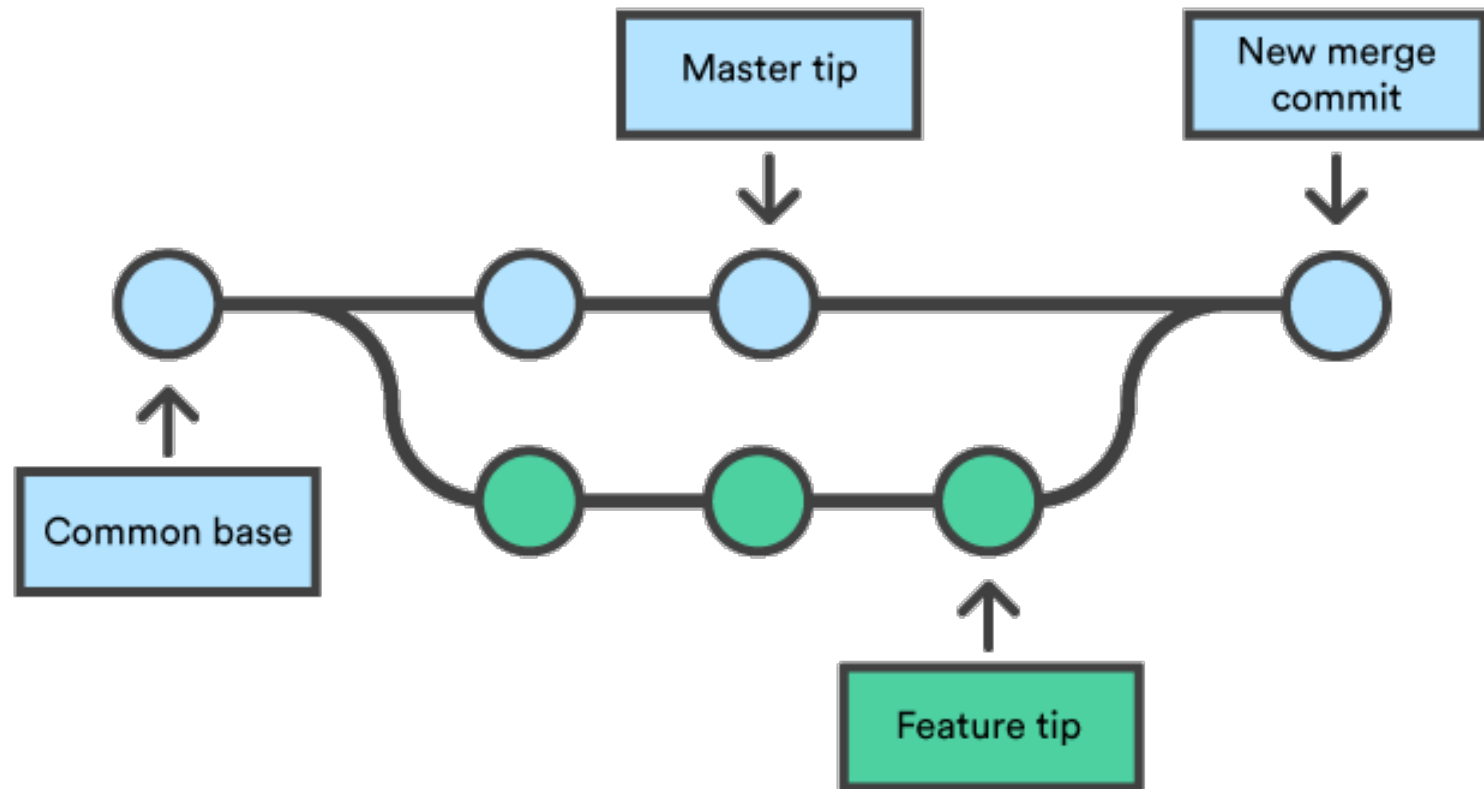
Push/Pull



Branches



Merge



Merge Conflicts

Merge Revisions for C:/f/MergeDemoDevelopment/app/src/main/java/ca/cmpt276/mergedemo/NumberFun.java

