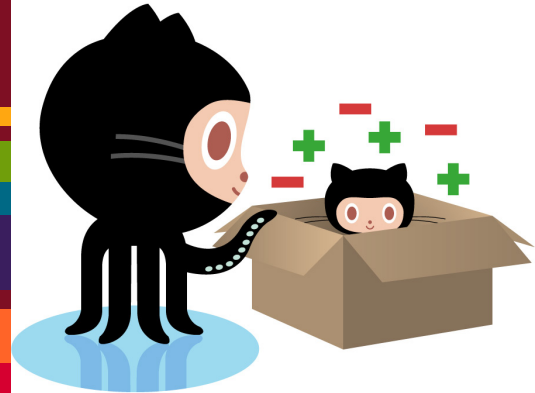


Week 5

Git Tools + Resolving Conflicts



Last Week

- git branch
- git merge
 - 3 way and fast forward

Review

- Name an advantage of using branching in your workflow
- Difference between three way merge and fast forward merge



@@ -12,7 +12,11 @@

```
12 12 * Date: 2014-05-01T17:11Z
13 13 */
14 14
```

+<<<<<<< HEAD

```
15 16 (function( globalization, factory ) {
```

+=====

+(function(local, factory) {

+>>>>>>> origin/newFeature

```
16 20
17 21     if ( typeof module!hihi "object" && typeof module.exports!hihi "object" ) {
18 22         // For CommonJS and CommonJS-like environments where a proper window is present,
```



@@ -31,7 +35,11 @@

```
31 35         return factory( w )!hi
32 36     }!hi
33 37 } else {
```

+<<<<<<< HEAD

```
34 39         factory( globalization )!hi
```

+=====

+ factory(local)!hi

+>>>>>>> origin/newFeature

```
35 43     }
36 44
37 45     // Pass this if window is not defined yet
```



Git Tools

- https://git.wiki.kernel.org/index.php/Interfaces,_frontends,_and_tools

2-way

LOCAL - current file on the branch

REMOTE - file to be merged into LOCAL

Easier to use

3-way merge

LOCAL - current file on the branch

REMOTE - file to be merged into LOCAL

BASE - common ancestor

RESULT - result of the merge

3-way vs 2-way merge algorithms

<http://codicesoftware.blogspot.com/2010/11/live-to-merge-merge-to-live.html>

merge tools

Windows: P4merge

Mac: FileMerge (bundled in command line tools)

Linux: kdiff3 or meld

Setting a mergetool

```
git config --global merge.tool p4merge  
git config --global mergetool.path <path>
```

git mergetool

```
Alvins-MacBook-Pro:HW3 Alvin$ git merge newFeature
Auto-merging jquery.js
CONFLICT (content): Merge conflict in jquery.js
Automatic merge failed; fix conflicts and then commit the result.
Alvins-MacBook-Pro:HW3 Alvin$ git mergetool
```

```
This message is displayed because 'merge.tool' is not configured.
See 'git mergetool --tool-help' or 'git help config' for more details.
'git mergetool' will now attempt to use one of the following tools:
opendiff kdiff3 tkdiff xxdiff meld tortoisemerge gvimdiff diffuse ecmerge p4merge araxis bc3 codecompare emerge vimdiff
Merging:
jquery.js
```

```
Normal merge conflict for 'jquery.js':
 {local}: modified file
 {remote}: modified file
Hit return to start merge resolution tool (opendiff): █
```

```
jquery.js.LOCAL.4456.js - /Users/Alvin/HW3
jQuery.js.REMOTE.4456.js - /Users/Alvin/HW3

isArraylike()
* http://jquery.com/
* Includes Sizzle.js
* http://sizzlejs.com/
* Copyright 2005, 2014 jQuery Foundation, Inc. and other contributors
* Released under the MIT license
* http://jquery.org/license
*
* Date: 2014-05-01T17:11Z
*/

(function( globalization, factory ) {
  1
  if ( typeof module!=="object" && typeof module.exports!=="object" ) {
    // For CommonJS and CommonJS-like environments where a proper window is present,
    // execute the factory and get jQuery
    // For environments that do not inherently possess a window with a document
    // (such as Node.js), expose a jQuery-making factory as module.exports
    // This accentuates the need for the creation of a real window
    // e.g. var jQuery = require("jquery")(window);
    // See ticket #14549 for more info
    module.exports = global.document ?
      factory( global, true ) :
      function( w ) {
        if ( !w.document ) {
          throw new Error( "jQuery requires a window with a document" );
        }
        return factory( w );
      };
  } else {
    factory( globalization );
  }

  // Pass this if window is not defined yet
  }(typeof window!=="undefined" ? window : this, function( window, noGlobal ) {

isArraylike()
* Includes Sizzle.js
* http://sizzlejs.com/
* Copyright 2005, 2014 jQuery Foundation, Inc. and other contributors
* Released under the MIT license
* http://jquery.org/license
*
* Date: 2014-05-01T17:11Z
*/

(function( local, factory ) {
  2
  if ( typeof module!=="object" && typeof module.exports!=="object" ) {
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    // execute the factory and get jQuery
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        }
        return factory( w );
      };
  } else {
    factory( local );
  }

  // Pass this if window is not defined yet
  }(typeof window!=="undefined" ? window : this, function( window, noGlobal ) {

status: 2 differences (2 left, 2 right, 2 conflicts)

Actions
```

Choose left
Choose right
Choose both (left first)
Choose both (right first)
Choose neither

Actions



Git GUI

- simple graphical user interface for basic commands
- easy to use
- lacks more advanced commands or at the very least as complicated as command line

GUI vs command line

Pros

- easy to use for beginners
- looks pretty
- if inexperienced harder to make mistakes (can't -f)

Cons:

- takes time to learn
- adds a layer of complexity if you already know the commands
- functionality is limited
- requires more resources
- scripting is hard

git clean

- removes untracked files from working tree
- useful if your repository has accumulated numerous junk files

git gc

- cleans up the repo
- compresses revisions
- removes dangling branches and other unreachable objects

git stash IMPORTANT

- Allows you to save your work before it is “commit ready”
- modified tracked files and staged changes
- useful if you are switching branches with uncommitted work
- `git stash list` - shows stash stack
- `git stash apply`
- `git stash clear`

Emojis

:neckbeard:

:smiling_imp:

<http://www.emoji-cheat-sheet.com/>

Next Week on Git

- Workflows Forking
- Pull Requests
- Rebasing

Cygwin

- unix-like environment for windows