6 changes, 2 conflicts

Local Changes (Read-only)	LF	Result	CRLF	Changes from Server (revision 50314cc8638a07fa4a88653d0752ec656f9... LF)
<pre> public int getMin() { int min = data[0]; for (int value : data) { if (value < min) { min = value; } } return min; } </pre>	14	4	<pre> * NumberFun class manages some data an generates * My Changes and Teammate's changes applied! */ </pre>	4
<pre> public int getAverage() { if (data.length == 0) { return 0; } int sum = 0; int i = 0; while (i < data.length) { sum += data[i]; i++; } return sum / data.length; } </pre>	24	14	<pre> public class NumberFun { private int[] data; public NumberFun(int[] data) { this.data = data; } public int getAverage() { int sum = 0; int i = 0; while (i < data.length) { sum += data[i]; i++; } return sum / data.length; } public void printData() { // Print out the data int i = 0; while (i < data.length) { int value = data[i]; System.out.print(value + ", "); i++; } System.out.println(); // Print out the stats: int avg = getAverage(); System.out.println("Stats: avg = " + avg); } } </pre>	14
<pre> public void printData() { // Print out the data for (int value : data) { System.out.print(value + ", "); } System.out.println(); // Print out the stats: int avg = getAverage(); int min = getMin(); } </pre>	37	37	<pre> public int getMax() { int max = data[0]; for (int value : data) { if (value > max) { max = value; } } return max; } </pre>	22

Hosting-Dienste für Git



Lokale Git-Clients

- IDE's
- Kommandozeile
- UIs für Git

Beispiel Sourcetree

sourcetree-website (Git)

Commit Pull Push Branch Merge Shelf Show in Finder Terminal Settings

WORKSPACE
File status
History
Search

BRANCHES
BOOKMARKS
TAGS
REMOTES
SHELVED
SUBREPOSITORIES

All Branches Show Remote Branches Ancestor Order Jump to:

Graph	Commit	Author	Description	Date
	b7358c7	Rahul Chha...	master origin/master origin/HEAD Removing ol...	Mar 3, 2016, 11:...
	bdb8bef	Rahul Chhab...	Merged in update-google-verification (pull request #14)	Feb 18, 2016, 1:3...
	dfe975d	Tyler Tadej...	origin/update-google-verification Update google verificati...	Feb 11, 2016, 2:2...
	3bc3290	Tyler Tadej...	Replace outdated Atlassian logo in footer with base-64 en...	Feb 11, 2016, 2:1...
	dba47f9	Tyler Tadej...	Add gitignore	Feb 11, 2016, 1:3...
	ff67b45	Mike Minns...	Updated Mac min-spec to 10.10	Feb 15, 2016, 11:...
	72d32a8	Michael Min...	Merged in hero_images (pull request #13)	Feb 15, 2016, 10:...
	246c4ff	Joel Unger...	origin/hero_images hero_images Used TinyPNG to c...	Feb 11, 2016, 3:3...
	9d9438c	Joel Unger...	Replacing hero images with new version of SourceTree	Feb 9, 2016, 2:59...
	ce75b63	Michael Min...	Merged in bug/date-https (pull request #12)	Feb 15, 2016, 10:...
	85367bb	Patrick Tho...	origin/bug/date-https fixed date and https errors	Jan 7, 2016, 12:2...
	4f9b557	Joel Unger...	New Favicon	Feb 8, 2016, 3:55...
	384e6d5	Rahul Chhab...	origin/search-console-access search console google ver...	Feb 3, 2016, 2:09...
	6fa47a9	Mike Minns...	updated to move supported version to OSX 10.9+	Dec 15, 2015, 2:0...
	8dd87bb	Mike Minns...	remove extra , when a line is skipped due to empty server	Nov 23, 2015, 2:2...
	faa195e	Mike Minns...	Skip records with empty server/user id as gas rejects them	Nov 23, 2015, 2:1...
	0cdf96	Mike Minns...	corrected paths after merge	Nov 23, 2015, 2:0...
	051ab1b	Mike Minns...	corrected column counting	Nov 23, 2015, 1:5...
	a723bc2	Mike Minns...	Merge branch 'au2gex'	Nov 23, 2015, 1:5...
	65fd580	Mike Minns...	deal with invalid instanceids	Nov 23, 2015, 1:5...
	500a892	Michael Min...	Merged in au2gex (pull request #11)	Nov 23, 2015, 1:0...

Alternativen

- Apache Subversion (SVN)
- Mercurial

Mehr Informationen über Git?



- <https://www.atlassian.com/git/tutorials/learn-git-with-bitbucket-cloud>
- <https://confluence.atlassian.com/get-started-with-sourcetree/get-started-with-sourcetree-847359026.html>
- <https://github.com/pcottle/learnGitBranching>

Take Away

Git ist ein Versionsverwaltungssystem.

Die parallele Arbeit an der selben Codebasis wird ermöglicht.

Git ist über graphische Tools bedienbar.

